
CAIRNGORMS NATIONAL PARK AUTHORITY

Title: REPORT ON CALLED-IN PLANNING APPLICATION

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DEVELOPMENT PROPOSED: INSTALLATION OF MICRO-HYDRO ENERGY GENERATING PLANT, INTAKE WEIR, TURBINE HOUSE, OUTFALL AND ASSOCIATED WORKS AT MILLTOWN BURN, ALLARGUE ESTATE.

REFERENCE: 09/014/CP

APPLICANT: ROSEMARY JEAN WINTER WALKER

DATE CALLED-IN: 23rd JANUARY 2009

RECOMMENDATION: APPROVAL



Fig. 1 - Location Plan



Fig. 2 Burn and valley section below intake weir



Fig. 3 Burn at site of intake weir



Fig. 4 site of turbine house to right of old mill building, Don and site of out fall in foreground



Fig. 5 Don looking upstream from out fall site

SITE DESCRIPTION AND PROPOSAL

1. The site of the proposed micro hydro-power generation plant is on the Milltown Burn before it enters the River Don on the Allargue Estate at Corgarff. The Milltown Burn is a side stream arising from springs below a limestone bed in the Coire Riabhach above. This produces a more consistent flow in the burn than usual, supplemented at times of higher rainfall. A track known as the Green Road passes the site at Milltown of Allargue, close to the Don and follows the Milltown valley to the North. This track is on the Scottish Paths Record but is little used. The burn is otherwise hardly visible from points of public access. There is a small original mill building close to the proposed turbine hut and evidence of an old lade leading from a point approximately 400 metres up the burn. The lade is dry and ruinous.

2. The proposed plant comprises three elements;
 - 1) An intake weir built across the burn at a point approximately 600 metres from the confluence with the River Don. The intake weir would be 2.75 metres high by 3.1 metres wide with an in stream length of 2.75 metres, including wing walls. It would be constructed in concrete and would include a fish pass and screens to prevent fish, wildlife and debris from entering the system. This would be connected by underground pipe work to;
 - 2) A turbine house containing an 11Kw turbine housed in a steel portal frame shed on a concrete foundation. The walls would be externally clad in timber and a black corrugated plastic roof with Perspex roof lights is proposed. The shed would measure 3.2metre wide by 3.3metres long by 3.3metres high and would be sited on a bank adjacent to the old mill building and the Green Road. There would be a 1 metre high by 5.2 metres long retaining wall to the rear. The turbine would be connected by outfall pipe work, over a distance of 31 metres to;
 - 3) An outfall structure set into the banks of the River Don. This is the nearest point of discharge to a watercourse. The structure comprises an inspection chamber and revetments and gabions to protect the bank.

3. There would be no sub-station. Access would be via the existing valley track. A short stretch of track to the weir site (100 metres down a bank) may be required. It is intended to source as many materials and components as possible locally. Annual services and occasional checks will employ local engineers, particularly as more systems are commissioned.

DEVELOPMENT PLAN CONTEXT

Cairngorms National Park Plan 2007

4. Strategic objectives for the Landscape, Built and Historic Environment include: maintaining and enhancing the distinctive landscapes across the Park and ensuring that development compliments the landscape character and conserving the archaeological record.
Strategic objectives for Biodiversity include: conserving and enhancing the condition and diversity of habitats and species present throughout the Park through a landscape-scale approach to habitat networks and ensuring that populations of protected species are stable or, where appropriate, increasing.
Strategic objectives for Energy include: contributing to national targets for greater renewable production through increasing community, business and domestic-scale renewable energy schemes.
Strategic objectives for Water include: Maintain or where necessary enhance the existing high water quality and physical condition of water bodies in the Park and encourage more sustainable patterns of domestic, industrial, agricultural and recreational water use.

Aberdeen and Aberdeenshire Structure Plan 2001- 2016

5. **Policy 5 Renewable Energy Facilities** states that proposals shall be favourably considered subject to ecological, transportation, landscape and amenity considerations.
6. **Policy 19 Wildlife, Landscape and Land Resources** states that would have an adverse impact on a protected species will only be permitted where the objectives of the designation and the integrity of the area will not be compromised and any significant adverse effects are clearly outweighed by social and economic benefits of national importance. Development will be sited and designed to avoid adverse impacts on the biodiversity of the site, including environmental quality, ecological status and viability. Development should take into consideration the character of the landscape.
7. **Policy 20 Built Heritage and Archaeology** states that the built heritage will be conserved as a valuable non-renewable resource.
8. **Policy 22 Water Management** states that development shall be sited and designed to protect the natural heritage value and water quality of lochs, ponds, water courses, aquifers and wetlands.

The Aberdeenshire Local Plan 2006

9. **Policy Env\4 Biodiversity** states that development will be refused subject to the same criteria as set out in Structure Plan Policy 19 and unless there will be no fragmentation or isolation of habitats as a result of the development.
10. **Policy Env\5B Areas of Landscape Significance** will resist development where its scale, location or design will detract from the quality or character of the landscape, with greater weight being given to Aim 1 (Natural and Cultural Heritage) in the Cairngorms National Park.
11. **Policy Env\15 Aquatic Engineering Works** states that development that would result in the deterioration of the ecological status of water bodies through impacts on water quality, flow rate, riparian habitat or protected species will be refused.
12. **Policy Env\19 Archaeological Sites** states that archaeological sites of local interest will be protected from adverse impact unless there is an overriding public interest and no alternative site for the development.
13. **Policy Inf\8 Other Renewable Energy Sources** states that facilities will be approved if located, sited and designed to protect public health and safety, comply with Environmental Policies, are appropriate in scale and nature to the settings of archaeological sites, mitigation of noise or visual intrusion of neighbours and suitable land restoration and aftercare.
14. **Policy Gen\1 Sustainability Principles** includes assessment against indicators to protect wildlife habitats, landscapes, built heritage, maximising the efficient use of energy, avoid pollution, public health and safety, provides local employment. Where there is significant uncertainty as to the risk of substantial harm then the precautionary principle will apply.

CONSULTATIONS

15. **Scottish Natural Heritage:** in accordance with the agreed concordat, comments relate only to potential impacts on European Protected Species, in this case Otter. SNH does not object to the application but recommends conditions to minimise potential impacts on Otter. In accordance with the Wildlife and Countryside Act 1981 (as amended) and the Conservation (Natural Habitats &c.) Regulations 1994, it is illegal to deliberately or recklessly kill, injure, disturb, or capture/take a Protected species of animal or to damage or destroy the breeding sites or resting places of such animals. The Otter and Water Vole Survey supplied by the applicant identifies signs of Otter up and down the Milltown Burn, two holts on the Don upstream from the confluence and a couch or resting site on the Don, downstream from the confluence. The holts did not show signs of current occupation and were not in use for breeding. SNH accepts the survey and its findings including the mitigations measures suggested. SNH is of the view that there is unlikely to be any long term impact on the local otter population, subject to conditions to protect the animal and its holts during construction activities.

Water Vole is a Protected species under The Wildlife and Countryside Act 1981(as amended) and UKBAP. The survey found evidence of Water Voles only upstream of the proposed works although the entire stream provides good habitat. SNH advises that the conditions recommended to prevent disturbance to Otter will also help to protect suitable Water Vole habitat.

16. **SEPA:** Is currently considering a licence application under The Water Environment (Controlled Activities) (Scotland) Regulations 2005 (CAR Licence). This deals with pollution, water flow, quality and quantity and the ecological status of the water course with regard to passage of migratory fish and weir design, screening and cleaning. SEPA is minded to grant the Licence but is seeking a delay in issuing a licence whilst advice on specific aspects of micro-hydro schemes is sought. SEPA is not the competent authority to comment on the wider biodiversity aspects of the scheme or on landscape impact. SEPA does not object to the scheme from a planning perspective, subject to conditions to prevent the pollution of and disturbance to the water course. The site lies adjacent to the 1:200 flood envelope but is not likely to cause a flood risk to property down stream.

With regard to water flow, a minimum “hands-off” flow of 20 litres per second (l/s) (Q90) is likely to be required to be left in the watercourse. I.e. for 90% of the time the flow must be 20 l/s or above. This is considered quite a respectable flow for a stream and will protect the passage of salmonids. The effect of the abstraction will be to flatten off (i.e. remove) natural flows in the water course above this minimum, up to a maximum design flow of the system of 114 l/s. Above this value, system overflows will go down stream. This is not expected to affect water quality or temperature as the time of travel of water through the depleted stretch (600 metres) would only be a few minutes.

17. **Don District Salmon Fisheries Board:** a survey of the burn revealed a healthy stock of mature Brown Trout, juvenile trout and young salmon

from fry to parr. The Board has concerns in relation to the width, gradient and design of the fish pass, which may not permit adult fish to ascend the burn. There are also concerns about low flows affecting fish passage and the requirement for screens at the inlet and discharge points. These are all matters for the CAR licence from SEPA. SEPA is currently taking specialist advice on the licence requirements.

18. **Aberdeenshire Council Environment Officer:** unable to comment initially due to a lack of information. A second consultation revealed no further comment other than the advice of SEPA and SNH should be sought.
19. **Aberdeenshire Council Flood Prevention Unit:** the proposal does not appear to have any adverse effects on property upstream or downstream therefore no comment.
20. **Donside Community Council:** no comment.
21. **Heritage and Landscape Management:** Comments will be reported verbally.

REPRESENTATIONS

22. None.

APPRAISAL

The Principle of the Development

23. This is the first of a number of similar proposals across the Cairngorms National Park and currently at the design stage. Planning policy expresses support for sustainable renewable energy projects subject to protection of the environment, species, the landscape, amenity and in particular, the water regime. These aspects are considered in terms of the actual impacts and a precautionary approach comparing potential impacts with the actual productivity of the proposed scheme.

Respective Responsibilities of the Regulatory Agencies

24. Also relevant are the respective roles of the Regulatory Authorities. SEPA is the Competent Authority with regard to a range of issues covered by the CAR Licence application but these are by no means comprehensive. PAN 51 advises that it is material to consider all aspects of the proposal under the planning system, including the likelihood of the grant of a CAR Licence although planning permission is not dependant of the grant of a CAR Licence and visa versa. PAN 51 also advises that where a consideration is specifically covered by the CAR Licence then it "may be best addressed by the relevant environmental protection regime". SEPA is actively investigating these considerations. The recommendation therefore does not

cover issues specifically covered by the CAR Licence but takes them into account in the assessment and recommended conditions. These specifically relate to pollution of the water course, the water flow regime as it affects migratory fish and the ecological status of the water, weir and out fall design, screening and fish passage design. All other material matters are primarily considered under the planning application.

The Potential Renewables Contribution

25. The applicants Feasibility, Environmental and Design Study states that the hydro-electric resource at the Milltown Burn is suited to the installation of an 11kW turbine. This has a theoretical output of 43,000 kWh per year, enough to supply 9 average UK households. However, the actual output is determined by the stream flow, which varies over the year. It is planned to extract a 100% of the flow above the Q90 (i.e. a minimum of 20 litres/second will be left in the stream for 90% of the time) up to a maximum design flow of 114 litres per second. The gauged and recorded flow in the burn, adjusted for the predicted mean flow at the weir is a maximum of 195 litres/second in January, 105 litres/second in April and below this level in the summer months from May to September. The water flow in the burn is only likely to exceed the 114 litres/second maximum proposed abstraction between October and March each year and at times of spate. This can be for short periods during any month. Some power is lost between "water and wire" and a water to wire efficiency of 49% is predicted. This produces a predicted average power out put of: 8.1kW in January (highest)
- 5.7kW in April
1.4kW in July (lowest)
7.0kW in November
26. For comparison, it is understood that an average house requires 11kW when everything is running and an average of 4.5kW at any point in the day. It is intended to connect the system to Allargue House and Stable Cottage (both occupied by the applicants family). The system would provide some but not all the needs of these houses in the winter months with some surplus going to the mains in off-peak periods. In summer months most of the needs of the houses would come from the mains or other sources, with little or no surplus going to the mains. At times of very low flow, the system would be turned off, still allowing for the Q90 of 20 litres/second of "hands off" flow in the burn.
27. Whilst the contribution to energy production is not as good as the headline figure of supplying 10 average UK households per year, it would make a significant contribution to the energy requirement of the two houses connected to it, with a limited contribution to the grid locally. This is more beneficial than transmission of a surplus over any distance as less power is lost.

Habitat and Species Impacts

28. The specifically protected species in this case are Salmonids, Otter and Water Voles. Surveys of these species have revealed a healthy presence and habitat for all three but the specific sites of the weir, turbine hut and outfall do not affect any specific breeding or resting sites. SNH advises that the works would not have any long term impacts on the Otter and Water Vole subject to conditions. The Don District Salmon Fisheries Board and SEPA are seeking design changes and a water flow regime that will protect the interests of migratory fish. The wider impact of the change in the flow regime on the local biodiversity of the stream and its environs is less understood but it would appear that whilst the flow and dynamism of the stream will change, the surrounding habitats are unlikely to be significantly affected. The affects of foraging Otter on Salmonids in a low flow environment is not fully understood. The applicant points out that the estate holds a further five similar burns that will be unaffected and actively managed for their biodiversity and amenity. A mink extermination programme is also on-going.

Design and Landscape Impact

29. The intake weir is a concrete construction. Due to its small scale and discrete location it is not planned to face it in stone. The turbine housing will be faced in stained timber boarding. The applicant has also agreed to a corrugated iron roof with Perspex light panels in place of plastic roofing. The building is approximately a large single garage size and will be placed adjacent to an old stone mill building. It is unlikely to have any significant impact on the wider landscape or the enjoyment of the public as the Green Road is little used and near-by houses are occupied by members of the applicants family. Use of the old mill and its lade were considered but were found to be prohibitively expensive due to their condition. The out let point on the Don will be protected by stone gabions and revetments similar to normal bank protection works and are unlikely to have any impact on the amenity of the wider surroundings. The approach track to the weir can take a minimal form, simply to allow for construction access and limited access for maintenance thereafter. The pipe work will be under ground. A condition requiring careful land restoration and after care around all the works is recommended.
30. There is likely to be some impact on the landscape from the reduced water flow over 600 metres. Whilst the site is in an a Local Plan Area of Landscape Significance, the development is only likely to affect public amenity and enjoyment to those using the near-by Green Road up the valley or in distant views from the surrounding hills. Neither is heavily used and the site is generally secluded and not widely visible in the landscape.

Archaeology

31. There are five sites of sheilings and other old farm buildings recorded on the National Monuments Record in the vicinity of the Milltown Burn. This attests to the historic role of the valley as a farming community. Only one, to the west side of the burn, may lie in line with the pipe run and should be avoided. A condition is recommended.

Conclusion

32. The proposal would have no significant impact on the known sites of Protected species. The precise impact on the biodiversity of the burn affected by the reduced flow is not fully understood, particularly in relation to capacity to support flora and fauna, and the affects of foraging Otter on Salmonids in a low flow environment. These dynamics require more research but for this particular proposal, SEPA considers that the flow remaining in stream is good for purposes of supporting migratory fish and SNH does not consider that the proposal would have a significant impact on protected species, subject to conditions. With regard to landscape and amenity, the structures are small and discrete and are unlikely to affect public amenity provided that the land is properly reinstated post-construction. The local landscape will be marred by the low flow regime over a distance of 600 metres but the location is secluded and little visited by the public and the effects are considered to be acceptable given the predicted renewable energy contribution to two households in the vicinity. A more precautionary approach may be necessary in a more prominent or sensitive location or for a larger scheme but the benefits balanced against the impacts on the wider bio-diversity and the landscape lead to a conclusion in favour of the development in this case.

IMPLICATIONS FOR THE AIMS OF THE PARK

Conserve and Enhance the Natural and Cultural Heritage of the Area

33. Mitigation measures and conditions, a construction management plan and careful future management will conserve the natural heritage interest of the site although no enhancement is expected and the effects of factors such as water temperature are unknown. Some impact on the landscape very locally may be expected.

Promote Sustainable Use of Natural Resources

34. The proposal promotes a renewable and clean form of energy.

Promote Understanding and Enjoyment

35. No implications for this Aim.

Promote Sustainable Economic and Social Development

36. The proposal promotes a technology that may provide local jobs in the construction and operation phases and in the more strategic promotion and implementation of the technology.

RECOMMENDATION

That Members of the Committee support a recommendation to:

Grant Full Planning Permission subject to the following conditions: -

1. The development to which this permission relates must be begun within five years from the date of this permission.
2. That the development hereby approved shall be carried out strictly in accordance with the "Otter and Water Vole Survey for Allargue Estate Recommended Avoidance and Mitigation Measures" Dated April/May 2009, by Flora Grigor-Taylor and Steff Ferguson, with the additional requirements that:
 - (i) Notwithstanding the recommended construction periods, no construction works shall take place **outwith** the late summer to mid-autumn period (i.e. Mid - August to Mid- November);
 - (ii) Construction works shall be limited to the period between 2 hours after sunrise and 2 hours before sunset;
 - (iii) A protection zone of 30 metres shall be clearly marked out around the two Otter holts identified in the survey, with access barred to people and machinery during the construction period.
 - (iv) Access routes for heavy machinery shall not enter the water courses and machinery shall be restricted to the banks immediately adjacent to the intake and outfall points.
3. The construction shall be carried out in accordance with the Construction Method Statement marked "Report 08004R002 – Issue 2" supplied with the Feasibility, Environmental and Design Study supplied by Highland Eco-Design and dated 25th November 2008, (as well as any conditions required by the CAR Licence).
4. The construction shall be carried out entirely in accordance with the plans and dimensions given on Drawing Numbers 08004D001/01, 02 and 03, dated 25.11.08, subject to any design changes required to meet the terms of the Licence issued under the Water Environment (Controlled Activities) (Scotland) Regulations 2005 (CAR Licence) unless amendments are first approved in writing by the Cairngorms National Park Authority acting as Planning Authority.

5. The turbine machinery shall be made entirely inaccessible to Otters and fish, both at the in-take weir and outfall and at the turbine house, to the satisfaction of the Planning Authority in Consultation with SEPA.
6. Within 2 months of the completion of the each of the works at (i) the Weir, (ii) the turbine house, (iii) the discharge point and (iv) the pipe connections and the access track, the areas around and over these respective elements shall be restored to its original condition of unimproved grassland with local native shrubs and thereafter maintained for a period of at least two years or until established.
7. The works including the pipe works shall avoid all sites identified on the National Monuments Register. In particular, prior to the commencement of the works, sites to the west of the Milltown Burn at NJ265 097 and NJ266 098 shall be identified on the ground, taped off and avoided completely by all machinery.
8. The turbine house hereby approved shall be finished in traditional timber cladding to the walls and corrugated iron to the roof (other than lighting panels) and shall be stained or painted to dark, recessive colours to the satisfaction of the Planning Authority.
9. In the event that the intake weir is disused the maintenance by-pass sluice shall be left permanently open and the burn restored fully to its natural flow regime.

ADVICE NOTE

I. Protected Species

The applicant is advised that it is a criminal offence under the Conservation (Natural Habitats Etc.) Regulations 1994 to deliberately or recklessly capture, injure or kill a European protected species of wild animal (including birds) or to deliberately or recklessly (i) harass an animal or group of animals; (ii) disturb an animal while it's occupying a structure or place used for shelter or protection; (iii) disturb an animal while it's rearing or caring for its young; (iv) obstruct access to a breeding site or resting place; (v) disturb an animal in a manner that is likely to significantly affect the local distribution or abundance of the species to which it belongs; (vi) disturb an animal in a manner that is likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for their young; (vii) disturb an animal while it is migrating or hibernating.

Where it is proposed to carry out works which will affect European species or their shelter/breeding places, whether or not they are present in these refuges, a licence is required from the Scottish Government (Scottish Natural Heritage).

2. SEPA Application for Licence under the The Water Environment (Controlled Activities) (Scotland) Regulations 2005 (CAR Licence).

The applicants attention is drawn to the above application for a CAR Licence. Notwithstanding grant of the planning permission, the CAR Licence must be granted before the development may proceed. Both the conditions of planning permission and the terms of the CAR licence must be met in full.

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14th July 2009

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