

Agenda Item	6.1
Report No	PLS 078/18

HIGHLAND COUNCIL

Committee: South Planning Applications Committee

Date: 23 October 2018

Report Title: 18/01564/S36: Coire Glas Pumped Storage Ltd.
At Coire Glas, North Laggan.

Report By: Area Planning Manager – South

Purpose/Executive Summary

Description: Revised Coire Glas Pumped Storage Scheme.

Ward: 11 - Caol and Mallaig.

Pre –Determination hearing : No

Pre meeting Site Visit : Yes (19 Oct 2018)

Reason referred to Council : Section 36 application and Community Council Objection

All relevant matters have been taken into account when appraising this application. It is considered that the proposal accords with the principles and policies contained within the Development Plan and is acceptable in terms of all other applicable material considerations.

Recommendation

Members are asked to agree the recommendation to **Raise No Objection** to the application as set out in Section 12 of the report.

1. INTRODUCTION

- 1.1 The proposal is a “national development” but not one advanced under Town and Country Planning (Scotland) Act 1997. The application requires determination by Scottish Ministers under Section 36 of the Electricity Act 1989. However, if approved, Scottish Ministers will issue a Direction under Section 57(2) of the Town and Country Planning (Scotland) Act 1997 that deemed planning permission be granted for the development.
- 1.2 Consent for abstraction, diversion and use of water for generating electricity is also being sought under Section 10(5) and Schedule 5 of the Electricity Act 1989. This requires licences from Scottish Environmental Protection Agency (SEPA) under the Water Environment (Controlled Activities) (Scotland) Regulations 2006 (CAR).
- 1.3 The Council at this stage is a consultee on the proposed development. Should the Council raise an objection to this Section 36 application, Scottish Ministers will be required to hold a Public Local Inquiry on the proposed development.

2. PROPOSED DEVELOPMENT

- 2.1 Scottish Ministers granted consent to construct and operate a 600MW (megawatts) hydro-electric pumped storage scheme at Coire Glas. The current application seeks to increase the generating capacity of the consented project. The revised scheme proposes a maximum generating capacity of up to 1,500MW with an energy storage capacity of up to 30GWh (Gigawatt Hours).
- 2.2 The primary function of the proposed development would be to extract, store and release energy to or from the electricity transmission system as required to help balance supply and demand for power at a national scale. The principal components of the development are as follows: -

- **Dam and Upper Reservoir** - on Loch a' Choire Ghlais.
- **Upper Control Works** - An intake tower, screens, gate and gate shaft located within the upper reservoir to direct water into the headrace tunnel and underground waterway system;
- **Underground Waterway System** - underground caverns and tunnels carrying water between the upper reservoir and lower reservoir, through the underground cavern power station;
- **Cavern Power Station** - A series of underground caverns containing reversible pump-turbines and motor-generators together with associated equipment such as transformers and switchgear;
- **Surge Shaft** - A surge shaft would be required to respond to the fluctuations in pressure within the tunnels;
- **Ventilation Shaft** - A ventilation shaft would be required to circulate fresh air through the underground access tunnel and cavern power station complex;
- **Lower Control Works** - two screened inlet / outlet structures and stop logs, positioned at the end of the tailrace tunnel below minimum water level. These structures would channel water in and out of Loch Lochy;
- **Jetty** - Constructed on the shore of Loch Lochy to facilitate use of the Caledonian Canal system for the transport of heavy equipment and materials, and the removal of tunnel spoil;

- **Administration building** - An above ground administration and workshop building required for day to day operational and maintenance tasks;
- **Access Tunnels** - A main access tunnel and an emergency access tunnel would be provided for accessing the underground power plant, close to the shore of Loch Lochy;
- **Access tracks** – The development will require access to the upper reservoir and lower control works. A variety of tracks (and track options) are proposed in part using existing routes as well as new permanent and temporary tracks. The latter will involve a connection from the lower control area to upper reservoir; and
- **Borrow pits** to provide aggregate to supply sufficient rock to construct suitable access tracks.

2.3 In addition to the above, it is anticipated that there would be a need for “site establishment” and “project lay down areas” in the vicinity of the upper reservoir, the surge shaft and the lower reservoir works, as well as within the forest area near White Bridge.

2.4 It is anticipated that the construction period would extend over seven years in phases. Normal day time construction shifts would generally apply for the surface works taking into account weather and seasons. However underground construction operations would be expected to continue 24 hours a day / seven days a week.

2.5 The development will result in a significant amount of spoil from the tunnels, surge shaft, ventilation shaft and cavern chambers that would be removed via the tunnel portals near the shore on Loch Lochy. Where possible excavated spoil from the underground works would be re-used in the construction of the dam and within the localised area of construction works wherever feasible. This depends on the characteristics of the blasted rock, processing and handling requirements and cost analysis against the use of an on-site quarry / borrow pit.

2.6 Once the material to be re-used at the dam and the processed spoil used for construction aggregate has been accounted for the quantity of surplus spoil would be approximately 3.9 million tonnes of material at the lower reservoir works. It is anticipated this would require onward transportation for re-use off site. Surplus spoil material could be used on local infrastructure projects, subject to all necessary consents, for example: -

- Laggan Bay Breakwater - (potential project with Scottish Canals);
- A82(T) – Loch side protection (potential project with Transport Scotland);
- Glensanda Quarry - (for onward re-sale);
- Inverloch Pier Works, Fort Augustus - (potential project with Scottish Canals); or
- Fort William Marina / Cruise Terminal – (potential project with third parties).

2.7 The development would require the modification of Mucomir Barrage and hydroelectric power station at Gairloch. Control of Loch Lochy water levels is currently determined by the operation of Mucomir Power Station but the operation of a pumped storage hydro scheme on the loch would take priority over Mucomir. As such, the Mucomir Barrage and Power Station would be modified and a new operating regime determined to allow the necessary control of Loch Lochy levels. It

is not intended to manage Loch Lochy beyond the existing level range, but variations in water levels would be more frequent than they are at present.

- 2.8 The development will impact upon the Great Glen Way which currently uses sections of existing forestry tracks. Alternative permanent provisions to the Great Glen Way will require to be put in place to separate walkers and cyclists from the works / development.
- 2.9 Pre Application Consultation: - Informal meetings were held to explain the case for and implications of the enlargement of the existing consented project.
- 2.10 The application is supported with an Environmental Assessment (ES) as required by the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.
- 2.11 Supporting Information: The application has a number of supporting submissions the principal one being the Environmental Impact Assessment Report (EIAR) which considers the following key matters: -
- Water management.
 - Spoil management.
 - Landscape.
 - Visual amenity.
 - Terrestrial ecology.
 - Ornithology.
 - Aquatic ecology.
 - Fish.
 - Geology.
 - Cultural heritage.
 - Traffic and transport.
 - Noise and vibration
 - Land use and recreation
 - Socio-economic.
 - Forestry
 - (Appendix 3.3 Schedule of Mitigation including draft CEMP)
- 2.10 The EIAR has been based upon the worst case scenario. The final decision remains over the actual project design taking into account grid requirements, financial decisions and engineering / geological knowledge. The scale of the project may be smaller in terms of electrical output and / or rock extraction.
- 2.11 It is noteworthy that the application is submitted on behalf of Coire Glas Hydro Pumped Storage Ltd, this provides a vehicle for Scottish and Southern Electricity Plc (SSE) to advance a joint venture project with other parties given the scale of investment required to initiate the project.
- 2.12 Variations: None

3. SITE DESCRIPTION

- 3.1 The new dam and upper reservoir would inundate the existing Loch a Choire Ghlais and impound the Allt a Choire Ghlais, which currently flows into Loch Lochy as the Kilfinnan Burn, northeast of the lower development area. The site of the proposed dam falls within a “bowl” shaped valley with steep abutment slopes to the north, west and south. The loch a Choire Ghlais sits above 450m Above Ordnance Datum (AOD) east of hill-top Sron a Choire Ghairbh (935m AOD, a Munro). This area of the site is remote with no habitable properties nearby. Construction traffic to the upper reservoir would be from the A87(T) road at White Bridge (Invergarry), then utilise existing forestry tracks (to be upgraded) and ultimately a new track to the dam across the southern slopes of Ben Tee (a Corbett).
- 3.2 The tunnel and power house, with a surge shaft, will be developed under Sean Mheall descending southwards to Loch Lochy. The project application allows for a temporary haul road to be established between the tunnel / powerhouse and the upper reservoir.
- 3.3 The lower reservoir is formed by Loch Lochy, which is currently managed as a hydro resource by SSE Generation Ltd at its existing power station at Mucomir (Gairloch). The jetty and tailrace lie on the foreshore of Loch Lochy on one of the few flat areas of ground which is otherwise typified by steep mountain slopes, forested (commercially) on the lower margins. Construction traffic to the lower site would take access from the A82(T) road at North Laggan, and then along the existing public road and forestry tracks (both to be upgraded).
- 3.4 Although the lower development area is relatively remote there are a number of properties (residential and tourist accommodation) that sit adjacent to the initial sections of the public road and forestry tracks that give access to the development. These properties utilise a number of private water supplies drawn from their immediate environs.
- 3.5 The main A82(T) road and tourist route runs along the opposite shoreline, on which a small number of additional properties and tourist facilities lie (hotels/ viewpoints / picnic laybys).
- 3.6 The project sits across a landscape of high mountain summits and lower deep glens and lochs principally sections of the Great Glen including Loch Lochy and Loch Oich. A key landscape interest associated with this project is the Council's Loch Lochy and Loch Oich Special Landscape Area.
- 3.7 The site carries no ecological designation but will accommodate a number of protected habitats, valued peatlands, Ground Water Dependent Terrestrial Ecosystems (GWDTEs); and protected species, including numerous ornithological interests. Within the wider area there are a number of designations including Sites of Special Scientific Interest (SSSI) and further afield a site designated as Special Areas of Conservation.

4. PLANNING HISTORY

- 4.1 06.06.2017 Revised Coire Glas pumped storage scheme (17/02403/SCOP). Scoped.
- 13.12.2013 Section 36 consent to construct and operate a 600 MW hydroelectric pumped storage scheme at Coire Glas. The planning permission was granted for 5 years. An extension was subsequently granted by Scottish Ministers extending the permission to allow commencement of the development until 12 Dec 2021 (12/00602/S36). Consented.

5. PUBLIC PARTICIPATION

- 5.1 Advertised: EIA Advert.
Date Advertised: 06.04.2018.
Representation deadline: 06.05.2018.
- Timeous representations: The Council received three representations, all objections.
The Scottish Government received four representations, all objections.
- Late representations: Council received none.
The Scottish Government received 3 late representations objecting to the scheme.
- 5.2 Material planning considerations raised in objection are summarised as follows:
- a) Lack of recognition to local residential and tourist related amenities.
 - b) Existing property / businesses will be blighted.
 - c) Impact from traffic on existing properties.
 - d) Construction impacts over 7 years / 24 hours / 7 days a week.
 - e) Impact of noise upon existing properties.
 - f) Detrimental impact to local amenity and tourist business.
 - g) Impact likely to last for 20 years – taking recovery of landscape into account.
 - h) Failure to recognise EIA impact of grid connection works.
 - i) Inadequate assessment of “barge traffic” removing rock.
 - j) Assessment contains many inaccuracies.
 - k) Lack of assessment of water draw-down impacts upon Coire Glas reservoir.
 - l) Visualisations inadequate.
 - m) Adverse impact on pristine landscape.
- 5.3 Letters of representation are available for inspection via the Council’s eplanning portal which can be accessed through the internet www.wam.highland.gov.uk/wam.

6. CONSULTATIONS

Consultations by Planning Service.

- 6.1 **Glengarry Community Council** objects to the application. Lack of information on rock disposal (transportation impact) and connection to the grid network (landscape impact).
- 6.2 **Spean Bridge Community Council** has not responded to the application.
- 6.3 **Access Officer** has no objection to the application. Requests condition to ensure adequate mitigation to ensure continued public access particularly along the Great Glen Way and other valued core paths during construction periods.
- 6.4 **Environmental Health Officer** has no objection to the application. Suggests planning conditions are deployed in respect of surface operations to effectively manage potential adverse impacts (noise, dust, private water supplies, etc.).
- 6.5 **Historic Environment Team** has no objection to the application. Requests planning conditions to ensure adequate investigation of potential impacts during excavations.
- 6.6 **Transport Planning** has no objection to the application. Request is made for planning conditions to secure adequate mitigation particularly for the existing road network / private accesses and effective construction management.
- 6.7 **Flood Team** has no objection to the application. Request is made for planning conditions on water crossing designs, SUDS designs etc. to mitigate flood risk.

Consultations by Energy Consent Unit.

- 6.8 **Transport Scotland** has no objection to the application. It requests conditions are attached to any consent granted to safeguard the safety and free flow of traffic on the Trunk Road network.
- 6.9 **Forestry Commission** has no objection to the application. This position is sustained only on the basis that the applicant must ensure that details on the location, nature and timing of compensatory planting are secured by condition.
- 6.10 **Scottish Natural Heritage** has no objection to the application. It requires planning conditions to secure mitigation measures for matters on local ecology; peat, raptors, the Kilfinnan Burn and landscape and visual impacts.
- 6.11 **Scottish Environmental Protection Agency** has no objection to the application. This is subject to planning conditions being attached to any deemed planning consent safeguarding interests such as impact on the water environment; ground water abstractions; carbon rich soils; ground water dependant terrestrial ecosystems; spoil management; borrow pits and pollution prevention and environmental management.
- 6.12 **Marine Scotland** has no objection to the application. MSS would suggest that

Scottish Ministers should ask that they are shown and can comment on all conditions being drafted under CAR prior to the arrangements being finalised.

- 6.13 **Lochaber District Salmon Fishery Board** has highlighted a number of concerns over the application. There is potential to significantly impact the fish populations in the Lochy catchment, commercial fisheries and angling stock.
- 6.14 **Historic Environment Scotland** has no objections to the application.
- 6.15 **Highland and Islands Airports Ltd** has no objection to the application.
- 6.16 **National Air Traffic Systems (NATS)** has no objection to the application
- 6.17 **Mountaineering Council for Scotland** do not object in principle to this project but there are elements which cause concern, specifically relating to landscape and recreational access. This includes: -
- Visibility of above-ground elements of both the surge and ventilation structures.
 - Visual impact of permanent gravel roads.
 - Reinstatement of the temporary haul road.
 - Recreational access during and post construction.
- 6.18 **Ministry of Defence** has no objections to the application.
- 6.19 **Scottish Canals** has no objection to the application. It seeks provisions to work closely with parties on the further details of the project as they are developed including spoil management; water management; recreation; traffic and transport; cultural heritage; and aquatic and terrestrial ecology.
- 6.20 **Scottish Water** has no objection to the application. Request is made for planning conditions and further consultation through the CAR process to ensure safeguards to water quality and quantity.
- 6.21 **Scotways** has no objection to the application. Requests planning conditions to ensure that rights of way (e.g. HL21, HL24 and HL25) are kept open and free from obstruction during and after the proposed development works.
- 6.22 **Visit Scotland** has no objection to the application.
- 6.23 **Royal Society for the Protection of Birds** has no objection to the application. Request is made for appropriate mitigation for valued species within the local area.
- 6.24 **AM Geomorphology Ltd** has no objection to the application. A number of recommendations have been highlighted to tighten the assessment in respect of peat slide risk. No conditions are requested.

7. DEVELOPMENT PLAN POLICY

The following policies are relevant to the assessment of the application

7.1 Highland Wide Local Development Plan 2012

- 28 - Sustainable Design
- 29 - Design Quality & Place-making
- 30 - Physical Constraints
- 31 - Developer Contributions
- 52 - Principle of Development in Woodland
- 54 - Mineral Wastes
- 55 - Peat and Soils
- 57 - Natural, Built & Cultural Heritage
- 58 - Protected Species
- 59 - Other important Species
- 60 - Other Importance Habitats
- 61 - Landscape
- 62 - Geodiversity
- 63 - Water Environment
- 64 - Flood Risk
- 65 - Waste Water Treatment
- 66 - Surface Water Drainage
- 67 - Renewable Energy Developments including significant effects on: -
 - Natural, Built and Cultural Heritage
 - Other Species and Habitat Interests
 - Landscape and Visual Impact
 - Amenity at Sensitive Locations
 - Safety and Amenity of Individuals and Individual Properties
 - The Water Environment
 - Safety of Airport, Defence and Emergency Service Operations
 - The Operational Efficiency of Other Communications
 - The Quantity and Quality of Public Access
 - Other Tourism and Recreation Interests
 - Traffic and Transport Interests
- 69 - Electricity Transmission Infrastructure
- 72 - Pollution
- 73 - Air Quality
- 77 - Public Access
- 78 - Long Distance Routes

7.2 Highland Council Supplementary Planning Policy Guidance

- Construction Environmental Management Process for Large Scale Projects (August 2010)
- Developer Contributions (March 2013)
- Flood Risk & Drainage Impact Assessment (Jan 2013)
- Highland Historic Environment Strategy (Jan 2013)
- Highland's Statutorily Protected Species (March 2013)
- Managing Waste in New Developments (March 2013)

- Physical Constraints (March 2013)
- Special Landscape Area Citations (June 2011)
- Standards for Archaeological Work (March 2012)
- Sustainable Design Guide (Jan 2013)
- Trees, Woodlands and Development (Jan 2013)

7.2 **West Highland and Islands Local Plan 2012 (as continued in force)**

None

7.3 **West Highland and Islands Proposed Local Development Plan 2017**

None.

8. OTHER MATERIAL CONSIDERATIONS

8.1 **Non Statutory Guidance**

- Highland Renewable Energy Strategy.

8.2 **Scottish Government Planning Policy and Guidance**

- Scottish Planning Policy (2014).
- Scottish Energy Strategy (2017).

9. PLANNING APPRAISAL

9.1 Section 25 of the Town and Country Planning (Scotland) Act 1997 requires planning applications to be determined in accordance with the development plan unless material considerations indicate otherwise. The Council adopts this approach to its assessment of Section 36 applications, when formulating its response to Scottish Ministers.

Determining Issues

9.2 This means that the application will be assessed against all policies of the Development Plan relevant to the application, all national and local policy guidance and all other material considerations relevant to the application.

Planning Considerations

9.3 The key considerations in this case are:

- a) Development plan;
- b) Scottish planning policy;
- c) Planning history;
- d) Design and layout
 - Upper Reservoir
 - Lower Reservoir
 - Spoil Management
 - Access Tracks
- e) Access and Traffic Impact

- f) Water and Drainage
- g) Peat / Peat Slide
- h) Natural Heritage
- i) Fish / Fishing Interests
- j) Landscape and Visual Impact
 - o Special Landscape Area
 - o Landscape impact
 - o Visual Impact
 - o Wild land
- k) Economic impact
- l) Tourism
- m) Construction Impact
- n) Other material considerations.

Development Plan

- 9.4 The application needs to be assessed principally within the terms of Policy 67 of the Highland wide Local Development Plan (HwLDP). Other policies set out in the HwLDP, as highlighted earlier in this report, relate to the assessment of key factors which are material considerations as noted within this key policy. These elements will be addressed throughout this report.
- 9.5 Policy 67 of the Development Plan recognises the strategy developed by the Council on a range of renewable energy technologies. This is set out within the Highland Renewable Energy Strategy (HRES) which highlights the potential for pump store technology advising that such proposals are to be considered on its individual merits. There are additional benefits from such investment as highlighted in the HRES, noted earlier, which include for example 'Education and Training,' 'Community Benefit' and 'Local Content'. These remain important considerations and are discussed later in this report.
- 9.6 Policy 67 highlights that the Council will consider the contribution of the project towards renewable energy targets, positive and negative effects on the local and national economy other material consideration including making effective use of existing and proposed infrastructure and facilities. In that context the Council will support proposals where it is satisfied they are located, sited and designed such as they will not be significantly detrimental overall individually or cumulatively with other developments having regard to the 11 specified criteria.
- 9.7 If the Council is satisfied on these matters then the application will accord with the Development Plan.

Scottish Planning Policy

- 9.8 The Scottish Government's positive approach to Renewable Energy is set out in Scottish Planning Policy (SPP) with further advice on renewable energy targets set out in its most recent publication – Scottish Energy Strategy 2017. This reconfirms for example the target of generating the 100% of Scottish demand from renewable energy by 2020. The target is not a cap. Furthermore that by 2030 50% of all energy is expected to be derived from renewables.

- 9.9 There is expectation that the energy targets will be met from a mix of technologies. In particular it highlights the benefits of pumped store that “can store large amounts of power, releasing that energy when demand on the system is high.” The Scottish Government has highlighted the importance of the need of such technology with its identification of such projects being “national development” within the National Planning Framework. The applicant further highlights “As the proportion of electricity generated from less-flexible renewable sources rises, this role will become increasingly important and may begin to include the management of longer term imbalances due, for example, to frontal weather systems.
- 9.10 SPP advises that “Planning Authorities should support the development of a diverse range of technologies, guide development to appropriate locations and provide clarity on the issues that will be taken into account when specific proposals are assessed. Development Plans should support all scales of development associated with the generation of energy and heat from renewable resources ensuring that the area’s renewable energy potential is realised and optimised in a way that takes account of relevant economic, social, environmental and transport issues and maximises benefit.” These elements are presented within the applicant’s EIAR and considered within this assessment.
- 9.11 SPP highlights that when granting permission for renewable energy projects conditions should include for the decommissioning of developments, including ancillary infrastructure. The applicant for this project has advised that the development should be seen as very much a long term commitment. The assumption therefore is that any decommissioning requirements should relate only to the initial ancillary construction works, rather than the project as a whole.
- 9.12 The case for post construction decommissioning has particularly been highlighted within the representation from the Mountaineering Council for Scotland. It highlights its concerns that “many post construction applications by landowners to retain temporary access tracks are granted despite concerns over impact on the landscape”. The 2017 EIA regulations strengthen the case for all offered mitigation such as temporary track removal to be followed through in full. This commitment also needs to be picked up within the assessment of future track retention applications.

Planning History

- 9.13 The current application seeks to enlarge the development as previously proposed and for which an extant deemed planning permission remains valid until 2021. Whilst the planning history gives weight to the principle of such development in this locality, there is still a need to recognise in full the additional impacts that could arise from the current application.
- 9.14 Key changes from the consented project include: -
- Increase in size of the underground waterway system to enable water to be transferred through the system to support the larger generating / pumping capacity;
 - Increase in size of the underground cavern power station to facilitate larger and/or greater number of reversible pump-turbines, motor generators,

transformers and other associated equipment;

- Increased footprint of the lower control works (i.e. screened inlet / outlet structures and stop logs);
- Increase in the excavated material generated by the underground works (tunnels, shafts and caverns);
- Requirement for a surge shaft (and associated access track), to respond to the fluctuations in pressure within the tunnels due to increased flow rates;
- Requirement for a ventilation shaft adjacent to the surge shaft to circulate fresh air through the access tunnel and underground cavern power station;
- Requirement for an intake tower within the reservoir footprint;
- Creation of a temporary haul road to connect the lower reservoir works with the upper reservoir works to enable tunnel spoil (rock), excavated from the underground works, to be transported and used to supplement construction materials at the dam. This impacts more significantly upon existing commercial forests;
- Construction duration increased to 7 years (from 5 years); and
- The flow rate of water being transferred between the upper and lower reservoirs would be greater. However, it is not intended to manage Loch Lochy outwith the existing level range (as per the consented development).

9.15 The earlier consented project was considered acceptable, notwithstanding that there were uncertain elements. This included the need to make progress with a “Rock Disposal Plan” (Condition 3), which in itself was likely to require planning permission and environmental impact assessment. This might also include a direct relationship with another development as highlighted above (para 2.5), any one of which would require its own approval. The supporting information with this application has nevertheless sought to quantify (within the Spoil Management Plan) the scale of surplus rock likely to arise from this project, highlighting a worst case scenario of 3.9 million tonnes of rock disposal.

9.16 Furthermore, and as highlighted within public and community council objections, there is the associated need for a grid connection development (most likely secured through a Section 37 application under the Electricity 1989 Act. Best practice approach to-date allows for these matters to be considered individually through specific applications processes and be assessed on their own merits.

9.17 The initial consent provides a template of expected planning conditions for a project such as this. The existing suit of conditions provides a useful start point for the drafting of conditions for the current application.

Design and layout

9.18 The application has been developed as part of a feasibility and design project making reasonable assumptions based on current knowledge and engineering design. The scale of the current application has been set as an upper limit, but potentially could be less.

9.19 The principal generating elements of the development will be accommodated underground within the substantial cavern carved out of the mountain. The above ground elements would by condition require to be submitted to the Planning

Authority for approval. These include: -

i. Upper Reservoir

- 9.20 The **dam** to create would extend 700m in width, 92m in height. A 4m access track would run across the crest of the dam. The dam would be formed using a rock fill design, with an upstream concrete face, similar in nature to the Glendoe project. Upper control works would be located within the upper reservoir and comprise a **concrete tower**, screens, gates and gate shaft to direct water into the head race tunnel. A **bottom outlet** is required within the dam to provide a means of releasing the compensation flow to the Allt a' Choire Glas. This could be partly buried or located above ground. It would have an external standby generator. It would be served by its own access track and small parking area. Emergency power for the facilities at the upper reservoir would be provided by a standby diesel generator located just inside **the access tunnel**, located to the south of the dam. This tunnel relates to the development and maintenance of the surge shaft and ventilation shaft.
- 9.21 The reservoir is anticipated to hold 25,900,000cubic metres and operate with a drawdown of 64m. The assumed maximum water level in the reservoir is 558.1m AOD, with a minimum water level being 494m AOD. Concerns have been raised within public representations over the potential scarring effect on the foreshore between these contour heights. The degree of visible scarring will in part be determined by the operation of the power station and when and for how long the reservoir is reduced below the upper water limit. Unlike many other hydro reservoirs in the Highland, there is expectation that water will be replaced not just by local rainfall but also through water pumped up from Loch Lochy. Therefore the extent (in time) of any visible drawdown scar at the edge of the reservoir would be minimised by water pumped from Loch Lochy.
- 9.22 The scale of the project below ground requires the provision of a **surge shaft** and a **ventilation shaft** from the cavern power station complex. The above ground element of these structures would be carefully designed to ensure that they are assimilated within the surrounding landscape as far as possible, whilst ensuring public safety and operational security. They appear in design terms at ground surface level like supersized chimneys pots. The external concrete faces of these elements can be rendered to blend in with the surrounding landscape. However It would be important to ensure the finished design works effectively with all necessary security fencing / balustrades etc. This might require landscape bunding to close off views from the wider countryside.

ii. Lower Reservoir

- 9.23 The lower reservoir works on the northern edge of Loch Lochy would include an administration building, jetty, main and emergency access tunnel portals, and the lower control works.
- 9.24 The **administration building** would house the main station control room, together with conference room, offices, storage room, lunch room, kitchen and toilet facilities. This building would have workshops for maintenance work and on-site repairs to removable components of the underground cavern power station

equipment, where practicable. The final size, design and layout of the administration building would be subject to detailed design but it is expected to sit close by the lower access portal. It is expected to be rectangular in form and comprise two storeys. The lower floor would have a above average height allowance to accommodate an internal crane / rack. There is potential provide a well designed block, well articulated with windows to provide natural light. The design of the building should also work with the finished design of the tunnel portals, which should be finished with natural stone cladding. The portals are expected to form a distinct element of the design with the wider lower reservoir being defined by rock cuttings as required to establish the tunnels into lower hill slopes.

- 9.25 The works are expected to provide a **jetty** on the shores of Loch Lochy. A small jetty will be retained as a permanent feature with the project having the potential to establish a larger foreshore jetty during the construction period should rock removal or equipment delivery by canal barge prove an practical option.
- 9.26 There would be three main access **tunnel portals** associated with Lower Reservoir. The main access to the underground features would provide access to the power cavern for day-to-day operational and maintenance use. This would therefore be the largest of the three at 9m high and 8m wide, in order to accommodate the largest pieces of machinery. The other two main portals are related to the proposed tail race where water from the hydro operation would both enter and leave the scheme from Loch Lochy.
- 9.27 A further portal providing emergency access would be located to the north of the administration buildings and lower control works. This would be 4.5m tall by 4m wide. This portal would be the first part of the scheme to be seen by visitors arriving at the lower reservoir works.
- 9.28 By design and also through mitigation measures the intent is to minimise the visual impact of the rock faces created through the construction of the portals and ensuring simple frontages and structures to screen the movement and activity associated with the operation and maintenance of the scheme. This is expected to be achieved by: -
- Retaining the shoreline vegetation as far as possible to maintain a consistent frontage along the shore of the loch, and limit gaps which would have the potential to draw the eye;
 - Planting of native woodland species to restore gaps in the shoreline vegetation and soften the appearance of rock cuttings;
 - Allowing the growth of vegetation on benches and in crevices of higher parts of the rock cutting where practicable / safe;
 - Use of local stone finish for the building and walls to provide continuity; and
 - Retention of a simple frontage along the shore of the loch, using walls and the building to screen the movement and clutter of everyday activity and minimising the need for features such as railings.
- 9.29 Upon completion of construction works, the shape of the rock face would be softened to reduce hard vertical and horizontal edges and corners. Depending on the nature of the rock faces revealed once cut, it is likely that these would have to

be faced or sealed for the safety of those working below. This may require the use of shotcrete (concrete sprayed at high velocity on the rock face). Stone facing may be used on the lower part of the cuttings to give the appearance of retaining walls. The deployment of stone facing at key areas would add considerably to the finished look of the development. It is considered that the Council should request such finished details are secured by condition and thereafter through the procurement process, should the application be approved.

iii. Spoil Management

9.30 No single extraction method has the capacity to accommodate the removal of all spoil material at the rate required. It is therefore anticipated that a combination of options would be required to remove material off site including for example the use of the local road network and the use of the canal. Current estimates suggest likely impact as follows: -

- Road – (1,200 tonnes per day) accessing the trunk road network and allowing access to the A82 (north and south), A86 (east) and A87 (west). This represents 9 loaded vehicles per hour departing the site. Assuming a 7 hour working day) this equates to 120 trips per day; and
- Canal - 3 loaded barges (1,000 tonne barges) per day leaving the site to Corpach, Fort William.

9.31 The existing consent allows for the implementation of a best practical environmental option - final transport and re use of spoil management plan to be submitted and assessed prior to the commencement of the main underground works. The current application seeks a similar approach to be deployed, with the subsequent assessment undertaken in full consultation with the Council and other statutory bodies. SEPA in particular has requested that the finalised condition is amended to ensure: -

- All types of extracted material are covered, and to acknowledge that the material will hopefully be reused rather than disposed of, reference should be made to a “spoil management plan”, rather than a “rock disposal plan”.
- The spoil management plan must be informed by intrusive ground investigations.
- No long term storage on site. Identification and drawings of all temporary storage areas with confirmation of maximum storage periods.
- Clearly defined proposed reuse options, including information on quantity of materials to be used to demonstrate fate of all material to be taken off site.

iv. Access Tracks

9.32 The project advances a series of **access tracks**, principally and initially required for construction, with a significantly lesser requirement for operational needs. It is proposed that initial access tracks for construction are either 6m – 8m wide subject to traffic type usage and volumes. These are all then expected to be reduced in scale to 3m- 4m at the end of construction need. The small scale tracks will link to the surge shafts, whilst the main elements of the development / rock removal require the wider tracks.

- 9.33 The design of the tracks are dependent upon the underlying geology but are expected to be a combination of “cut” tracks (into the ground) or “floating” track where peat depths are usually greater than 1m. Tracks will also be implemented with associated drainage provisions to manage water run off in an effective manner which minimises flood risk and water course pollution. Both SEPA and SNH have guidance on these matters, the former taking into account design requirements where tracks need to cross water crossings.
- 9.34 Where track improvements are required distant from the lower reservoir where rock spoil would be available, for example at White Bridge, rock will require to be won from **local quarries / borrow pits** to aid the initial phases of construction. Five potential sites have been identified at key points associated with access track construction. It would be important to have on site quarries decommissioned and restored, potentially with spoil material generated by the project, where tracks are being retained permanently. SEPA in particular has requested finalised details for each borrow pit (exact location, size, restoration etc.) will need to be covered by suitable condition. This should also ensure that local watercourses and any deep peat is protected with requirements such as a buffer of at least 50m between any watercourses and works and no borrow pits on deep peat. Furthermore, when considering borrow pit restoration it would not be appropriate to create peat depths anywhere near 2m within such voids.

Access and Traffic Impacts

- 9.35 Construction traffic to the upper reservoir works would take access from the A87(T) road at White Bridge (Invergarry), before utilising existing forestry tracks (to be upgraded) and new tracks to the dam site and surge / ventilation shafts. Construction traffic to the lower reservoir works would take access from the A82(T) road at North Laggan, and then along the existing public road and forestry tracks (both to be upgraded). All operational or maintenance traffic would also utilise these access routes (reduced in width post construction), although it is anticipated that the majority of this traffic would require access to the lower reservoir works only. The application also proposes a temporary haul road between the lower works and the upper reservoir to enable spoil (rock) to be transported and used in association with the construction of the dam.
- 9.36 Transport Scotland is content with what is proposed. It notes that neither total nor HGV flows are predicted to increase by more than 30% on the A82(T) North, A87(T) Invergarry, A82(T) Spean Bridge or A86(T) east of Spean Bridge. Consequently, no further impact assessment was undertaken. While total traffic flows are anticipated to increase by less than 10% at the A82(T)/ Kilfinnan Road junction, HGV flows are predicted to increase by just over 30%. Consequently, a detailed assessment has been undertaken in relation to the significance of environmental effects.
- 9.37 The results of the above assessment indicate a requirement for mitigation at the Kilfinnan Road / A82(T) junction. This will involve the widening of Kilfinnan Road on its north side to permit the two-way movement of HGVs, so reducing delay to drivers on the A82(T). Appropriate traffic management measures would be put in place on the A82(T) Kilfinnan Road junction, on Kilfinnan Road and on the forestry

paths / tracks to avoid conflict with general traffic and pedestrians. Typical measures would include HGV Turning and Crossing signs and/ or banksmen and pedestrian / cyclist warning signs.

- 9.38 Transport Scotland has highlighted planning conditions be applied to safeguard the trunk road network and maintain road safety. It also relies upon the mitigation offered by the applicant as set out in the draft Construction Environmental Management Plan (Traffic and Transport) requiring further consultation with the police and road authorities as traffic plans are finalised.
- 9.39 Transport Planning has highlighted that Kilfinnan Road is a single track road with passing places. The geometry of the road comprises tight horizontal bends and an undulating vertical alignment. There is a Traffic Regulation Order (TRO) in place on the Kilfinnan Road that limits the length of vehicles that can legally drive on it to 30 feet (9.1 metre), because longer vehicles have difficulty manoeuvring. Therefore the road geometry and TRO restriction may have an impact on the type and size of general and abnormal construction traffic vehicles that can utilise this road.
- 9.40 The developer proposes mitigation works to the approach to the Kilfinnan Road / A82 junction to permit the two-way movement of HGV's. Improvement works to the Kilfinnan Road are proposed in the Schedule of Mitigation, however the nature and extend of the works have not been fully designed at this stage. It is likely that significant improvements are required to the current road to ensure road safety and usage by all construction vehicles, some of which will include abnormal loads. In more specific terms the road would be widened potentially to 8m and three bridges strengthened. Upon completion, this section of road / forestry tracks would be reinstated to a width sufficient to maintain operational and maintenance activities. This is assumed to be approximately 6m for the road and 4m for the forestry track.
- 9.41 The forestry road incorporates the Great Glen Way. It is proposed to provide a new higher path to run parallel to the existing track, to separate walkers and cyclists from the works. This pathway would be constructed as an amendment to the existing Great Glen Way and would remain as the permanent path. Mountaineering Scotland would be happy to assist with advertising to the hillwalking and climbing community any diversions or similar that are put in place. It looks favourably on the suggestion that alternative recreational access routes in the forestry sections be created to the standard of the Great Glen Way and could remain in place as a permanent realignment to this section of the Great Glen Way. It would expect that planning consents confirm this and state that any such undertaking be of comparable quality, or greater, regarding the experience of the views and the landscapes, and not just the quality of walking surface.
- 9.42 The above road improvements would affect a number of properties and facilities. There is a mixture of residential (26) and tourist (18) properties that lie close to the road side to be improved. Some properties lie above the existing track and face south but most lie below the road and thereby have "rear" elevations to the road. The access improvements will affect existing access and roadside parking arrangements and in one instance, at North Laggan Farm House, may require an existing traditional barn to be demolished. The upgrade to an 8m wide carriageway should not be difficult to achieve, but will require in some instances careful

management so as not to impact on private water / drainage arrangements. Acquisition of the land for these localised improvements would be for the developer to secure. The access improvements to the road network will be retained in the long term to the benefit of the local community.

- 9.43 The existing forestry track from the A87 at White Bridge (Invergarry) to the edge of forestry plantation and new access road to the dam site would require widening to 8m during construction, but would be reinstated post construction to the minimum width sufficient to enable heavy goods vehicles to access the upper reservoir for maintenance purposes. Strengthening of two bridges along the initial section of track is also anticipated, as well as the removal of some coniferous forestry to facilitate widening of existing tracks.
- 9.44 Transport Planning has advised that should the application be supported the following provisions are secured:
- Prior to the start of any works a Draft Construction Traffic Management Plan (CTMP) be submitted for the approval of the Planning Service in consultation with the Roads Authority.
 - A wear and tear agreement in accordance with Section 96 of the Roads (Scotland) Act 1984 will be required under which the developer is responsible for the repair of any damage to the Council's road network that can reasonably be attributed to construction related traffic.
 - Obtain Road Construction Consent from the Highland Council, as the Roads Authority under Section 21 of the Roads (Scotland) Act 1984 prior to any work commencing on or adjacent to the public road network.
- 9.45 There is the potential to utilise the Caledonian Canal for both the delivery and removal of substantial volumes of equipment and materials. However, use of the Canal is but one option which would need to offer practical and economic advantages through the project procurement process. The economics of this approach will clearly relate to factors such as the use of surplus rock at sites elsewhere along the canal and the need to minimise double handling.

Water and Drainage

- 9.46 The development itself will have significant impact on the existing local water environment through the storage and release of water in the expanded reservoir proposed on Loch a Choire Ghlais, exchanging water within Loch Lochy and compensatory flows within the Allt a Choire Ghlais / Kilfinnan Burn. These matters are addressed in the main by SEPA under the Controlled Activities Regulations (CAR) licensing process and the requirements of the Water Framework Directive (WFD). SEPA has not raised any objection to the principle of the development and has highlighted fisheries, third party water users and protected species and habitats within the bed and banks of the burn and inundation area are assessed as part of the CAR determination process. It also controls the rate at which water will be abstracted, fish passages, compensation flow and method statements and the timing of works which will directly impact the burn and therefore planning conditions for these elements will not be required.
- 9.47 Scottish Water (SW) has advised with regard to water quality that the proposed

scheme, including all access routes will take place within a relatively large catchment so there is considerable dilution and that the activities are sufficiently distant from an existing SW abstraction point. The proposal will thereby present a low risk to water quality. However it is essential that water quality is protected. SW would request to continue to be involved in the planning process as the development progresses and to be consulted on the expected Construction Environmental Management Plan (CEMP) to ensure appropriate protection measures. It should be included within appropriate documentation that, in the event of an incident occurring that could affect SW interests.

- 9.48 A number of properties at Kilfinnan / North Laggan rely on private water supplies collected from local resources generally upstream of the existing main forestry tracks. These supplies should remain unaffected by the development, but access improvements to the existing forestry road must, through conditions, safeguard existing private infrastructural arrangements. In a similar manner there are private water supply interests that may be impacted by the selected route through the woods by White Bridge. It is important that by condition such interests are protected by the deployment of monitoring proposals, remedial actions and alternate water supply proposals.
- 9.49 The development will provide its own water supplies and drainage arrangements for the workforce during construction and also at the operational phase. Details on these matters remain to be provided, but as with similar projects across remote locations within the Highlands, appropriate services can be provided without adverse impacts on the environment or local community.
- 9.50 SEPA has highlighted the need to minimise impact on watercourses. This can be achieved by design and micro-siting mitigation secured by condition; for example requiring all new and replacement watercourse crossings to be designed as bottomless arch culverts or traditional style bridges designed to include mammal passages and to pass at least the 200 year storm event flow. Where replacement crossings are proposed it should be demonstrated that any change in size does not result in an increase in flood risk to any sensitive receptors downstream.
- 9.51 SEPA welcomes the fact that, with the exception of watercourse crossings at the Upper Reservoir and Lower Control works, a 50m buffer will be applied between watercourses and any proposed construction activities or infrastructure.
- 9.52 Scottish Water has also advised on its interests in respect of water quantity and in particular with regard to the current operation of the Mucomir Barrage (including baseline level and flow data) and how this could change. It has requested that detail of proposed modifications to the Mucomir barrage be provided as part of a condition of consent. SW wished to be consulted regarding this condition of consent to ensure that the developer provide evidence in the form of water levels and discharge flow data to show there would be no negative impact to the River Lochy as a result of any modifications of the barrage.

Peat / Peat Slide Risk

- 9.53 The footprint of the development will have significant impact on peat, particularly through the construction of the dam, reservoir and associated construction tracks.

The proposed design has sought to minimise the degree of impact on a number of features including the water environment including watercourses and flood risk areas, valued habitats, peat, and many other receptors.

- 9.54 SEPA has highlighted that although the level of peat probing information does not meet the current Scottish Government guidance, it is content that sufficient information has been collected to inform the layout and application process. With the exception of a couple of small areas on the temporary track it is content that the layout of the development avoids deep peat. It considers that the draft Peat Management Plan provides a good level of detail for determining the application and welcomes the proposal for a finalised plan to be agreed by condition. This is expected to more fully address:
- more peat probing in areas where deep peat has been encountered to inform micro-siting including and dam site establishment to avoid deep peat.
 - finalised micro-sited layout plan to show location of all temporary peat storage areas.
 - finalised proposals for peat disturbance within the inundation area to be demonstrated to be minimised as much as possible to minimise carbon loss.
 - Highlight best environmental options by explore other uses of the disturbed peat material which could delivery other benefits for example peat restoration works.
- 9.55 In a similar manner SNH has noted that an assessment of the impacts of the proposal on carbon rich soils, deep peat and priority peatland habitat is limited. However it is able to conclude that the overall effect of this proposal on these aspects of peatland is no greater than the overall effect of the previous iteration of this scheme. The policy change since the previous scheme was consented will affect the weighting given to the effect in the decision making process rather than changing the effect on the peatland resource.
- 9.56 The Scottish Government also requires to consider the risk of peat landslide events for elements of the proposal and its infrastructure. Peat Landslide Hazard and Risk Assessment(s) (PLHRAs) have been submitted by developers as part of the EIA assessment. The ECDU commissioned AM Geomorphology Ltd to technically assess the submission.
- 9.57 The assessment provides a general view on the distribution of peat across the site and its relation to slope angle. Deeper peat is generally observed on the lowest gradients in the centre of the site, being thin or absent elsewhere. Three areas of access track (“AT4 – Edge of Forestry to Dam”, “AT5 – Surge / Ventilation Shaft”, “AT6 – Lower Reservoir Works – Dam”) are identified to have medium or high stability risk ratings at some point along their lengths. In general, the approach taken to calculating likelihood is acceptable. However there are some inconsistencies in the report which it is suggested is reworked should the project be supported. The review highlights no requirement for planning conditions.

Natural Heritage

- 9.58 There are no statutory designated sites within the development area. A number of sites designated for their biological or geological interests lie within 10km. SNH has advised, however, that there is no connectivity between the proposed development

and any of these sites.

- 9.59 SNH is content that adequate surveys have been undertaken for relevant protected species. Signs of otter, water vole, pine marten and red squirrel were all found within the study area, indicating the presence of these species. It agrees with the conclusion in the EIA report that there is potential for adverse impacts on these species as well as bats as a result of this proposal. It recommends that, in addition to the mitigation measures listed in the ES, the following measures are also taken in order to avoid the need for a licence:
- That all contractors are made aware of the possible presence of wildcat frequenting the site and the law for EPS.
 - Should the pre-construction surveys identify a holt or den site then all works within 250m of the holt or 200m of a den site should stop immediately and our Dingwall office contacted for advice.
 - Should a bat roost be found during the pre-construction survey further advice should be sought from our Dingwall office.
- 9.60 SNH is also content with the bird survey work undertaken and it agrees with the conclusions drawn about the impacts on the ornithological interest of the site. In particular with appropriate mitigation, the impacts on eagles will not lead to an adverse impact on the favourable conservation status of the golden eagle population in the Natural Heritage Zone (NHZ 7 Northern Highlands). The final outcome is, of course, dependent on the developer undertaking the mitigation measures properly. SNH has recommended the works proposed are undertaken strictly in accordance with the mitigation proposed. SNH notes other Annex 1 species are known to frequent the area. However, it is its view that their status is unlikely to be adversely affected by this proposal.
- 9.61 SNH has concluded that there will be significant loss of habitats of national and international importance from the development. However, SNH feel these losses can be accommodated within a regional and national context subject to suitable mitigation measures being provided in a Construction Methods Statement and Habitat Management. It recommends, should the application be consented, that prior to works commencing on the site a Habitat Management Plan (HMP) must be developed and approved by the Planning Authority, in consultation with SNH.
- 9.62 Of particular note is the assemblage of bryophytes in the West Highlands, which is of national / international importance, yet no survey results for any lower plant types have been presented in the EIAR. SNH has a reasonable list of bryophytes available from a previous (1988) survey of the Kilfinnan Burn section of the site. However, bryophyte interest across the remainder of the site is largely unknown. Whilst the resultant effects of this proposal on these interests will be no greater than that of the previously consented scheme there are known locations of lichens and/or bryophytes of conservation concern where the track meets the River Garry and along north side of Loch Lochy. Accordingly SNH recommends a survey of the access track and Kilfinnan Burn areas is carried out by a competent lower plant specialist. This may just require a walk over of the area to confirm lack of suitable habitat and some targeted detailed survey.
- 9.63 SNH is aware of the presence of a very rare Biodiversity Action Plan (BAP) and

Scottish Biodiversity List fungus along one of the access tracks. The very rare (fruiting) fungus *Cantharellus melanoxeros* (Blackening Chanterelle) has been recorded from along the side of one of the tracks leading to the potential development. This is only the second known site in Scotland and there are few other records in England and Wales. This type of fungus is symbiotic with the mature conifer trees to the south of the track and sensitive to loss of trees, disturbance and soil compaction. SNH recommends that a small track diversion in this location may be required to avoid damage of this species. This can be addressed within the satisfaction of conditions .

- 9.64 Both SNH and SEPA have highlighted the impact of the development upon Ground-Water Dependant Terrestrial Ecology Systems (GWDTE'S). Considerable mitigation can be made by design and mitigation. For example "flushes" (flush habitats) could be protected by the deployment of a 250m buffer. However SEPA has also highlighted that when a micro-siting layout decision has to be made between impacts on acidic (M6) and basic (M10) flushes. SEPA would recommend protection of the M10 habitats as they are generally rarer and more botanically important.
- 9.65 Any additional appropriate mitigation should be written and included in the final Construction Environmental Management Plan (CEMP). Overall such an approach recognises the value of any project approval requiring the appointment of an the Ecological Clerk of Works (ECOW) post is made full-time and should be given the powers to stop construction work if necessary.

Fishing Interests.

- 9.66 The lower reservoir has a number of fish interests particularly salmon, trout and Arctic Char. Marine Scotland (Science) has requested that prior to any construction work starting appropriate fish survey work in Loch Lochy be undertaken on the charr population, specifically where its presence and where it is likely to spawn. It further highlights that depending on the scale and energy of the operations determine the potential to produce high levels of underwater noise which could impact on fish and more details will need to be provided for consideration before work starts on the predicted underwater noise fields with whatever best practice will be in place and the likely effects on fish.
- 9.67 A number of concerns have been raised by the Lochaber District Salmon Fishery Board which could impact on fish within the immediate catchment and further downstream within in the Rivers Spean and Lochy. It highlights:
- Risk of leaching of metal from construction, particularly aluminium in the water which is lethal to fish.
 - Rapid change of water levels in Loch Lochy could increase the risk of fish farm release into the local waters, thereby impacting on local stock.
 - Water level changes will almost certainly destroy spawning habitats within the small burns related to Loch Lochy.
 - Flow modification could impact on commercial salmon fishery and fish habitat. The means of water delivery and fish passage at Mucomir power station need design and mutually agreed at this early stage.

- 9.68 The applicant has advised that there will be changes to the operational management of Loch Lochy, but only within existing consented parameters. While it is important that risks from the project are managed by conditions effective environmental management can best minimise concerns.

Forestry

- 9.69 The development will have impact on existing holdings managed by Forestry Commission Scotland both at Garry Forest White bridge (access tracks to upper reservoir) (13.63ha) and on the northern shores of Loch Lochy. It is the latter plantations, particularly around the lower reservoir area / tunnels outlets, which are most impact by the development. With advice and input from the Forestry Commission at this location it is necessary to fell a sizable block of woodland at the foreshore / Clunes Forest (48.69ha).
- 9.70 Once construction has been completed, replanting of woodland areas will be undertaken. It has been identified that 21.51ha of woodland would be lost as a result of the development and there is a commitment from the applicant to provide compensatory planting in full and within Highland. This can be addressed by condition.
- 9.71 A small area of PAWS (Plantations on Ancient Woodland Sites (PAWS) may be affected by construction of the temporary haul road between the lower reservoir works and the dam. It would be important, as recognised by the applicant's proposed mitigation that there needs to be appropriate storage and restoration of such forest soils, if the impact can not be mitigated (e.g. by avoidance) in the final design.
- 9.72 Forestry Commission Scotland is content with the proposed project but only with a commitment given to restocking as highlighted above including a commitment to new plantings at the earliest possible opportunity.

Landscape and Visual Impact

- 9.73 Notwithstanding the extant consent for many elements of this project, it will be important to recognise the additional impact that this proposed development will have should the application be approved.
- 9.74 The development has two main above ground development sites. The design and layout of each is dictated by many engineering requirements, but also from the experience of four other pump store schemes in North Wales and Scotland as well as the many hydro-schemes in the Scottish Highlands.
- 9.75 The dam is the most significant above ground structure and is similar to that developed at Glendoe, east of Fort Augustus. External structures are to be limited in number by placing for example welfare facilities underground. The tunnel portal on the south side of the dam will be finished in local stone with reinstated vegetation over the top. The large-scale development, simple in design, should sit comfortably with the local landscape (Corrie – set in mountains). The Zone of Theoretical Visibility (ZTV) indicates that the dam will not be extensively seen other than eastwards from the Choire towards

Aberchalder. It will not be visible to the lower areas (floor) of the Great Glen. The dam's layered rock face will however be visible, in part, to drivers / passengers heading south on a very short section of the A82(T) road at Aberchalder. (Site Visit Stop 1)

- 9.76 The lower reservoir will incorporate the tail race outfall structures, jetty and administration buildings. These will be low-lying on the shoreline but highly visible to road users on the southern shore of Loch Lochy using the main A82(T) road. Final design details have not been provided as elements of these will be dependent upon many engineering decisions yet to be made within the underground components of the project. However it is likely that the administration building including offices and workshop facilities, set close to the shore line, could help screen facilities to the rear, such as the tunnel access and its retaining wall. These latter elements are to be built to a high design quality, with the portal and walls being finished in local stone, set into landscaped abutments merging with the local woodlands. The enlarged project will result in a more significant landscape and visual impact on the north shores of Lochy highly visible to receptors (A82(T) road travellers) on the south side of the loch (Site Visit Stop 7) and those travelling through the Caledonian Canal / Great Glen.
- 9.77 Within the supporting EIAR the applicant presents its assessment of the development, including its impact during construction and at the operational stage on the designated Loch Lochy and Loch Oich Special Landscape Area (SLA) and the landscape features of Lochaber (Landscape Character Types (LCT)). The assessment presented in the EIAR is seen as being fair in its interpretation and can be relied upon.
- 9.78 The visualisations provided for this application are a substantial improvement on the artist's impressions consultees had for the original application. They have however been criticised within public representations. Furthermore consider that the visualisation produced underestimate the visual impact of some of the elements of the proposal, specifically the lower reservoir works as viewed from Loch Lochy. (Stop 7 on Site Visit). Here the visualisation illustrates what might be considered 'best case scenario' where the exposed rock face and vegetation reinstatement practically hides this part of the development. SNH advises that from its experience the exposed face and benches will be substantially lighter in colour and more prominent than is shown. In addition the rendering of the dam face as illustrated on Figure 3.6b is considered to be overly optimistic. The visualisation appears to practically hide the dam altogether in the landscape whereas in reality this large stone faced wall will be highly likely to be visible from this vantage point. Should the project be consented then particular attention needs to be given to the final design and the materials choice used in any construction.
- i. Special Landscape Area Impact
- 9.79 The assessment has identified that during **construction** there would be a Moderate and therefore significant impact to the Loch Lochy and Loch Oich Special Landscape Area (SLA), resulting from the presence and magnitude of construction activities on the shore of Loch Lochy and within Coire Glas. This will result in a temporary reduction of scenic quality in the areas affected and may

also affect some of the special qualities of the SLA.

9.80 Once **operational** and with reinstatement and mitigation works established, it is considered that impact would reduce to a “minor” adverse impact. Overall the assessment considers that the integrity of the Council’s SLA designation in the long term would not be significantly affected. The EIAR recognises that there would be a localised reduction in scenic quality to the area around Coire Glas potentially resulting in a reduction in the perceived value of this part of the much larger SLA.

9.81 This particular application increases the expected impact both during construction and in operation on account of the additional tracks and ventilation shafts. The tracks and lower reservoir area conflict with the Council’s policy particularly for the many receptors travelling on the A82(T). Whilst the experience will be short lived and the development is relatively minor when taking scale and magnitude of the Great Glen into account, it will remain as significant impact upon an area within the SLA.

ii. Landscape Impacts

9.82 In respect of landscape character, the EIAR highlights that during **construction** there would be significant impact upon five of the ten Local Character Zones (LCZs). Two of these, LCZ 1, Steep-Sided Valley with Loch, and LCZ 4, Corrie, are anticipated to experience substantial adverse impacts as a result of the presence of a large concentration of construction works associated with the outlet area, and dam. The other three LCZs would experience moderate adverse impacts either directly (LCZ 2, Settled Valley Floor, and LCZ 7, Rolling Moorland), resulting from the presence of construction access routes, or indirectly (LCZ 3, Mountain), resulting from the presence of extensive construction activities in the nearby landscape context. All other LCZs would experience slight adverse or neutral impacts which are not considered to be significant.

9.83 During **operation**, the impacts would be reduced. However there would be continued significant substantial adverse impacts to LCZ 4, Corrie as a result of the presence of the dam, reservoir and tracks in a previously undeveloped landscape with wild characteristics. LCZ 3, Mountain is also anticipated to have some long term significant adverse impacts. However, these are expected to be moderate and localised to the higher summits and ridge surrounding Coire Glas.

9.84 SNH had previously advised that it considers that the upper reservoir and dam will have a major negative impact on the regional and local landscape character in this locality during both construction and operation. It has advised that views from the Munro, Sron a’ Choire Ghairbh, and the Corbett, Ben Tee will be significantly affected. It considers that good design and restoration techniques will not be able to mitigate the landscape and visual impacts of this proposal due to the location of the upper reservoir / dam within a highly sensitive rugged mountainous landscape.

iii. Visual Impact

9.85 The EIAR presents an assessment of the visible impact of the development on

local receptors including from local housing, tourist accommodation, hotels, roads and other transport, footpaths / walking routes, mountain tops / viewpoints and other outdoor locations.

- 9.86 Clearly at the **operational** stage of the development the visual impact will be significantly adverse to a few of these receptors, particularly from the changed of view from the dam and access tracks from a number of walking routes and mountain tops. The impact however is considered to be acceptable given the range of hydro schemes that are already experienced in a very positive way across Highland. The lower reservoir area when operational will only have adverse impact particularly upon accommodation and road users to the south of Loch Lochy and pleasure craft and other users of the Canal. A high design quality of these structures / building can ensure the visual impact is made acceptable.
- 9.87 It is however the construction stage of this development which will have most adverse visual impact on a number of receptors. This may be in combination with other factors such as noise, dust, etc. to be considered later in this report. Highlights of the assessment of visual impact on key receptors during construction, as presented within the EIAR, are considered below.
- 9.88 At Kilfinnan and North Laggan a mix of housing and tourist accommodation have views looking south and will not have principal views of the main elements of the development. However, these properties are largely located adjacent to the existing single track road that would be upgraded and used for access to the lower reservoir works and as such many would receive views of the upgrading works to the road and construction traffic.
- 9.89 For some properties this impact is moderately adverse and therefore significant. On the opposite shoreline a mix of residential and tourist accommodation along the A82 on the south shore of Loch Lochy have a predominantly north-westerly aspect. Corriegour Cottage, Letterfinlay and Letterfinlay Lodge Hotel would be less. The Letterfinlay Cabins would receive more direct and open views towards the structures on the opposite shore of the loch resulting in Moderate Impact (significant) during construction.
- 9.90 The other principal receptors affected by the development include recreational users of local footpaths, walkways, including the Great Glen Way, canoe trails and hill-walkers principally those which access the mountain tops of Ben Tee and Sron a Choire Ghairbh. The principal adverse visual impacts will occur during the construction stage, which will very much recede when the development is in operation and all mitigation / ground recovery works have been undertaken. That said it will leave what is a relatively undeveloped area of Lochaber / Great Glen Area with a very significant visible man-made development both at the upper and lower reservoirs. The Mountaineering Council of Scotland has indicated it does not object to the scheme but holds concern about the visual impact of the revised plans. It considers that any restoration must be of the highest standard, with a bond being posted to ensure completion to that standard.

iv. Wild Land

- 9.91 Since the original application was submitted and consent granted Wild Land

Areas (WLAs) have been identified and descriptions been produced for each area. The site boundary for the proposal slightly overlaps with the far eastern extremity of the Kinlochhourn – Knoydart – Morar WLA however, no works are proposed within the WLA itself. The limits of the new impoundment will lie approximately 300m from the WLA boundary. The surrounding mountains have distinct qualities of wildness because of their unmodified character and relative seclusion which is enhanced by the ruggedness of the terrain.

- 9.92 SNH is in agreement with the LVIA that there will be significant impacts on the experience of wildness within the immediate vicinity of the proposal, however these impacts are limited in extent and are not considered to result in significant impacts on the qualities of the WLA.

Economic Impact.

- 9.93 When developed and in operation it is estimated that an average of 20 staff would be employed at the facility on a permanent basis. This equates to a Gross Value Added (GVA) impact of £1.1 million to the Highlands and £429k to the rest of Scotland per annum. During the construction phase, potential extended over a period of seven years, more significant employment impact will arise. These have been estimated to average 500 people deployed each year.
- 9.94 A high proportion of the employment impacts would come from the upper reservoir works, additional earthworks and creation of the underground tunnels and cavern powerhouse, all of which require extensive digging and support work. It is estimated that the benefits to the Highland economy in terms of GVA this equates to nearly £81.5m and for the rest of Scotland totalling £124m.
- 9.95 The applicant, in essence SSE, brings a considerable track record of economic development across Scotland and is effective in ensuring its developments offers sustainable economic benefits across the Highlands and Scotland. This can utilise the Development Initiatives in the Great Glen (DIGG) working group experience established in the area including the main public bodies and major developers. In this manner a wide range of harder to measure strategic economic benefits associated with the project can arise within the local supply chain, opportunities, pre-development effects, income effects, exchequer impacts, perception benefits and community benefits.
- 9.96 However, not all impacts from the proposal will have a positive economic impact. There are tourist accommodation businesses in the local communities of Kilfinnan, Laggan and Invergarry that could experience adverse impact through loss of its traditional customers on account of construction impacts. However there is the potential for such businesses to adapt to assist with the expected influx of workers associated with the project. The positive economic impact of the Glendoe hydro project and numerous wind farms across the area is well known by many local businesses (B&B's, hotels, property lettings, shops etc.) who have benefited from major construction works.
- 9.97 The Environmental Impact Assessment (EIA) Report highlights potential impact on walking routes and advances proposals including the permanent realignment of the Great Glen Way. The Mountaineering Council for Scotland highlights the

potential impacts to recreational users from the proposals agree with the need to mitigate potential significant impacts through the use of alternative walking routes involving discussion with stakeholders needs to take place. It adds that access through all the proposed site needs to be managed to facilitate passage, not just for existing infrastructure and Core Paths, but for informal access to the tops and ridges too.

- 9.98 Site staff require to be briefed on access rights and responsibilities, and how to manage recreational access outside of the formal path network. It requests a planning condition to secure an Outdoor Access Management Plan addresses the potential disruption to climbing the two Munros, Sròn a' Choire Ghairbh and Meall na Teanga, and Ben Tee. The Mountaineering Council for Scotland would be happy to assist with advertising to the hillwalking and climbing community any diversions that are put in place. Such an approach is consistent with the Council's approach to such project which also requires involvement of the Access Officer.

Cultural Heritage

- 9.99 The potential impact of the development on the archaeological and cultural heritage of the area would be slight. Only one archaeological site, 10, Coille an t-Salaich farmstead will be directly affected by construction of one of the upper reservoir construction compounds, located in existing forestry plantation. There may be damage to as yet unlocated minor features associated with the township of Glas dhoire, but the township buildings themselves would be unaffected. The visual impact on the canal and locks would be slight and can be minimised by good design of the existing track upgrading and the site compound and accommodation areas associated with the lower reservoir works. Mitigation has been proposed involving further investigation to locate and record minor features associated with these features. These can be secured by conditions.

Construction Impacts

- 9.100 A development of this nature has a number of significant construction impacts in addition to the construction of the generating facility itself. These include the formation of access tracks leading to the development; the opening of borrow pits to provide material for the access tracks and the dam; construction compounds and laydown areas, jetty facility and workers camps. In some of these locations there will be a need for the parking of vehicles and equipment, as well as storage for fuel, oils, temporary offices and welfare facilities.
- 9.101 The supporting EIA Report presents a draft Environmental Construction and Management Plan (CEMP) to be completed and adopted as the project moves from approval stage to the construction stage. The plan seeks to ensure that all construction activities are undertaken in a manner which best protect the local environment, habitats and watercourses and deliver the agreed mitigation measures agreed with statutory consultees. An agreed Construction and Environmental Management Document (CEMD), similar to the proposed CEMP, can be secured by conditions attached to any permission. This would address matters such as worker safety, given that the workforce will be operating in a largely isolated rural location, which can experience adverse winter weather.

9.102 Whilst working hours on the project above ground are to be limited to normal daytime working hours, the below ground works are expected to operate 24 hours a day, seven days a week. Working underground, except in its initial ground breaking days, will have limited impact above ground. Conditions to any permission can ensure appropriate safeguards to minimise the impacts of above ground operations beyond the development site. This can control such activities as blasting, rock removal activities, noise, vibration, dust and lighting. Housing and tourist accommodation within the communities of Kilfinnan, North Laggan and Glengarry would be most affected by these impacts, particularly passing construction traffic. Localised site specific mitigation measures could assist in reducing the impact of construction and construction traffic including for example the erection of noise barriers.

Other material considerations.

9.104 There are no other material considerations.

10. CONCLUSION

10.1 The applicant highlights hydro power is a very flexible method of electricity generation due to its ability to rapidly start and stop without constraint. Pumped storage hydro schemes add to this the ability to consume and store large quantities of energy, making them the most flexible of all electricity generation technologies. The role which pumped storage hydro has traditionally played in power network management is primarily in managing relatively short term differences between electricity supply (generation) and demand (consumption). However as the proportion of electricity generated from less-flexible renewable sources rises, this role will become increasingly important.

10.2 Within the National Planning Framework (2014) Scottish Planning Policy (2014) and other Government Advice e.g. Scottish Energy Strategy (2017) there is considerable support for renewable energy development and projects that help to maximise renewable energy capabilities. The Council too within its Development Plan (Policy 67 of the HwLDP) and the Highland Renewable Energy Strategy has policies which support renewable energy development, including pumped storage. This support is not unconditional, requiring the full assessment of projects against a number of planning criteria which must safeguard the local environment and consider balancing arguments in respect of its economic and social impacts.

10.3 The application has drawn a small number of objections particularly from parties who live in the vicinity of the development, particularly the lower reservoir. It also has an objection from Glengarry Community Council. A significant concern is the impact of the proposed construction works associated with this project including widening of the local access roads which currently serves the local community and the expected impacts arising from the removal of significant volumes of rock from the underground workings to an as yet unspecified final location. These two elements in particular will impact on the quiet rural amenity which residents enjoy and on which many rely for their tourist enterprises.

10.4 Details within the application on these two key elements including rock disposal and improvements to the local road network are sparse. The applicant has

identified a number of projects and partners which might be used for rock disposal and provides calculations on the traffic impact of vehicles / canal boats moving 3.9 million tonnes of rock over many years. The improvement of the local road network, including existing forestry access tracks will have more immediate impact on individual properties from North Laggan to Kilfinnan and a shorter length at Glengarry. The impact of these works will be for a short time period, at start of any development, but will leave an improved road network as a legacy. A number of mitigation measures are tabled to ensure that the impact on existing housing and tourist accommodation is lessened including controls over working hours. Without doubt the construction impact on local properties is a significant consideration which needs to be recognised, although the potential haul road between the Lower Reservoir and Upper Reservoir will reduce the impact slightly.

- 10.5 In addition there will be a number of impacts on valued tourist resources that also operate in this locality, principally the Great Glen Way, but also a number of other footpath routes, canoe trails and recreational sailing interests on the Caledonian Canal. This impact too will be greatest during the construction phase of the development, but it also will have longer term impacts with the presence of significant elements of the development, principally the dam at the top reservoir and tail race area / administration building on Loch Lochy. Mitigation is tabled to ensure continued access along the route on the Great Glen Way, via a permanent path parallel with the existing route.
- 10.6 SNH has highlighted in its views that the development will have significant impact on the local landscape. SNH acknowledges that even when using good design the impact of the dam will adversely affect the immediate rugged mountain landscape, particularly as viewed from local footpaths and hill tops including one Munro and one Corbett. It is also recognised that there will be a reduction in the scenic qualities of part of the Council's Loch Lochy and Loch Oich Special Landscape Area. Furthermore the dam will be seen from a short section of the A82(T) road at Aberchalder, particularly by south bound travellers. Users on this principal road and valued tourist route will also have greater impact from the facilities on the shore line of Loch Lochy, particularly when under construction. When operational this impact overall is not regarded as being significantly adverse.
- 10.7 SEPA and SNH have not objected to the application, recognising that their interests in the local water environment, peat, habitats and a range of protected species can all be managed effectively using planning conditions; the principal requirements being the need to have a site specific Construction and Environmental Management Document (CEMD), Peat Management Plan and a Habitat Management Plan approved prior to the commencement of development. Both agencies recognise the need for the applicant to submit their Rock Disposal Options for assessment and determination. A number of additional surveys in respect of plants and fish will also be required to ensure particular interests are recorded / safeguarded. Given that the proposed maximum / minimum water levels in Loch Lochy are unchanged the impact on downstream fishing interests are not expected to be significant.
- 10.8 The development is expected to impact on the local economy both positive and negative. It will bring forward a significant initiative by a valued company with

many assets in the Highlands, which has implications for the grid network and many other investments in renewable energy. There is potential for local residents to gain from an investment of this magnitude, including associated education and training programmes as well as direct and indirect employment. The downside to the local economy is the adverse impact on some local tourist accommodation businesses, particular during the construction phase.

- 10.9 Notwithstanding some short comings in the submitted details associated with this project, the main impacts of the development are clear and understandable. There are considerable benefits with this type of project and strong support for such investment within Government and Council policy. Also to be recognised is the extant planning permission for this project albeit it at a reduced, but still significant scale.
- 10.10 The history of the Highlands is one that includes the development and operation of hydro electricity. Such investment will have impact to the local and national economy both in the short and long term both positive and negative. There will be an adverse impact on the local landscape, including an area designated as a Special Landscape Area. These adverse impacts will be significantly more pronounced during the construction stage than the subsequent operational stage. Many of the construction impacts can be mitigated to a degree and managed, particularly with regard to the impact on existing residential properties.
- 10.11 The application can be supported in the context of the Council's Development Plan and in particular it's Policy 67 Renewable Energy. All relevant matters have been taken into account when appraising this application. It is considered that the proposal accords with the principles and policies contained within the Development Plan and on balance is acceptable in terms of all other applicable material considerations.

11. IMPLICATIONS

- 11.1 Resource: Not applicable
- 11.2 Legal: Not applicable
- 11.3 Community (Equality, Poverty and Rural): Not applicable
- 11.4 Climate Change/Carbon Clever: Not applicable
- 11.5 Risk: Not applicable
- 11.6 Gaelic: Not applicable

12. RECOMMENDATION

- 12.1 It is recommended that the Council raise **no objection** to the application, subject to conditions being attached to any approval by Scottish Ministers. A list of draft conditions are presented below which can be passed to the Scottish Government for its consideration.

Conditions and Reasons

1. The Development must be carried out in accordance with the plans and details set out in the Application and supporting Environmental Impact Assessment Report (including the submitted schedule of Mitigation), and in compliance with the following conditions.

Reason: To identify the terms of the development consent and the need for additional approvals.

2. Prior to the commencement of development, final design details for the following elements of the development must be submitted to the Planning Authority for approval. The Planning Authority will be expected to consult with SEPA, SNH and other relevant authorities on these details. All work must then be carried out in accordance with the approved design details unless otherwise agreed in writing with the Planning Authority.

- Dam and upper reservoir, including intakes and spillway;
- Tunnel portals and vent shafts;
- Cavern power station, substation and welfare facilities;
- Tail race;
- Temporary and permanent jetty and supporting quayside infrastructure on Loch Lochy;
- All above ground facilities including administration buildings and associated external infrastructure and parking areas;
- All roads, access tracks and water-crossings serving the Development including details on amendments to the Great Glen Way and local forestry tracks;
- Pathways, earthworks and areas of landscaping including proposals for compensatory tree planting and amendments to the Great Glen Way;
- Borrow pits;
- Site establishment areas;
- Site compounds and work camps;
- All site boundary treatments and external lighting provisions;
- All mitigation measures to be implemented in association with the project as set out in the Environmental Impact Assessment Review, or as amended by the above plans or agreed with statutory consultees prior to determination and not specified in this consent;

Reason: To ensure the final design details of the Development have regard for rural setting of the Development Site within a Special Landscape Area and the commitment to high quality design as set out in the Environmental Impact

Assessment Report.

3. Prior to the commencement of development, a detailed report evaluating options for the use of all excavated material, with a preferred Spoil Management Plan, must be submitted for the approval of the Planning Authority, who must consult with SEPA and SNH. The report must be prepared with input from suitably qualified professionals. It must:
 - identify the final volumes and likely nature of the material to be excavated;
 - identify the potential use of all excavated material either as part of the development or for other construction projects or uses in the general locality;
 - Identify any temporary or long term storage requirements on or off site
 - identify all traffic impact consequences, including use of the Caledonian Canal and moving the excavated material from the tunnel portals to on or off site locations; and
 - Assess the feasibility and environmental impact of each option, and identify the need for any additional planning permissions or licences.

The development must be implemented in compliance with the approved Spoil Management Plan, including any further planning permissions that will be required for any specific elements of the approved Spoil Management Plan that are in addition to the provisions of this consent unless otherwise agreed in writing with the Planning Authority.

Reason: To allow full and proper assessment of the proposals for all excavated material from the undergrounding workings associated with this project and to ensure compliance with sustainable waste management and that appropriate safeguards and mitigations measures are in place.

4. Prior to the commencement of development, a signalled site specific Soil and Peat Management Plan which includes detail of how disruption to peat lands will be minimised must be submitted for the written approval of the Planning Authority, who must consult with SEPA. All work must be carried out in accordance with the approved Plan unless otherwise agreed in writing with the Planning Authority.

Reason: To ensure that the construction minimises in so far as reasonably practicable its impact on the local peat resource.

5. Prior to commencement of development, a programme of work for the evaluation, preservation and recording of any archaeological and historic features affected by the proposed development, including a timetable for investigation, all in accordance with the Highland Council Standards for Archaeological Work, must be submitted for the written approval of the Planning Authority. The approved programme must be implemented in accordance with the agreed timetable for investigation unless otherwise agreed in writing with the Planning Authority.

Reason: In order to preserve the archaeological and historical interest of the

Site.

6. Prior to the commencement of development, a finalised Construction and Environmental Management Document (CEMD) must be submitted to and approved by the Planning Authority, who must consult with SEPA and SNH. The CEMD must as a minimum provide for the following: -
 - The full-time employment of a suitably qualified and experienced Ecological Clerk of Works, or equivalent, for the construction project, with specific responsibility for environmental management and the authority to take action when required, including stopping operations and implementing mitigation measures.
 - Provision for the company to meet the costs of the Council in appointing a Planning Monitoring Officer, to discharge and to monitor compliance with the conditions attached to this consent, including provision of a quarterly compliance report to the Council.
 - A programme for environmental auditing and monitoring in and around the Site, before and during construction and for 18 months after the development completion date, to include the establishment of an environmental checklist, to monitor and input into the planning of construction activities and ensure implementation of all environmental mitigation measures.
 - Production of a Habitat Management Plan highlighting all environmental buffers within the development site, micro-siting restrictions for all track developments across the site and any agreed exceptions agreed with the planning authority in consultation with SEPA, SNH and other relevant bodies.
 - Details of all pre construction surveys of wildlife and plants, together with appropriate mitigation measures for all protected species to ensure all contractors are made aware of the possible presence of and the required mitigation and the laws for protected species. This must also confirm measures to address valued lichens, bryophyte, fungi, eagle conservation and arctic char as highlighted within consultation responses to this application by SNH and Marine Scotland.
 - A site specific statement outlining drainage and sediment management for all construction areas and measures to limit above ground construction activities during periods of high rainfall, including weather forecasting and actions to be taken in advance of adverse forecasts.
 - Working arrangements, including a programme for the phasing of operations, and particularly the movement of plant, materials and rock into, across and out of the site to minimise, so far as reasonably possible, impact on communities or businesses adjacent to or in close proximity to the Site.
 - Waste Management and Pollution Controls including contingency plans in case of pollution incidents.
 - A Noise Management Plan, including details of the timing and methodology of any blasting associated with the development, outlining steps to be taken to reasonably minimise all principal sources of noise, and vibration activities that are likely to be audible beyond the Site boundary. The noise management plan shall also include measures for community liaison to

- advise on the timing and duration of blasting activities.
- Details for the delivery, storage, loading and unloading of plant and materials to be used in constructing the development, with particular regard for the deployment of HGV's and any abnormal loads.
 - Measures to control the emission of dust and dirt during construction.
 - Provision of welfare facilities on site during construction and the means of disposal of foul drainage.
 - Measures to protect all existing public water, private water and drainage arrangements, with suitable back up arrangements in case of any disruption to these provisions from construction activity.
 - An Access Management Plan to maintain public access and promote the general safety of walkers, cyclists, fishing and game stalking parties, canoeists and other marine users out-with the principal construction areas and access roads serving the Development. A key principal to be advanced within the Plan is to minimise restrictions on public access to important recreational facilities including the Great Glen Way and local hilltops.
 - Wheel washing facilities to prevent vehicles associated with the construction from depositing mud or dirt on the public road network when leaving the Site.
 - Lighting for construction activities which will minimise illumination, glare or light spillage out-with the site boundary.
 - A Construction Site Re-Instatement Plan.

All works must be carried out in accordance with the approved CEMD unless otherwise agreed in writing with the Planning Authority.

Reason: To ensure the impacts of construction are well understood by all parties involved with the construction of the project and that best practices are deployed to mitigate the expected impacts of the Development on the local environment both generally and with regard to specific resources or features.

7. Prior to the commencement of development, the Company must submit details of any proposed modifications to the Mucomir Barrage and Power Station for approval in writing by the Planning Authority, who must consult SEPA. Details must include the proposed means of regulating flows into the River Lochy and details of any modifications proposed to the existing fish passage arrangements. The approved modifications must be implemented prior to the operation of the pumped storage hydroelectric generating station unless otherwise agreed in writing with the Planning Authority.

Reason: To ensure the approved flow regime downstream of the Mucomir Power Station is maintained and the offered mitigation in respect of the fish passage is secured.

8. Prior to the commencement of development the applicant shall submit a Forestry Plan to compensate for all permanent woodland removal associated with the development (compensatory planting) for the approval of the Planning Authority in consultation with Forestry Commission Scotland. The Plan will be expected to provide a woodland area of either 21.51ha, or equivalent of the area of actual permanent woodland removal (whichever is higher). Unless

otherwise agreed with the Planning Authority the plan must be implemented at a site and on a timetable as approved.

Reason: - To comply with adopted woodland / forestry policy.

9. There shall be no commencement of the development until: -
- a) a scheme of road improvements describing measures to secure improvements to the A82 (T) and A87 (T) entrances to the trunk road network, including methods of construction; and
 - b) a Route Access Report, including swept path analysis, must be undertaken to ensure that exceptional loads can be transported through the trunk road network safely. The complete report shall detail any accommodation measures required including the temporary removal of street furniture, junction widening, traffic management etc. and show that deliveries will not have any detrimental effect on the trunk road, including structures, along the designated route(s).

has been submitted to and approved by the Planning Authority in writing in consultation with Transport Scotland. The approved scheme and access Route Report shall thereafter be implemented in full unless otherwise agreed in writing with the Planning Authority.

Reason: To minimise interference with the safety and free flow of the traffic on the trunk road network.

10. No development is to begin at the Lower Reservoir Site area until the road between the A82 (T) at North Laggan and Kilfinnan Farm has been improved to the satisfaction of the local Roads Authority. Furthermore there shall be no commencement of development at the Lower Reservoir Site until the Company and the Planning Authority have concluded a minute of agreement under section 96 of the Roads (Scotland) Act 1984, regulating the parties' liability for extraordinary expenses in repairing damage to the road between the A82 (T) at North Laggan and Kilfinnan Farm caused by heavy vehicles associated with the development. Both the design of the phased road improvements, which must retain access for all existing households and businesses, and the type and method of construction for these works must be approved by the Planning Authority in consultation with the local Roads Authority. The final reinstatement works to make good the local road network must be completed within eighteen months of the end of construction period unless otherwise agreed in writing with the Planning Authority.

Reason: To ensure the local road network is improved to an appropriate standard to serve the development and to retain community access generally during construction.

11. Unless otherwise agreed in writing with the Planning Authority all above ground construction works including construction traffic entering and leaving the Development Site is restricted to the operational hours listed below. For the avoidance of any doubt this will exclude staff entering and leaving the Site

in cars or buses. Exceptions will be permitted, subject to the prior agreement in writing of the Planning Authority, for particular engineering operations requiring continuous working beyond the permitted hours.

- a) Movement of HGV's into or out of the site or within 0.5km of any residential or tourist accommodation unit, existing at the date of the consent, can only take place between 09.00 hours and 17.00 hours on Monday to Friday and 09.00 hours and 14.00 hours on Saturdays.
- b) Construction of access roads associated with this development within 0.5 km of any residential or tourist accommodation unit can only take place between 09.00 hours and 17.00 hours on Monday to Friday and 09.00 hours to 14.00 hours on Saturday.
- c) Surface Blasting can only take place between 10.00 hours and 15.00 hours on Monday to Friday and only on dates pre-notified to the community in accordance with the approved Noise Management Plan.

Reason: To ensure that residents and customers retain periods of quiet during the construction phase of the Development.

12. Prior to the commencement of development the applicant shall submit a plan for the approval of the Planning Authority to establish and manage a Community Liaison Group (CLG). The purpose of the CLG shall be to discuss the progress of the construction of the development and in its initial years of operation following energisation. The CLG shall sustain an open invitation to representatives of Invergarry Community Council and residents within 5km of the development site. The approved plan shall thereafter be implemented as agreed, including a general timetable to ensure meetings are held in advance of critical periods of construction activity or on a reasonably regular basis to facilitate purposeful community engagement.

Reason: To provide for effective community consultation on the development and operation of the substation in its early years.

Signature: David Mudie

Designation: Area Planning Manager – South

Author: Ken McCorquodale, Principal Planner

Background Papers: Documents referred to in report and in case file.

Relevant Plans:

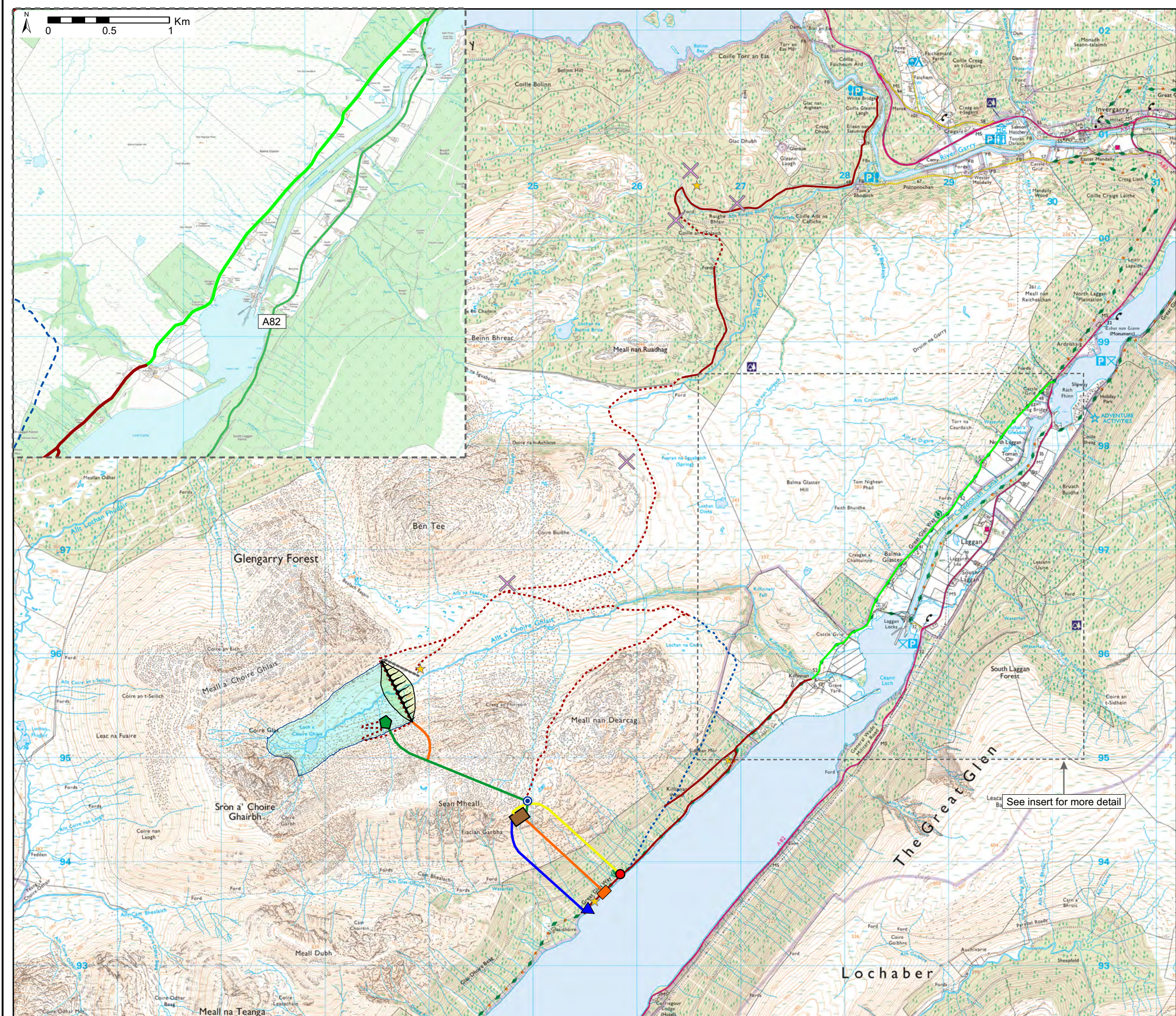
Plan 1- EIA Vol 3 - Fig 3.1 - Scheme Overview

Plan 2 - EIA Vol 3 Fig 3.3 - Indicative Layout of Dam

Plan 3 - EIA Vol 3 Fig 3.2 – Indicative layout of Lower Reservoir Works

Plan 4 – EIA Vol 3 Fig 8.1- ZTV of Scheme.

Plan 5 – EIA Vol 3 Fig 2.1 - Access Track Alignment Options.



- Key:
- Upper Reservoir
 - Dam and Embankment
 - Spillway Channel
 - Intake Tower
 - Headrace Tunnel (underground)
 - Tailrace Tunnel (underground)
 - Access Tunnel (underground)
 - Emergency Access Tunnel (underground)
 - Cavern Power Station (underground)
 - Surge / Ventilation Shafts
 - Emergency Access Tunnel Portal
 - Lower Control Works
 - Jetty & Administration Building
 - Existing Road to be Upgraded
 - Existing Track to be Upgraded
 - Permanent New Access Track
 - Temporary New Access Track
 - Indicative Borrow Pit Area
 - Indicative Site Establishment Area

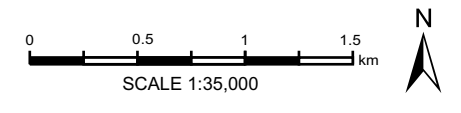
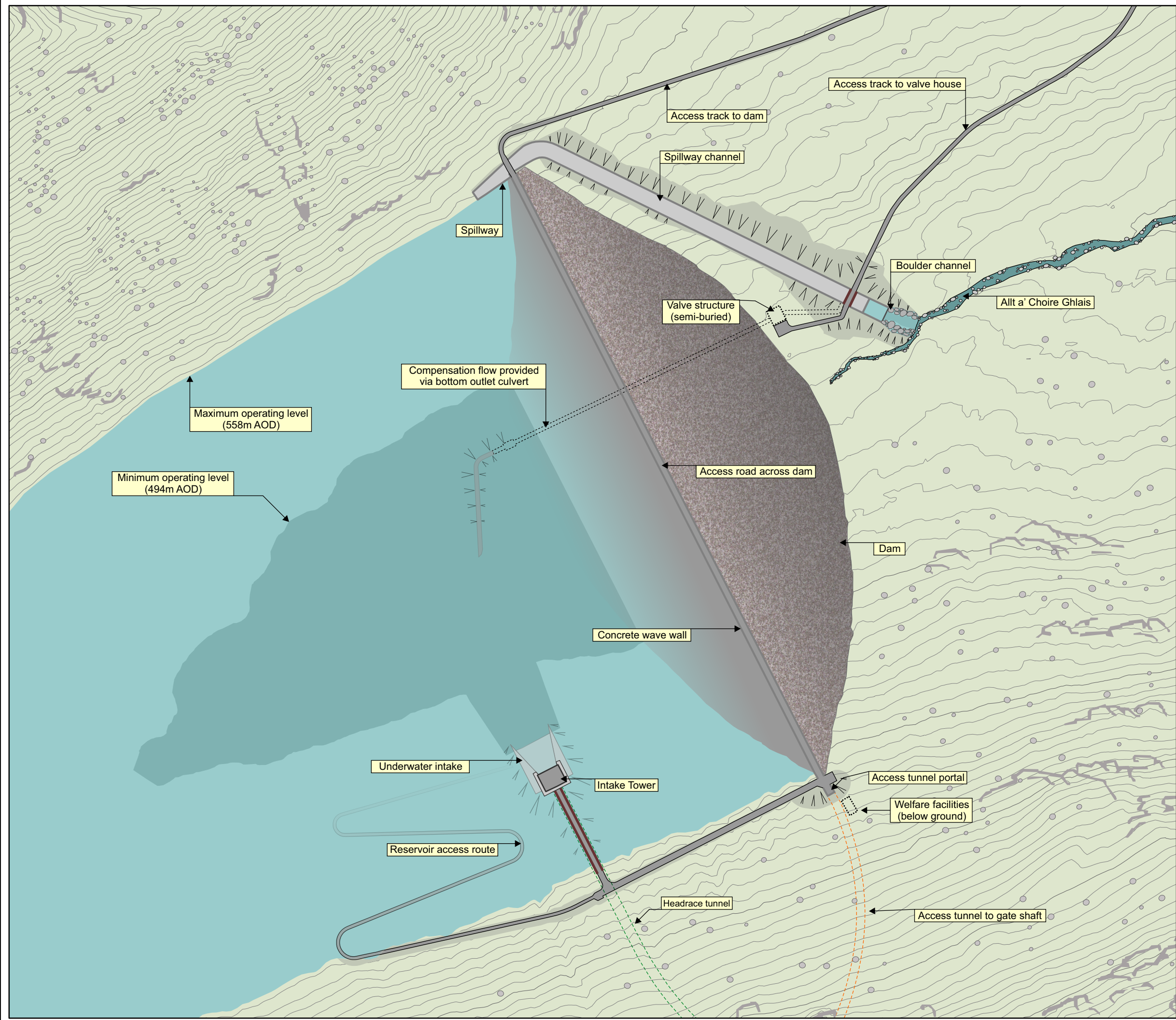


Figure 3.1
Scheme Overview

Revised Coire Glas Pumped Storage Scheme
EIA Report



Key:

- Maximum operating level of reservoir (558m AOD)
- Minimum operating level of reservoir (494m AOD)
- Moorland vegetation (existing and areas to be reinstated)
- Exposed bedrock and boulders
- Indicative cutting to be reinstated
- Existing river
- Proposed access track
- Proposed bridge
- Proposed wall
- Indicative alignment of intake tunnel
- Indicative alignment of access tunnel
- Bottom outlet culvert
- Below ground building

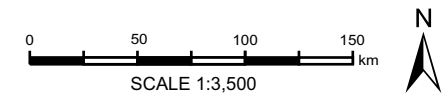
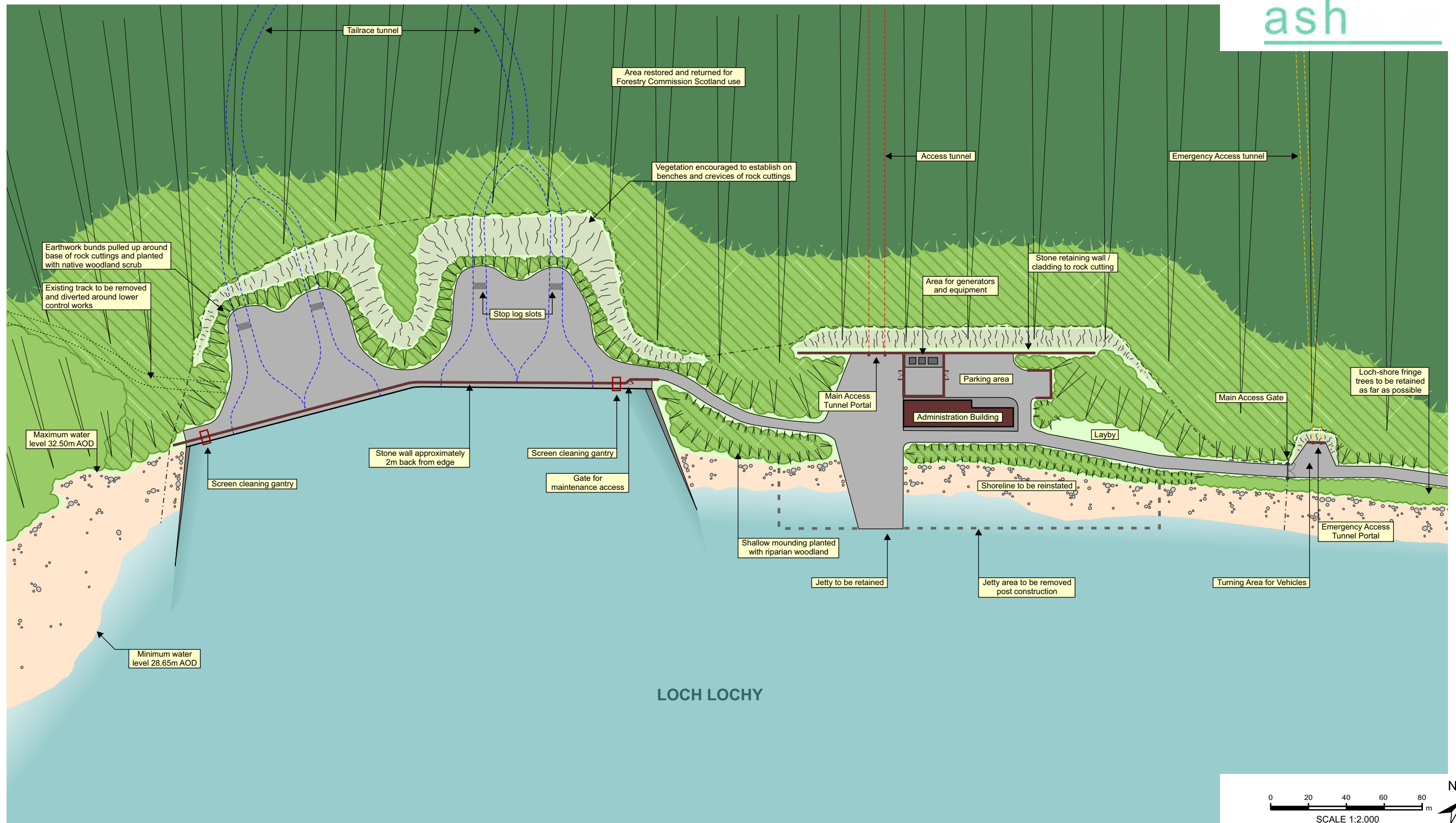


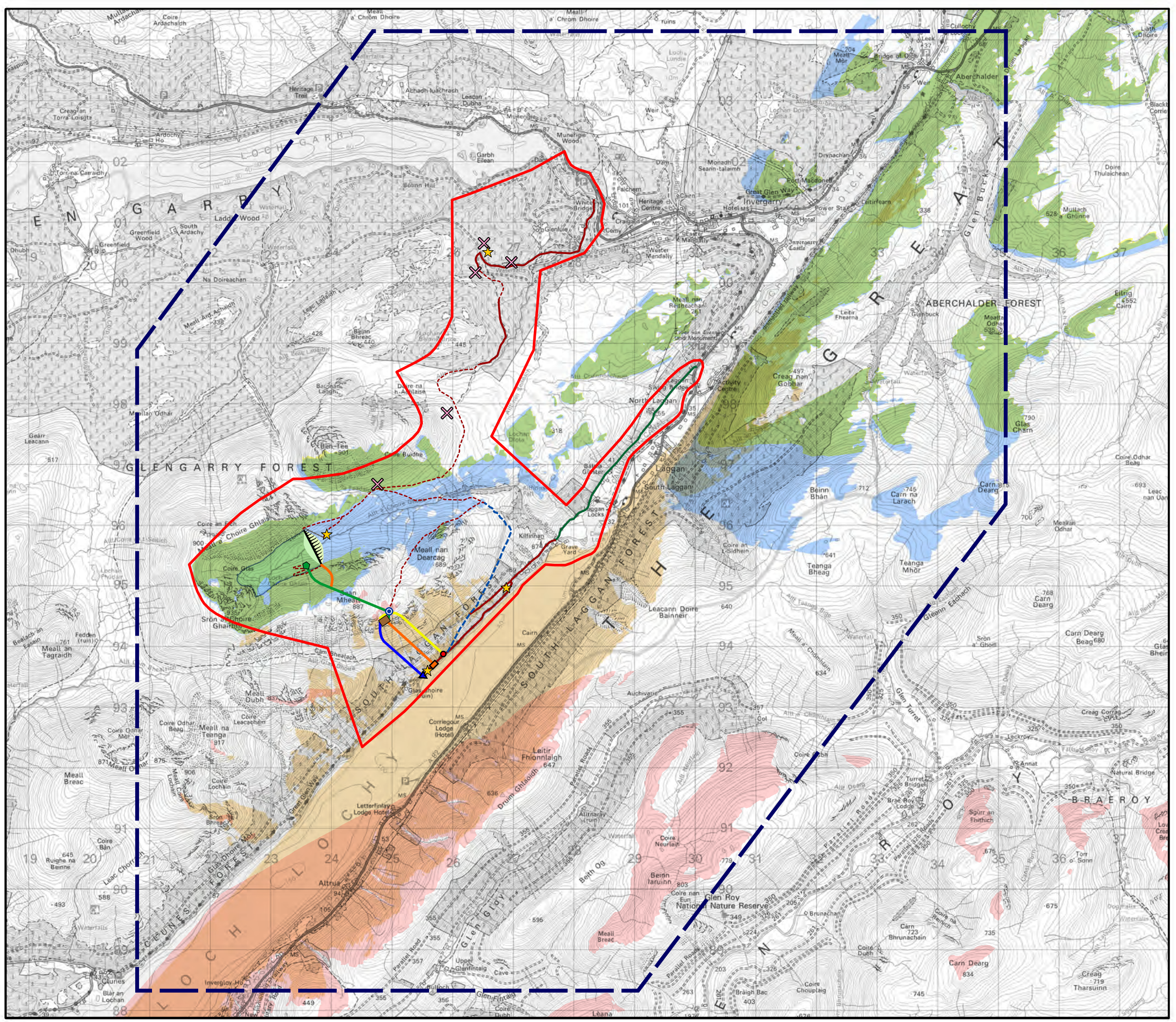
Figure 3.3
Indicative Layout of Dam



Key:

- | | | | | | | | | | |
|--|---|--|--|--|---|--|---|--|---|
| | Water (Loch Lochy) | | Proposed native woodland planting | | Indicative alignment of tailrace tunnel | | Proposed stone wall / cladding | | Indicative extent of jetty to be reinstated post construction |
| | Existing forestry plantation | | Rock cutting with regeneration of vegetation | | Indicative alignment of access tunnel | | Indicative alignment of post and wire fence | | Indication of slope |
| | Existing native woodland to be retained | | Loch shore | | Indicative alignment of emergency access tunnel | | | | |

Figure 3.2
Indicative Layout of Lower Reservoir Works
 Revised Coire Glas Pumped Storage Scheme
 EIA Report



- Key:**
- Site Boundary
 - Dam and Upper Reservoir
 - Spillway Channel
 - Intake Tower
 - Tunnels: Headrace / Tailrace / Access / Emergency Access
 - Cavern Power Station (underground)
 - Surge / Ventilation Shafts
 - Emergency Access Tunnel Portal
 - Lower Control Works / Jetty and Administration Building
 - Existing Road / Track to be Upgraded
 - New Access Track: Permanent / Temporary
 - Indicative Borrow Pit Area
 - Indicative Site Establishment Area
 - Landscape and Visual Study Area
 - Zone of Theoretical Visibility: Dam
 - Zone of Theoretical Visibility: Dam with Intake Tower
 - Zone of Theoretical Visibility: Administration Building
 - Zone of Theoretical Visibility: Surge / Ventilation Shafts

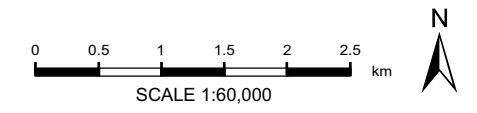
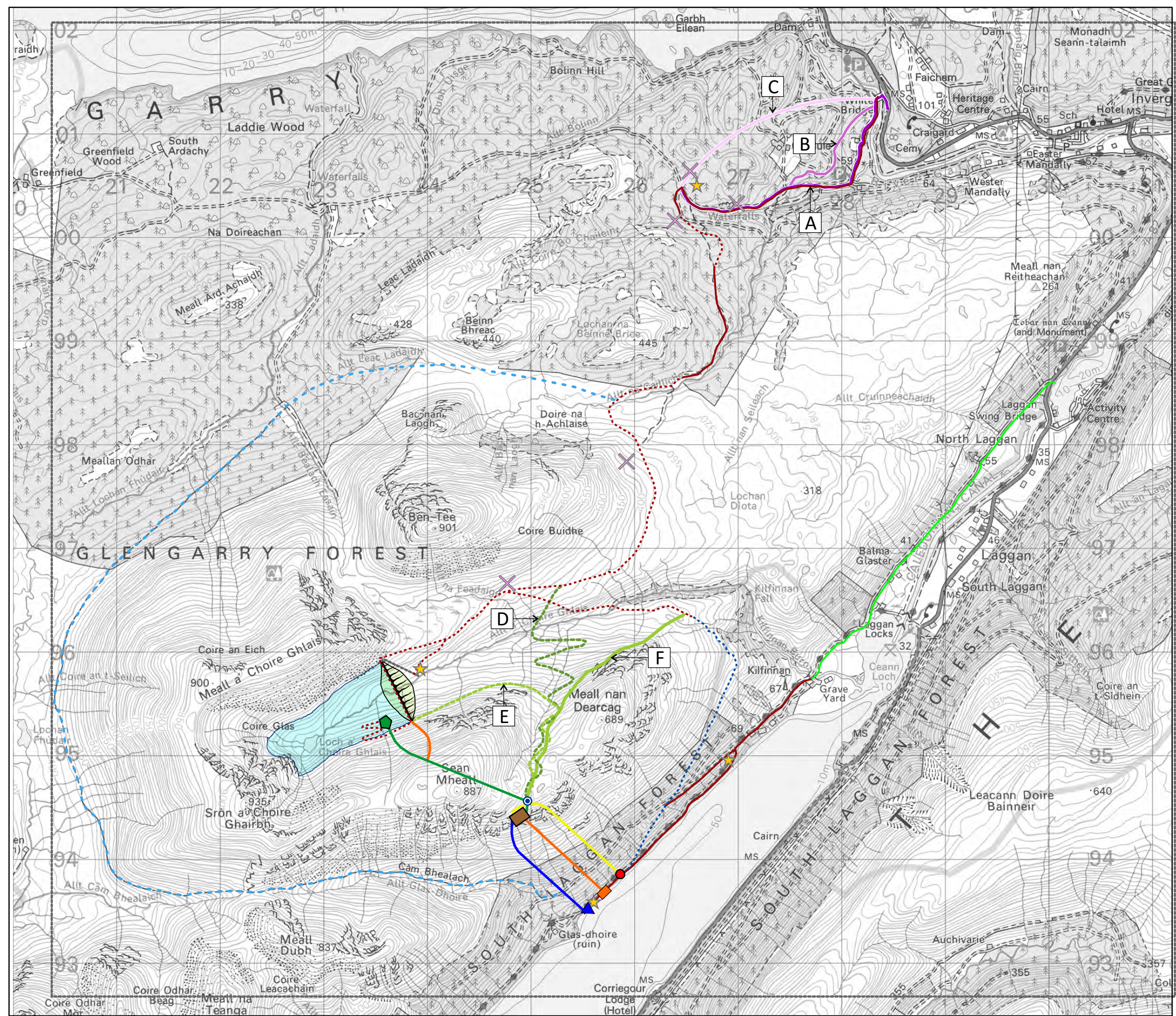
























Figure 8.1
Zone of Theoretical Visibility
during Operation
Revised Coire Glas Pumped
Storage Scheme
EIA Report



Key:

-  Alternative Track Options through Forestry
-  Surge Shaft Track Options
-  Alternative Track to Link Lower Reservoir to Upper Reservoir
-  Upper Reservoir
-  Dam and Embankment
-  Spillway Channel
-  Intake Tower
-  Headrace Tunnel (underground)
-  Tailrace Tunnel (underground)
-  Access Tunnel (underground)
-  Emergency Access Tunnel (underground)
-  Cavern Power Station (underground)
-  Surge / Ventilation Shafts
-  Emergency Access Tunnel Portal
-  Lower Control Works
-  Jetty & Administration Building
-  Existing Road to be Upgraded
-  Existing Track to be Upgraded
-  Permanent New Access Track
-  Temporary New Access Track
-  Indicative Borrow Pit Area
-  Indicative Site Establishment Area

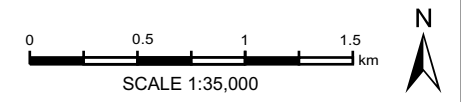


Figure 2.1
Access Track Alignment Options

Revised Coire Glas Pumped Storage Scheme
EIA Report