

The purpose of this note is to address concerns raised by Harrison Clark Rickerbys Solicitors on behalf of a resident who lives in close proximity to the site, relating to noise, vibration, vehicle impact on ground stability, light and visual amenity. This is considered in the context of the statement within the letter that the resident has particular sensitivities to noise and light. As applicant, we do not have details of these sensitivities, but we have sought to respond to the points raised.

Assessment of Noise

The main concerns raised in the letter are that:

1. construction activity will result in a significant increase in noise levels over the existing ambient level;
2. the use of embedded mitigation is insufficient to adequately control construction noise; and,
3. the assumptions used for the assessment of operational noise levels for the spillway do not represent a reasonable worst case.

Construction noise levels

The letter raises concerns over increased noise levels due to construction activity and makes the point that the existing ambient noise levels are low. The effects of construction noise have been assessed using the ABC method set out in "BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites". This methodology takes existing ambient noise levels into account by setting the significance threshold based on existing noise levels.

The ambient noise levels used for the assessment were determined through a noise survey and it is recognised that the existing levels are low. This is reflected in the use of the Category A threshold for the assessment, which is the lowest threshold for determining significant effects in BS 5228. Considering this, we believe that the impacts from construction noise have been adequately assessed and have sufficiently taken into account the existing noise climate.

Embedded mitigation

The letter raises concerns over the assumption of embedded mitigation in the assessment of construction noise and goes on to state that "the lack of additional measures to prevent, reduce and offset likely adverse effects which could not be avoided through design, mean that the Proposal is currently contrary to policy EQ 10".

Best practicable means (BPM) is assumed as incorporated within any embedded mitigation measures meaning any noise impacts will be minimised as far as reasonably practicable. The Construction Management Plan will ensure that best practicable means are employed. Additionally, through consultation with High Peak Borough Council, it was agreed that a section 61 application under the Control of Pollution Act 1974 would be advisable to ensure that construction noise (and vibration) impacts are adequately controlled. For these reasons, no additional mitigation is recommended (beyond the embedded mitigation detailed in the ES) as noise impacts are already controlled as far as reasonably practicable.

Operational assessment

The letter raises concerns about the assumptions used in the assessment of operational effects from the new spillway. In particular it is questioned whether the assessment represents a worst-case scenario. The assessment of environmental noise typically employs reasonable worst-case assumptions (i.e. favourable wind conditions or moderate ground-based temperature inversions). This principle has been used in the assessment of noise from the spillway.

As stated in the ES, there are no existing prediction methods to calculate noise from spillways in operation so the assessment relies on published noise measurements taken of similar shaped spillway in operation. The published data states that the dominant noise source in the measurement was "noise generated by water rushing over the dam spillway". The data is therefore considered to be representative of a reasonable worst-case scenario with large amount of water flowing over the spillway. The assessment is not representative of infrequent absolute worst-case events such as storms.

The letter states that the closest assessed receptor to the correspondent's dwelling is R5. This receptor is around 200m from the centre of the proposed spillway. At this distance, we predict reasonable worst case spillway noise levels of 36dBA which is 4dB below the 40dBA LOAEL threshold (i.e. the 4dB below the threshold where adverse effects on health and quality of life can be detected) and 14dB below the existing daytime ambient noise level of 50dBA (see the ES for further details).

Summary

Overall, we believe that the assessment presented in the ES adequately addresses the concerns raised in the letter. Namely,

- The use of the Category A threshold for the construction assessment takes the low ambient noise levels into consideration;
- The incorporation of BPM means that any construction noise impacts will be minimised as far as reasonably practicable and therefore additional mitigation does not need to be proposed in the ES; and,
- The operational noise assessment represents a reasonable worst-case scenario of a large amount of water flowing over the spillway.

Consideration of whether any further mitigation of impacts could be achieved

Noise and vibration impacts

As stated above, best practicable means (BPM) is assumed as incorporated within any embedded mitigation measures, meaning any noise impacts will be minimised as far as reasonably practicable. Any residual noise effects will be managed and mitigated through the implementation of a Construction Environmental Management Plan (CEMP). Noise impacts being controlled as far as reasonably practicable, there is no further mitigation that can be made. Numerous inclusions of BPM are listed; it is worth noting that the topography / level differences within the site makes noise mitigation measures more difficult to practically implement. We agree that communication with residents prior to noisy or high vibration works will be particularly important and would also make reference to our 'Construction Phase Communications Note' submitted as supplementary information.

The letter references consideration of limits being placed on the number of vehicle movements and the times when they are permitted to travel to and from the site to minimise the duration of noise each day. Doing so would inhibit construction and prolong the works programme duration significantly, which we believe would not be the interests of close residents. We have placed reasonable limits on construction working hours (and it is noted that these are typical for noisy working), as well as including the need for prior approval from the Council before Saturday working could be implemented (which is not normally restricted for Saturday mornings).

We note that noise monitoring is referenced in the letter as a potential additional measure. We would be willing to implement noise monitoring (frequency to be agreed) at the site and review this data in conjunction with the Council's EHO, but we do not believe it is realistic to reduce noise further to that done so by implementing BPM, as already proposed.

Ground Stability and additional vehicle impacts

The letter states concerns that lorries will potentially damage foundations and could cause subsidence. We do not envisage this occurring, and would not allow a vehicular route where this was likely. The route will be upgraded to be suitable for all vehicle traffic.

Nonetheless, we have appointed an independent Building Surveyor for the project, in order to conduct Condition Surveys (where consented to), for purpose of residents being assured that in the unlikely event of damage occurring, it will be identified and rectified. It is our understanding that a survey has taken place at this resident's property.

Amenity and visual impact

Several points are raised regarding amenity and visual impact:

- Light pollution

- Construction hoardings
- Loss of existing trees

Measures regarding lighting are included in the Outline CEMP, and will be further detailed in a full CEMP to be completed for construction, which would be submitted for LPA approval. We have stated that lighting controls will be included and temporary lighting will be arranged so that glare is minimised outside the construction site. Where possible, out of hours lighting will be kept to a minimum, although there will be a need for this in conjunction with maintaining site security.

The site compound and surrounding construction hoarding is needed nearby to the resident's property, as the space available for a compound in the north part of Memorial Park is limiting for a construction scheme of this scale. We believe our construction compound plan to be reasonable in relation to surrounding residents, and taking account of the necessary space needed for site welfare, parking, materials / plant / equipment storage etc. Hoardings are incorporated for both visual screening and a degree of noise mitigation, the need for which is referred to in the letter. With the level difference in the site, and the position of the residents property and fenestration, we believe the impact of hoarding blocking natural light will be minimal.

We acknowledge that a number of trees will be lost in order to construct the new spillway. This is unfortunately a necessity owing to the complex engineering requirements and constraints. However, we have taken additional effort to ensure retention of the tree group G8 (see Appendix 7 of our Arboricultural Impact Assessment). Whilst not substantial in number, the plans for the compound initially required removal of this group. In consideration of the close residents, these plans were specifically rearranged at the cost of compound space and therefore efficiency, in order that the group could be retained. Retaining these will offer some degree of longer term screening of the spillway once complete. Working in conjunction with the Council's Tree Officer during the planning application phase, some further trees have been added to the landscape plans in this part of the park, which (once established) ought to be of benefit to the resident.

Summary

We do not believe we can incorporate any further noise mitigation within the scheme, with implementation of BPM having been assumed.

However, we propose that we could implement noise monitoring as stated above. The requirement for a Section 61 has been agreed, and monitoring data from the site reviewed with the EHO could assist in this regard.

Kind regards,

Tom Greenwood

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