AGENDA ITEM 6

APPENDIX 4

HABITAT REGULATIONS APPRAISAL

Habitats Regulations Assessment consultation draft: Flood Alleviation Scheme for Allt Mhor, Pitmain Estate, Kingussie

10th May 2016

2014/0232/DET

Introduction

This is a record of the assessment under regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) for the planning application 2016/0011/DET | Proposed flood alleviation scheme diverting from the Allt Mhor to discharge into the adjacent Loch Gynack, Pitmain Estate, Pitmain Lodge, Kingussie, Highland PH21 1LR

There is no prescribed methodology within Scotland for HRAs for projects. The CNPA has based its methodology on those prepared by D Tyldesley Associates for the Welsh Assembly in conjunction with guidance from the EU. We have derived a 10 stage process, from the initial decision to assess a project.

Background to the assessment

The proposed development which is the subject of this assessment is for planning permission for a scheme which includes: The creation of a diversion weir on the Allt Mhor to take water in times of high flow down a flood alleviation channel into Loch Gynack. The flood alleviation channel is approximately 1200m in length and varies in width from 6-10m, it will follow the route of a previous channel in places. The Allt Mhor is a tributary of the River Gynack which in its lower reaches is part of the River Spey SAC. Otter are active throughout the area.

There are some key elements of the scheme that have the potential to impact on the River Spey SAC these include:

- Disturbance and potential harm to otter resulting from construction activities.
- During the construction phase there is a risk to Freshwater Pearl Mussel, Salmon and Sea Lamprey from sedimentation and run-off from site.
- Long term impacts on designated features could result from changes in water flow and sediment dynamics which effect habitat quality.

The principal documents which have been taken into account for this assessment are:

- Planning application forms
- Amended Diversion Structure Plan
- Amended Flood Diversion Channel Plan
- Amended Channel Plan
- Amended Downstream Elevation
- Amended Survey Plan
- Amended Cross Sections

- Amended Long Sections
- Site Plan
- SEPA response
- SNH Natura response
- Spey Fisheries Response
- Construction and Environmental Management Document
- Protected mammal Survey
- Species protection Plan for Otters
- River Spey SAC: Information to inform an appropriate assessment

Table 1. Stages of Assessment

Stages of Assessment	
Stage 1	Decide whether proposal is subject to HRA
Stage 2	Identify Natura Sites that should be considered and gather information about the Natura Sites
Stage 3	Consultation on the method and scope of the appraisal with SNH and others. Request additional information from applicant if required.
Stage 4	Screening the proposal for likely significant effects on Natura sites including mitigation measures included within the proposal
Stage 5	Screen for "in combination effects" with other plans or projects
Stage 6	Appropriate Assessment to determine effect upon conservation objectives. Preliminary conclusion about adverse effect upon the integrity of any site.
Stage 7	Consultation with SNH (and others if considered appropriate)
Stage 8	Apply additional mitigation measures, if required, via conditions or agreements to ensure that there is no adverse effect on site integrity
Stage 9	Conclusion on Integrity test
Stage 10	Regulation 49 derogation procedures. This only applies if adverse effects remain and Competent Authority still wishes to approve the application

Stages 1-5 describing the Natura sites and Screening

The proposed development is not wholly concerned with the necessary management of a European site for nature conservation and requires planning permission and so the plans must be subject to assessment under the terms of Directive 92/43/EEC.

Stages 2: Identification of Natura Sites and gathering their details

The list below is those sites that have been taken forward to screening for likely significant effects. See Appendix 1 for details on each site and its qualifying features.

- **Special Area of Conservation (SAC) River Spey**

Stage 3: Discussions on the method and scope of the appraisal and requests for additional information

Advice has been sought from SNH, SEPA and the Spey Fishery Board

Stage 4: Screening the proposal for likely significant effects

Screening of this application considers any possible effects that would arise from the granting of planning permission for the creation of a new channel from the Allt Mhor at Pitmain Estate, the four possible outcomes from the screening process are identified in Table 2.

The effects identified were:

- Impacts from construction activities which have the potential to destroy places of shelter for otter; disturb otter; or, reduce ability to hunting efficiency if water is cloudy from construction activities;
- During the construction phase there is a risk to Freshwater Pearl Mussel, Salmon and Sea Lamprey from sedimentation and run-off from site; and
- Long term impacts on designated features could result from changes in water flow and sediment dynamics which effect habitat quality.

Table 2. The four possible outcomes from the screening process

Screening outcome	Description	Stage of process outcome found
No effect	There is no effect at all upon the qualifying interests	Stage 4
No likely significant effect in combination	There is an insignificant effect from the development itself and even in combination with other plans and projects, it does not amount to a significant effect.	Stage 5
Likely significant effect in combination	There is an insignificant effect from the development itself but in combination with the insignificant effects of other plans and projects, it	Stage 5

	becomes significant.	
Likely significant effect alone	There is a possible significant effect from the development by itself. This may be direct or indirect.	Stage 4

Table 3. Screening for LSE from the creation of a flood alleviation channel on the Allt Mhor, Pitmain Estate

Name of Natura Site : River Spey					
Qualifying Feature Affected	**Possible effect of development**	**Likely significant effect**	**Duration**	**Screening assessment**	**Screening outcome**
OTTER	Direct injury to otter from construction activities or destruction of rest sites or holts	A new channel is to be created through riparian habitat which is suitable for otter to rest and breed, spraints have been found along the route of the new channel	Temporary threat of injury or death or loss of shelter from construction activities	An otter survey was undertaken in July 2015 of the channel route and for 250m upstream and downstream of the proposed channel entry on the Allt Mhor. Surveys were conducted in 2011 and 2014 for two nearby hydro schemes. These surveys all indicate that otter are active in the area as various spraint sites were located. A holt was identified outwith of the working area and likely zone of disturbance. A site visit undertaken by CNPA ecologist found spraint on the proposed route of the flood alleviation channel. Otters are active in the area but no holts or couches were identified within the working corridor. Otters are inquisitive and it is likely they will explore working areas. A Species Protection Plan has been provided (Elliot, 2016) which details protection measures to be put in place to prevent the likelihood of otter harm, death or loss of shelter.	**Likely Significant Effect Alone**
	Pollution of watercourses through run – off generated during construction: siltation during	Disturbance to foraging habitat leading to displacement	Temporary during construction	Otters require clean water to hunt effectively for prey including fish and amphibians. The release of silts and sediments during construction needs to be tightly controlled and measures put in place to stop silt laden run-off, oil or fuel spills from machinery and polluted run-off from concrete	**Likely Significant Effect Alone**

	ground excavation work, fuel run-off.			shuttering works during weir construction reaching the Allt Mhor or Loch Gynack. The Construction Environmental Management Document, December 2015 provides sections on protection of the watercourse in section 3.2 Works in or adjacent to watercourses, 3.4 Pollution Protection measures-which references SEPA's guidelines. Specific reference is made for the control of Sediments , within section 3.4.1 and fuel/oil, within section 3.4.2.	
	Disturbance to otter from construction activities	Otter are sensitive to noise and vibration and there will be extensive ground works undertaken for the creation of a new channel	Temporary during construction	Surveys have indicated that otter travel throughout the construction area when foraging.	**Likely Significant effect Alone**
ATLANTIC SALMON	Sediment dynamics within the Allt Mhor are likely to change	Salmon require replenishment of gravels to spawn, the construction of weirs within Allt Mhor has the potential to alter sediment dynamics within the lower reaches of the Gynack which supports salmon	Permanent loss of suitable spawning habitat	The weir construction will allow the passage of sediments over the top, but there will also be transport of sediments down the flood relief channel. Sediment transportation within the Gynack will either remain at the same level or reduce. The proposal has the possibility of improving the condition of spawning grounds in the lower sections of the River Gynack if it results in a **reduced** sediment loading, as at present this requires regular clearing with the resulting detrimental impact on spawning habitat. If sediment transportation continues as normal the status quo of habitat disturbance during gravel clearing will remain (SFB Response, 2016).	**No Effect**
	The hydrology of the Allt Mhor and	Salmon are not present in the Allt Mhor but are	Permanent loss of	The diversion of water into the new channel is outwith the SAC, from the channel it flows into	**No Effect**

	Gynack will change as water flow is diverted off into the new flood alleviation channel	present in the lower sections of the River Gynack. If there is less water in the channel, there will be less velocity to replenish gravels and remove silty build up. Salmon require clean, well oxygenated gravels to spawn.	suitable spawning habitat	Loch Gynack. There is a discharge point from Loch Gynack through the existing hydro-scheme into the downstream section of the Gynack which is within the Spey SAC. This is the section that supports salmon. A reduction in flood peaks would have no effect on the SAC as it is considered that the habitat at this point is not dependant on flood events to maintain its porosity and remove woody debris because the steepness of the river is enough to maintain this at lower flood peaks.	
	Pollution of watercourses through run – off during construction: siltation during ground excavation work, fuel run-off.	Salmon require clean gravels to spawn	Temporary loss of suitable spawning habitat	The Construction Environmental Management Document, December 2015 provides sections on protection of the watercourse in section 3.2 Works in or adjacent to watercourses, 3.4 Pollution Protection measures-which references SEPA's guidelines. Specific reference is made for the control of Sediments, within section 3.4.1 and fuel/oil, within section 3.4.2.	**Likely Significant effect Alone**
FRESHWATER PEARL MUSSEL	Pollution of watercourses through run – off during construction: siltation during ground excavation work, fuel run-off.	FWPM as filter feeders are very sensitive to levels of silt which can smother mussel beds. They are also sensitive to nutrient and metal pollution, a large release of which is often associated with a siltation event.	Temporary loss of suitable habitat during construction could have long-term impacts on mussel populations.	There have been no mussels recorded within the Allt Mhor or River Gynack and therefore it is not likely that any silt or sediments generated from the works will cause any impact to populations in the main stem. The procedures outlined in the Construction Environmental Management Document (Dec, 2015) act as a further mechanism to ensure there is no risk to FWPM within the main channel of the River Spey. These measures are comprehensive and if adhered to on site will ensure protection of the water environment.	**No Effect**

SEA LAMPREY	Pollution of watercourses through run – off during construction: siltation during ground excavation work, fuel run-off.	Sea Lamprey are sensitive during the spawning season which peaks in June to disturbance and pollution especially suspended solids.		There have been no recorded Sea Lamprey within the Allt Mhor or River Gynack and therefore it is not likely that any silt or sediments generated from the works will cause any impact to populations in the main stem. There are historic records of Sea lamprey upstream of Kingussie in the River Spey (Laughton & Burns, 2003). The procedures outlined in the Construction Environmental Management Document (Dec, 2015) act as a further mechanism to ensure there is no risk to Sea Lamprey within the main channel of the River Spey. These measures are comprehensive and if adhered to on site will ensure protection of the water environment.	**No Effect**

Stage 5: In-combination effects

The plans and projects in Table 4 have been searched for any likely significant effects that may combine with those identified the proposed development.
There were no residual effects from the Pitmain Flood Alleviation Channel proposal and so there are no possible in combination effects.

Stages 6–10 Assessment and Conclusions

Stage 6: Appropriate Assessment

The proposals have been screened in Stages 4 and 5. It was found that for one Natura site, the River Spey SAC there were likely significant effects upon the qualifying interests. Consequently the following appropriate assessment is required to ascertain the implications for the conservation objectives for the site:

- River Spey SAC

River Spey SAC
Qualifying species and conservation status Freshwater pearl mussel - unfavourable declining 30/09/2014 Sea Lamprey - favourable maintained 07/09/2011 Atlantic salmon - Unfavourable recovering 04/09/2011 Otter - Favourable maintained 18/09/2011
Conservation objectives To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and To ensure for the qualifying species that the following are maintained in the long term: • Population of the species, including range of genetic types for Salmon, as a viable component of the site • Distribution of the species within the site • Distribution and extent of habitats supporting the species • Structure, function and supporting process of habitats supporting the species • No significant disturbance of the species • Distribution and viability of freshwater pearl mussel host species • Structure, function and supporting processes of habitats supporting freshwater pearl mussel host species

Is the operation likely to have a significant effect on the qualifying interest? Consider each qualifying interest in relation to the conservation objectives

- Freshwater Pearl Mussel (*Margaritifera margaritifera*)
  Screened out at Stage 4
- Atlantic Salmon (*Salmo salmar*)
  Atlantic Salmon are present on the lower section of the River Gynack and so there will be no direct impact from construction activity. Changes in hydrology and sediment dynamics arising from this proposal will have no negative impact on salmon or its supporting habitat.
  Accidental pollution arising from incidents during construction may affect the distribution of the species and its supporting habitat. Atlantic Salmon can also be affected by levels of soluble nutrients, particularly at egg stage which can affect habitat quality and the levels of algae and macrophytes in the water.
- Otter (*Lutra lutra*)
  Otter are present on the Allt Mhor, Gynack and Loch Gynack and could be affected by the proposal, there is a risk to disturbance or injury to Otters that are passing the area during the construction phase. There is also a risk that foraging habitat may be lost due to construction activities which result in pollution reaching the Allt Mhor and Gynack.
- Sea Lamprey (*Petromyzon marinus*)
  Screened out at Stage 4

Will the development adversely affect the site's conservation objectives?

In this assessment, the implications of the planning application for the site's conservation objectives are assessed in order to answer the question: "Can it be ascertained that the proposal will not adversely affect the integrity of the site?"

The over-arching conservation objective of SAC is to avoid deterioration of the habitats of the qualifying species, or significant disturbance to the qualifying species, thus ensuring that the integrity of the sites is maintained. This over-arching conservation objective can be broken down into the following detailed elements:

To ensure that the following are maintained in the long term for the qualifying species:

- Population of the species as a viable component of the sites
  Distribution of the species within sites

- Distribution and extent of habitats supporting the species
  Structure, function and supporting processes of habitats supporting the species

- No significant disturbance of the species

In-combination effects

As described at Stage 5 (screening); identification of in-combination effects is required to identify where cumulative and synergistic effects are likely to be significant. There were no relevant in-combination effects for this Natura site.

Assessment against the Conservation Objectives

Freshwater Pearl Mussel (FWPM)

1. Population of the FWPM as a viable component of the sites and distribution of the FWPM within the Special Area of Conservation

- No effect – see Table 3

2. Distribution and extent of habitats supporting FWPM and structure, function and supporting processes of habitat supporting FWPM

- No effect – see Table 3

3. No significant disturbance of FWPM

- No effect – see Table 3

Atlantic Salmon

1. Population of the Atlantic Salmon as a viable component of the sites and distribution of the Atlantic Salmon within the Special Area of Conservation

- No effect – see Table 3

2. Distribution and extent of habitats supporting Atlantic Salmon

and structure, function and supporting processes of habitat supporting Atlantic Salmon

- Salmon require clean gravels to spawn in and are most sensitive to pollution from sedimentation or excessive nutrients during the spawning season (October – March). The Construction Environmental Management Document, December 2015 provides sections on protection of the watercourse in section 3.2 Works in or adjacent to watercourses, 3.4 Pollution Protection measures-which references SEPA's guidelines. Specific reference is made for the control of Sediments, within section 3.4.1 and fuel/oil, within section 3.4.2. There is a legal obligation to adhere to the CEMD submitted within the planning document package.

Conclusion

- There will be no negative impact on salmon habitat integrity.

3. No significant disturbance of Atlantic Salmon

- No effect – see Table 3

Otter

1. Population of the Otter as a viable component of the sites and distribution of the Otter within the Special Area of Conservation

- Otters are active in the area but no holts or couches were identified within the working corridor. Otters are inquisitive and it is likely they will explore working areas. A Species

Protection Plan has been provided (Elliot, 2016) which details protection measures to be put in place to prevent the likelihood of otter harm, death or loss of shelter, there is a legal obligation to adhere to documents submitted as part of the planning package. It is stated within the Species Protection Plan that an Ecological Clerk of Works will undertake a pre-construction survey for otter and other protected mammals. Pre-construction checks would ensure that the level of Otter use remains unchanged ie no new rest sites or holts have been established. The ECOW will be present on-site throughout the construction process to ensure adherence to the Species Protection Plan.

Conclusion

- There will be no negative impact on Otter population within the River Spey SAC.

2. Distribution and extent of habitats supporting Otter and structure, function and supporting processes of habitat supporting Otter

- Otters require clean water to hunt effectively for prey including fish and amphibians. The release of silts and sediments during construction needs to be tightly controlled and measures put in place to stop silt laden run-off, oil or fuel spills from machinery and polluted run-off from concrete shuttering works during weir construction reaching the Allt Mhor or Loch Gynack.

- The Construction Environmental Management Document, December 2015 provides sections on protection of the watercourse in section 3.2 Works in or adjacent to watercourses, 3.4 Pollution Protection measures-which references SEPA's guidelines. Specific reference is made for the control of Sediments , within section 3.4.1 and fuel/oil, within section 3.4.2.

- The compensation proposals describe wetland breakout zones along the new channel which if designed and planted appropriately will result in new areas of feeding habitat for otter. The Species Protection Plan describes placement of rocks and trees during channel creation to create additional suitable places of shelter for otter.

Conclusion

- There will be no negative impacts on habitat supporting otter and the measures detailed within the proposal have the potential to extend suitable habitat for otter.

3. No significant disturbance of Otter

- To avoid any disturbance and therefore reduction in feeding capacity, works will be limited to daylight hours and will not start until one hour after sunrise. There are no otter holts or rest sites within 100m of the working area and the risk of disturbance while at rest is negligible.

Conclusion

- The impact on Otters would be minimal and would not amount to significant disturbance.

1. Population of the Sea Lamprey as a viable component of the sites and distribution of the Sea Lamprey within the Special Area of Conservation

• No effect – see Table 3 **2. Distribution and extent of habitats supporting Sea Lamprey and structure, function and supporting processes of habitat supporting Sea Lamprey** • No effect – see Table 3 **3. No significant disturbance of Sea Lamprey** • No effect – see Table 3
Additional mitigation None
Likely insignificant effects None
Conclusion on site integrity **There will not be an adverse effect upon the integrity of the River Spey SAC if the mitigation measures detailed within the Construction Environmental Management Document and Species Protection Plans are adhered to.**

Stage 7: Consultation

Wider consultation of the draft report is at the discretion of the competent authority. It has been decided to consult further with the Spey Fishery Board.

N.B. This is the consultation draft and will be followed up with a final response prior to determination.

Stage 8: Additional mitigation

No additional mitigation is required.

Stage 9: Conclusion on the integrity test

This assessment based upon the best available scientific evidence and advice offered from SNH and others has shown that, there is not a likely significant effect from the proposed development upon the qualifying features or the conservation objectives for the following Natura sites:

- River Spey SAC

We therefore conclude that the proposed development, will not adversely affect the integrity of any of these sites.

Stage 10: Section 49 (derogation)

The conclusion that there is no adverse effect upon the integrity of any of the Natura sites covered in this report means that regulation 49 is not relevant.

References

- Council Directive 92/43/EEC "the Habitats Directive" EEC adopted 1992
- Managing Natura 2000 sites – EU communities 2000
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC - EC 2007
- The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)
- Habitat Regulations Appraisal of Plans – Guidance for Plan Making Bodies in Scotland SNH/DTA August 2012 (Version 2.0)

Appendix 1
Details of Natura 2000 sites within, or adjacent to, the proposed development site

Name of European Site	River Spey SAC
Site Type	
Conservation Objectives	To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long-term: Population of the species as a viable component of the site Distribution of the species within the site Distribution and extent of habitats supporting the species Structure, function and supporting process of habitats supporting the species No significant disturbance of the species
Qualifying Species	Freshwater pearl mussel *Margaritifera margitifera,* Sea Lamprey *Petromyzon marinus* Atlantic salmon *Salmo salar*, Otter *Lutra lutra*
Site Condition	Freshwater pearl mussel - unfavourable declining 30/09/2014 Sea Lamprey - favourable maintained 07/09/2011 Atlantic salmon - Unfavourable recovering 04/09/2011 Otter - Favourable maintained 18/09/2011
Factors currently influencing site	In the Spey catchment the main development pressures are: FWPM – Extraction and water quality Atlantic Salmon - Water Dependant Pressure- morphological alteration
Vulnerabilities to change/potential effects of the Plan	The long-term wellbeing of the river and its catchment is being promoted through the development of an integrated Catchment Management Plan undertaken in partnership with others. Guidance on best practice for river engineering works has been prepared to ensure that such activities are compatible with the conservation of the species of interest in the SAC.

Appendix 2

Glossary of terms and abbreviations

Appropriate Assessment (AA)	The part of the Habitats Regulations Assessment process that considers the effects of an aspect of a plan upon the conservation objectives for a Natura site.
CNPA	Cairngorms National Park Authority
CNAP	Cairngorms Nature Action Plan
Competent Authority	The decision making body required under the Habitats Directive to undertake HRA. This includes Scottish Government, National Park Authorities, SNH , SEPA or Local Authorities.
CPP	Core Paths Plan
Habitats Regulation Assessment (HRA)	The whole appraisal process for determining effects upon Natura Sites. It includes Appropriate Assessments. It is a requirement by the Habitats Directive that competent authorities carry out HRAs where a plan or project affects a Natura site.
CLDP	Draft Cairngorms National Park Local Development Plan
Likely Significant Effect	An adverse effect of the development upon a qualifying interest or conservation objective that is considered to be potentially severe enough as to threaten the integrity of the Natura site itself.
Natura Sites	Collective term for Special Protection Areas and Special Areas of Conservation
Ramsar sites	Ramsar sites are wetlands of international importance designated under the Ramsar Convention 1971. Not technically Natura sites they are however usually also SPAs. They are included within the HRA process by policy.
Special Area of Conservation (SAC)	An area designated for the protection of habitats and species. Authorised under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (commonly called the "Habitats Directive"). One of three designation to be considered in a HRA
Special Protection Area (SPA)	An area designation for the protection of birds. Authorised by the Directive 2009/147/EC of the European Parliament and of the Council (commonly called the "Birds Directive"). One of three designation to be considered in a HRA