



# Loch Etive Hydro Development Construction and Operation of Marine Landing Facility at Rubha Barr July 2019

**Screening Request** 

Appendix B – Draft Scheme of Mitigation from the Hydro EIAR



# 15 Summary and Conclusions

## 15.1 Summary of Potential Effects

The following table summarises key issues and impacts which could arise from the proposed Allt Easach hydro scheme. Column 1 lists the receptors; column 2 describes the potential effect on that receptor. All effects, whether significant or not, are described, and any significant effects are highlighted in colour. Column 3 describes the mitigation which has been incorporated into the scheme to deal with adverse effects, and column 4 provides additional notes as necessary.

Red cells highlight significant negative impacts and green cells highlight significant positive impacts. Coloured cells in column 2 indicate significant effects before mitigation is taken into account, and coloured cells in column 4 indicate significant effects remaining after mitigation is considered.

**Table 15.1 Draft Scheme of Mitigation** 

Receptor	<b>Potential Effects before</b>	<b>Proposed Mitigation</b>	Notes			
	mitigation					
Habitats (Chapter 6)						
Marshy grassland/wet heath (M25)	Pipeline has to cross this habitat near the intakes. Temporary disturbance, potential changes to water flow, potential pollution and silt mobilisation.	Save turves carefully and restore habitat. Manage pollution and silt as above				
Basic flush (M29)	Cable route passes close to this habitat below power house. Temporary disturbance, potential changes to water flow, potential pollution and silt mobilisation.	Avoid by 100m, mark 10m radius buffer zone around flush.	If not possible to avoid by 100m margin a risk assessment will be required.			
Acid flush (M6)	Cable route passes close to this habitat below power house.  Temporary disturbance, potential changes to water flow, potential pollution and silt mobilisation.	Avoid by 100m, mark 10m radius buffer zone around flush.	If not possible to avoid by 100m margin a risk assessment will be required.			
Woodland & trees >10cm dbh	Scattered mature trees below the powerhouse lie close to the proposed cable route, may be damaged by vehicles, excavations and pollution/siltation incidents.	Avoid by at least 10m. Mark a 10m RPZ around any trees within 25m of the working corridor. Ensure avoidance of pollution and siltation.	Mark a buffer along the upper margin of the SAC and taken particular care that site outfalls and silt flows are not allowed to approach this area.			
River and Marine Ecology (Chapter 7)						
Migratory salmonids and eels	Insignificant, due to low populations and lack of suitable habitat.	Controls on construction methods, controls on abstraction.	Insignificant residual effect.			
Resident trout	Insignificant, due to low populations in the depleted reach.	As above.	As above.			
Larval lampreys	No effect.	None.				
Freshwater Pearl Mussels	No effect.	None.				
Migrating fish	Almost certainly no effect.	Burial of the cable in the intertidal and near-shore zone, and protection with cast steel cable protectors.				

Receptor	Potential Effects before mitigation	Proposed Mitigation	Notes			
Mammals (Chapter						
Otter, pine marten and badger	Disturbance, loss of habitat, death or injury due to machinery, entrapment in voids, harm from pollution and sediment, effects on prey.	Avoidance of habitat, work according to CMS, licence applications where required, pollution and sediment control, preconstruction surveys.	There would be no significant residual effect.			
Water vole and bat	No effect.	None.				
Ornithology (Chapt		Trone.				
Construction (and Decommissioning)						
Glen Etive and Glen Fyne SPA	Disturbance – limited to eagles using the vicinity of the development area - negligible  Habitat loss –	n/a				
	no change					
Golden eagle	Disturbance to ranging golden eagles - negligible  Disturbance to breeding golden	n/a				
	eagles - no change  Disturbance to golden eagle prey –	n/a				
Common Crossbill and Avian assemblage	no change  Disturbance during the breeding season - negligible	If construction is to take place during the breeding birds season, pre-construction bird surveys are to be completed. No vegetation clearance is to take place during the breeding bird season unless supervised by an ECoW.				
	Disturbance to foraging birds – negligible	n/a				
	Permanent habitat loss – negligible	n/a				
Operation	1					
Glen Etive and Glen Fyne SPA	No change					
Golden eagle	Increase of golden eagle use of the area after felling – no change to positively negligible	n/a.				
Common Crossbill and	Disturbance to resident birds –	n/a				
Avian assemblage	no change					
Bryophytes (Chapte						
All bryophyte species, in particular Oceanic bryophytes.	Little or no effect.	No mitigation proposed.				
Landscape Character and Visual Amenity (Chapter 11)						
Landscape character and people in the area.	Adverse changes to the character of the landscape, and changes to people's views.	Scheme design with landscape and visual impacts in mind. Construction management in accordance with the methods shown in the CMS. Appointment of Landscape Clerk of				
		Works to supervise construction.				

Receptor	Potential Effects before mitigation	Proposed Mitigation	Notes			
Upstanding archaeology	Physical damage caused by	Archaeological watching brief and				
	construction activities.	possible reconstruction of a derelict				
		dry stone dyke.				
Access and Recreation (Chapter 13)						
People moving through	Danger, delays and inconvenience	Safety measures including signs,				
the area for recreational	due to construction activity on and	operator training, diversions, route				
purposes	near public access routes.	maintenance and site management.				

### 15.2 Conclusions

### 15.2.1 Key Findings

The assessment has shown that:

- For many issues (for example bats) there would be no impact.
- For the remaining issues (for example landscape character) impacts would be insignificant.
- The scheme would cause no residual significant impact.

### 15.2.2 Consultation

Statutory consultees and planning decision-makers were consulted at all stages of the assessment process.

### 15.2.3 Mitigation

Mitigation measures have been taken into account in the assessment only if they would be:

- Affordable and agreed by the client
- Known and proven to be effective from empirical evidence
- Free of "knock-on" adverse effects on other receptors
- Feasible to construct and maintain.

This gives certainty that the proposed mitigation would be effective and can therefore be taken into account.

Mitigation measures were developed in a collaborative way between Green Highland Renewables as developer, FCS as landowner, the environmental assessment team and the scheme designers to ensure the above criteria were met and opportunities to reduce adverse impacts or enhance the environment were seized.

### 15.2.4 The design and assessment process

The scheme development and environmental assessment process has followed processes required as part of the appropriate regulations.

# 15.2.5 Limitations to the study

There were few limitations to the study, mainly relating to health and safety issues preventing access to some parts of the site. Alternative methods were developed to overcome these minor limitations. The assessment of impacts of EMF on migratory fish was somewhat hampered by the absence of available research on the topic. No significant limitations to the study were encountered.