

From:Robin Fraser

Sent:Fri, 25 Jan 2019 14:32:04 +0000

To:Epc

Subject:18/05427/S36 | To construct and operate a pumped storage hydro scheme approximately 14km SW of Inverness. | Land 630M East Of Park Cottage Dores

Apologies for delay in responding.

The application is for a large hydro power scheme in what is predominantly a rural setting. As such there is a potential for disturbance to sensitive premises from noise, dust and vibration. The applicant has submitted a noise assessment which has assessed the potential impact from noise and vibration during both the construction and operational phases.

Construction Noise

In most cases, it is expected that construction activities will give rise to some level of disturbance but any impact will be temporary. The construction period for this development is expected to last for up to 6 years. Some □permanent□ developments don□t last for that long therefore this needs to be taken into account, particularly when considering what constitutes the best practicable means for noise and vibration mitigation.

Figure 16.1 of the supporting documents identifies the location of the noise sensitive properties in the area. Baseline monitoring has been undertaken at representative locations which shows generally low background levels which is not unexpected.

The assessment has assumed noise criteria, taken from BS 5228, of 65 dB(A), 55 dB(A) and 45 dB(A) during the day, evening and night-time respectively. However, BS 5228 also refers to *Minerals Policy Statement 2 - Controlling and mitigating the environmental effects of mineral extraction in England*. This advises that where the duration of earth moving works is likely to exceed six months then the development should be considered more as surface mineral extraction than conventional construction. For these activities MPS 2 suggests a daytime limit of 55 dB LAeq,1h. The equivalent guidance in Scotland is *PAN 50 Annex A Controlling The Environmental Effects Of Surface Mineral Workings*. This guidance actually goes on to suggest that in

areas of low background levels the appropriate limit for mineral workings should be 45dB LAeq 1hr.

The noise assessment appears to have broken down the various phases of construction into periods of months and has identified that there is only one phase which would last more than 6 months. I am of the opinion that the construction period should be considered as a whole. In that respect, I would advise that a limit of 55 dB LAeq, 1 hr is more appropriate for daytime noise throughout the construction period with possible exemptions for short term activities such as blasting or piling.

This being the case, the assessment demonstrates that noise levels will exceed the criteria of 55dB 1 hr LAeq at various locations and times throughout the construction period. It should also be noted that the assessment has apparently scoped out the impact of construction traffic which is only likely to increase noise at sensitive receptors.

The assessment states the intention is for tunnelling to be a 24hr operation but has not given predicted levels for night time construction noise. I understand the assumption is that underground activities will not present a significant issue at receptors but there are no further details.

It is noted that the predicted noise levels do not include any reductions from the implementation of mitigation measures. Examples of mitigation are given in section 16.7 of the assessment which also states that the best available construction methods shall be employed at all times, having regards to the principles of BPM to minimise noise and vibration impacts during the construction. At this stage, there is no specific mitigation scheme proposed and it appears the intention is to submit a CEMP which will incorporate things like mitigation, noise monitoring and consultation with the community. ■

I am of the opinion that based on the low background levels in this area and the likely duration of construction works, noise from this phase of the development is likely to have a detrimental effect on the day time amenity of local residents unless significant mitigation measures are implemented. This impact may be made worse if it is found that night time construction levels from tunnelling etc. also cause disturbance.

Planning conditions are not normally used to control the impact of construction noise as similar powers are available to the Local Authority under Section 60 of the Control of Pollution Act 1974. However in this case, given the extent of the development I believe it would be beneficial for all parties to be clear on the requirements prior to construction commencing. **I would therefore object to this development unless the following conditions are attached: -**

- Unless otherwise authorised in writing by the Planning Authority, noise arising from construction works associated with this development shall not exceed the following limits as calculated or measured at the curtilage of any noise sensitive property: -

Monday to Friday 8am to 6pm 55dB LAeq 1 hour

Monday to Friday 6pm to 10pm 45dB LAeq 1 hour

Saturdays 8am to 1pm 55dB LAeq 1hour

Saturdays 1pm to 6pm 45dB LAeq 1 hour

At all other times and including Easter and Christmas/New Year public holidays; operations for which noise is audible at the curtilage of any noise sensitive property are not permitted.

- Prior to the commencement of construction, the applicant shall submit for the written approval of the planning authority, a construction environmental management plan (CEMP) to include details of a noise mitigation and monitoring scheme which demonstrates how compliance with the above limits will be achieved. The CEMP should also include proposals for the monitoring and control of blasting noise and vibration.

I would also recommend a community liaison group be set up which meets at regular intervals following commencement of construction.

Construction Vibration

The assessment has looked at construction vibration from surface works, piling, blasting and tunnelling. Given the separation distances involved, vibration levels are unlikely to exceed relevant Nuisance criteria. However, with such a long construction period complaints about vibration may arise even at levels below these limits. I would recommend the following condition but to clarify, should complaints arise about prolonged periods of perceptible vibration this Service has powers under the Control of Pollution Act 1974 to introduce additional controls if required.

- The peak particle velocity generated by construction activities shall not exceed 5mm / second as measured at any dwelling or other sensitive property. This applies to all operations other than blasting. For blasting, it is expected that the best practicable measures will be employed to minimise the impact of noise and vibration.
- For activities where vibration is perceptible at any sensitive property, the hours of operation shall be as follows: -

Monday to Friday 8am to 6pm

Saturdays 8am to 1pm

At all other times and including Easter and Christmas/New Year public holidays; operations for which vibration is perceptible within any noise sensitive property are not permitted.

- Prior to the commencement of construction, the applicant shall submit for the written approval of the planning authority, a construction environmental management plan to include details of a vibration mitigation and monitoring plan which demonstrates how compliance with the above limits will be achieved.

For the avoidance of doubt it is expected that the best practicable means in accordance with BS 5228 Parts 1 & 2 will be employed to reduce the impact of construction noise or vibration

Operational Noise

The predicted operational noise levels from above ground equipment are given in table 16.24 of the assessment which compares them against background levels. This indicates that daytime noise is unlikely to be significant. Night time levels at some locations do exceed the existing low background levels but the absolute predicted levels are still very low. The maximum predicted external level is 26dB. Allowing for a 10-15dB reduction through an open window, internal noise levels should not give rise to complaints. As a precaution I would object to the development unless the following condition is attached: -

All plant, machinery and equipment associated with this development shall be so installed, maintained and operated such that the following standards are met: -

- Between 2300 hrs and 0700 hrs, any associated operating noise must not exceed NR 20 when measured or calculated within the bedroom of any noise-sensitive premises with windows open for ventilation purposes.
- Between 0700 hrs and 2300 hrs the operating noise Rating level must not exceed the Background noise level by more than 5dB(A) including any characteristics penalty. Terms and measurements to be in accordance with *BS 4142: 2014 Methods for Rating Industrial & Commercial Sound*.

Operational Vibration

Experience has shown that people can be very sensitive to emissions which are perceived as a sensation rather than an audible noise. For construction noise, there is a foreseeable end to any impact and standards can be more relaxed. However, if the

development was to give rise to any noticeable operational vibration, this could have a significantly detrimental impact on the amenity of sensitive residents. For the avoidance of doubt, the only acceptable operational limit for vibration from this development is to be below the threshold of perception. I would therefore object to the development unless the following condition is attached: -

- The peak particle velocity generated by activities arising from the operation of this development shall not exceed 0.1mm / second as measured at any dwelling or other sensitive property.

Dust

The CEMP will need to include an adequate scheme for the suppression of dust. Given the size of the development and the extent of earthmoving works, the applicant should submit information demonstrating how dust levels will be controlled should there be a recurrence of the dry weather conditions experienced across the country last summer.

Regards,

Robin Fraser

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