

## *Loch Kemp Storage - EIA Report*

### *Appendix 17.3: Outline Construction Noise and Vibration Plan*

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# Outline Construction Noise & Vibration Management Plan (CNVMP)

## 1.1 Introduction

- 1.1.1 As described in Section 17.9 of Volume 1, Chapter 17: Noise and Vibration of the EIA Report, the proposal is for Noise and Vibration resulting from construction operations associated with the proposed Loch Kemp Pump Storage Scheme (the Proposed Development) to be managed and controlled through a Construction Noise and Vibration Management Plan (CNVMP).
- 1.1.2 Once clearer detail of the construction plant and processes are known, the appointed Principal Contractor would develop and submit, for approval by The Highland Council (THC), the CNVMP which would detail how noise and vibration emissions would be managed during construction works. The plan would detail control measures, such as hours of work, mitigation strategy, monitoring proposals and protocol for receiving and dealing with any complaints.
- 1.1.3 In outline terms the scope of the CNVMP would, as a minimum, cover the items included in the following sections.

## 1.2 Objectives

- 1.2.1 This section would detail the broad objectives of the CNVMP, to include the practical measures and procedures to be adopted in order to minimise noise and vibration and thereby prevent construction operations causing nuisance to any members of the public living, or working, in the vicinity of the operations.
- 1.2.2 As a general principal, consideration would be given in the CNVMP for adopting the 'best practice means' to noise and vibration control, with particular consideration given to the guidance provided in Section 8 (Control of Noise) of BS5228-1, for the purpose of minimising noise emission.

## 1.3 Noise & Vibration Control Measures

- 1.3.1 This section of the CNVMP would detail the specific mitigating measures that would be considered for controlling noise and vibration to include:
- Noise control in construction design and selection of plant and equipment;
  - Noise control at source (favourable positioning of specific plant and operations);
  - Noise control in transmission path (use of plant enclosures, local or site boundary screening);
  - Blast-induced ground vibration control, by employment of good blast design, in particular to the use of the appropriate charge sizes; and
  - Blast induced air overpressure control, by employment of good blasting technique.

1.3.2 Detail would be provided of the pro-active measures for predicting, or estimating, noise and vibration that would be generated through each phase of the works, with mitigating noise and vibration control measures and procedures reviewed and implemented, as necessary, for the purpose of meeting the any defined noise limits and objectives. This would be an on-going process conducted before work starts on each phase of construction operations.

1.3.3 A procedure for pre-warning of specific construction activities (such as blasting), where these are likely to produce higher risk of complaint or adverse comment from the local community, would also be included.

## 1.4 Working Hours

1.4.1 This section of the CNVMP would detail the proposed normal working hours for the construction works. Any surface works planned for outside these normal daytime construction hours would be specified, with such works subject to agreement with THC.

## 1.5 Noise and Vibration Limits

1.5.1 This section of the CNVMP would include the noise and vibration limits proposed for the construction works, typically set and applied at any sensitive residential receptor positions located in the vicinity of these works.

1.5.2 In setting noise limits, account would be taken of the impact thresholds described in Section 17.5 of Volume 1, Chapter 17: Noise and Vibration of the EIA Report, in particular to the potential significant effect thresholds, as described in BS5228-1.

1.5.3 There is not expected to be any significant vibration produced by any of the proposed construction activities, including blasting. Nevertheless, for the purpose of monitoring vibration and air overpressure, during test blasting, reference would be made to the guide values for human response and cosmetic damage to buildings, as defined in Annex B of BS 5228-2.

## 1.6 Monitoring & Reporting

### Noise

1.6.1 This section of the CNVMP would include the procedure for monitoring and reporting of noise during construction works to verify that noise limits at any identified residential receptor positions were being complied with, throughout the period of these works.

1.6.2 The noise monitoring programme would take account of the guidance provided in Annex G of BS5228-1. Typically, noise monitoring would include for routine checks to be made either directly at identified residential receptors, or at a set distance from operations (to allow extrapolation of noise levels to be made at further distance). The Principal Contractor would provide resource for the routine noise monitoring and at any other times.

1.6.3 It is expected that continuous monitoring of noise would only be carried out in response to a specific complaint, or at the request by THC, resulting from such complaint.

### Vibration

- 1.6.4 This section of the CNVMP would include the procedure for monitoring and reporting of vibration monitoring during construction works, to verify that vibration limits at any identified residential receptor positions were being complied with, throughout the period of these works.
- 1.6.5 Vibration and air-overpressure monitoring would be carried out, either during trials, or during the early stages of blasting operations, for the purpose of predicting site-specific ground vibration and air-overpressure resulting from these operations. The CNVMP, would provide more detail when the design of the blasting programme is known.
- 1.6.6 In the event of any of the construction works producing formal complaint (either to the Principal Contractor, or via the Planning Authority), arrangements would be made to set up a temporary vibration monitoring station at the property concerned, with the reporting procedure to be agreed with THC.

### 1.7 Complaints Procedure and Local Liaison

- 1.7.1 This section of the CNVMP would outline the proposal for local liaison, including the formal complaints procedure, set up to address any complaint from members of the public. Typically, the procedure would specify how a complaint would be recorded, investigated and responded to.