

SECTION 7

NIGHT LIGHTING

7.1 Introduction

7.1.1 This section of the report describes the scope and methodology to be used in the prediction and assessment of noise and vibration effects arising from the proposed development.

7.1.2 The effects will be assessed in accordance with recognised U.K guidance and international protocols. It will include a number of stages; consultation with The Highland Council, baseline noise monitoring, modelling and prediction of noise effects, reporting of findings and recommendations, and the development of a series of mitigation measures, if required.

7.2 Legislative and Regulatory Context

7.2.1 The Scottish Government offer guidance and strategy in relation to the potential noise effect from new developments. This guidance is detailed in the documents specified below:

- Circular 10/1999: Planning and Noise (*The Scottish Office. (1999). Circular 10/1999: Planning and Noise*);
- Planning Advice Note 56 (PAN 56): Planning and Noise (The Scottish Office. (1999). Planning Advice Note 56: Planning and Noise);
- Planning Advice Note 57 (PAN 57): Environmental Impact Assessment Scottish Executive. (1999) (*Planning Advice Note 58: Environmental Impact Assessment*);
- Planning Advice Note 50 (PAN 50): Controlling the Environmental Effects of Surface Mineral Workings Scottish Executive. (1996). (*Planning Advice Note 50: Controlling the Environmental Effects of Surface Mineral Workings*); and,
- Planning Advice Note 50 (PAN 50) Annex A: The Control of Noise at Surface Mineral Workings (The Scottish Executive. (1996). Planning Advice Note 50 Annex A: The Control of Noise at Surface Mineral Workings);
- In addition to Scottish Government guidance, specific direction in relation to construction noise and vibration is also given in:
 - Control of Pollution Act, 1974 (CoPA) (*Control of Pollution Act, Part III. HMSO, 1974*);

- Environmental Protection Act, 1990 (EPA) (*Environmental Protection Act, Part III. HMSO, 1990*) and,
- British Standard 5227 (BS 5227): Noise and Vibration Control on Construction and Open Sites (*British Standards Institute. (1997). British Standard 5228, Parts 1-4: Noise and Vibration Control on construction and open sites. Code of Practice for Basic Information and Procedures for Noise and Vibration Control*).

7.2.2 The effects of increased public road network activity may be assessed using the methodologies outlined in the following documents:

- Calculation of Road Traffic Noise (CRTN) (Calculation of Road Traffic Noise. HMSO, 1988);
- Design Manual for Roads and Bridges (DMRB) (Design Manual for Roads and Bridges. Volume 11, July 1993);
- Guidance on the Methodology for Multi-Modal Studies (GOMMMS) (*Guidance on the Methodology for Multi-Modal Studies. DETR, 2000*); and
- CRTN is an internationally accepted method of calculating future noise levels as a result of changes to road traffic flows or design. The methodology uses measured or predicted movements, road type, average speed data and traffic flow composition (percentage of HGV's) to determine noise levels at each noise sensitive receptor (NSR) as a result of project and no-project scenarios.

7.3 Assessment Methodology

7.3.1 The prediction of construction noise and vibration will be based on the methodology outlined in BS 5227. This Standard offers a series of recommendations for basic noise control in relation to construction and other open sites, and provides guidance on noise measurement and prediction methods. The Standard also provides information on how best to minimise the level of noise intrusion experienced by the occupiers of nearby properties. Reference will also be made to the recommendations of the Department of the Environment Advisory Leaflet (AL) 72 'Noise control on building sites' (*Department of the Environment Advisory Leaflet (AL) 72 'Noise control on building sites', 1976*).

7.3.2 The predictions will be worst case, assuming high sound power levels and an absence of sound mitigation measures. Additionally predictions will assume that all construction activities will occur at the edge of the site at the closest location to the receptor. The actual noise impact associated with construction plant items or processes can vary significantly depending on their usage, and this will be taken into account where necessary.

7.3.4 Construction traffic and changes to traffic patterns on local roads during the construction phase are amongst the key elements of the proposed development

with the potential to result in noise effects. Noise will be assessed in the ES following the methodology outlined in the DMRB and CRTN.

- 7.3.4** Operational effects will be ascertained as per the Institute of Acoustics / Institute of Environmental Management and Assessment draft guidance on noise impact assessment. In addition to this guidance the recommendations of the World Health Organisation's guidelines (*World Health Organisation. 'Guidelines for Community Noise, 1999*) will also be followed.

7.4 Consultation Proposal

- 7.4.1** Consultation will be undertaken with the Environmental Health Department of The Highland Council prior to assessment in order to identify any particular issues of note. The consultation process will help identify present and future noise sensitive receptors which could potentially be disturbed by emissions at each stage of the project. These may be a mixture of residential, commercial or public buildings or areas.

7.5 Baseline Conditions

- 7.5.1** Potential noise sensitive receptors located in the local area will be the subject of a baseline survey. Noise from the construction phase and subsequent operation of the proposed development is likely to vary in nature and duration. Baseline conditions against which to judge the predicted impacts will be established at appropriate times over an adequate measurement duration.
- 7.5.2** The background noise conditions at each of the identified noise sensitive receptors will be established using a continuous monitoring regime at specified locations over a previously agreed timeframe, arranged through consultations with The Highland Council. Measurements will be necessary during both daytime and night-time periods as the development will be operational 24-hours per day / seven days a week.
- 7.5.3** The baseline survey will be undertaken in accordance with the principles of BS 7445 'Description and measurement of environmental noise' (*British Standard 7445 (2003): 'Description and measurement of environmental noise'*). The survey will consist entirely of free-field measurements, establishing the noise parameters of L_{Amax}, L_{Amin}, L_{A10}, L_{Aeq}, and L_{A90} and will be obtained using precision integrating sound level meters conforming to Type 1 specification and related standards. Further information including existing road traffic data for route sections and roads which will be subject to change as a result of the proposed development will also be used in the assessment.

7.6 Potential Effects

- 7.6.1** The potential for noise and vibration effects will be investigated as part of the EIA process. Any effects that are deemed to be significant will be addressed in this section. A preliminary review of the project has ascertained that potential effects

associated with construction and road traffic will warrant assessment. Impacts will arise through either noise and / or vibration changes or through exceedence of noise levels / limits.

7.6.2 Potential noise and vibration effects during construction may arise from:

- activities carried out at surface worksites;
- secondary ground-borne and structure-borne noise and vibration from underground works;
- road construction;
- assembly of buildings; and
- noise associated with site traffic.

7.6.3 Potential noise and vibration effects during operation may include:

- noise from changes in public road traffic flow;
- The effects identified will be the likely effects based on current assumptions concerning construction methods and noise emissions from vehicles; and
- Scope for Mitigation.

7.6.4 Mitigation in the form of selection of quiet plant, control of hours of working and implementation of the advice given in BS 5227 will be assumed for the construction stage. Additional mitigation will be considered according to the circumstances of each case where a significant effect is likely.

7.6.5 Mitigation will be reviewed for the operational stage where a significant effect is predicted.

7.7 Initial letter and Additional material to Consultation

7.7.1 Consultation with CPNA

Our ref JP/IA/JVM/244958
Your ref

Cairngorm National Park Authority
14 The Square
Grantown on Spey
PH26 2RS

FAO Mr M Hawkin

23 October 2008

Dear Sir,

Consultation on Proposed New Community at An Camas Mòr, Aviemore. Environmental Impact Assessment: Lighting

In support of the requirements of the Highland Council Structure Plan (2001) Badenoch & Strathspey Local Plan (1997), Rothiemurchus Estate proposes to create a new community at An Camas Mòr. The development site lies in the Cairngorms National Park and the Cairngorms Mountains National Scenic Area (NSA) and east of Aviemore and the river Spey on land owned by the Estate. The new community would provide 1500 residential units with associated community and business facilities, and infrastructure provision, with construction completed by 2027.

An Outline Planning Application for the proposed new community is scheduled to be submitted in January 2009, and will be supported by an Environmental Statement in accordance with the Environmental Impact Assessment (Scotland Regulations) 1999 which will assess the environmental effects of the construction and operation of the proposed new community.

Since starting work on An Camas Mòr started in 1994 much information on the environment has been taken into consideration in developing the Indicative Land Use Plan. As a result a request for a scoping opinion has not been submitted, and it has been agreed between The Highland Council, Cairngorms National Park Authority and Rothiemurchus Estate that agreement of the scope for the EIA will be undertaken through consultation.

Mott MacDonald Ltd has been appointed to the EIA team, and part of our brief is to assess the effects of lighting associated with the development on the surrounding landscape. An initial stage of the EIA process is to consult with relevant third parties who may have a specific interest in the impacts of lighting of the proposed scheme in order to:

1. Seek their views on issues which they consider to be of importance to the assessment;
2. Seek their views on the proposed methodology of assessment; and
3. Source any existing relevant information.

We would be grateful to receive any comments you may have regarding particular issues that you believe should be taken into account in the EIA, and the scope and approach of the intended assessment related to the effects of lighting on the surrounding landscape. We attach our proposed Methodology for baseline survey and impact assessment for your consideration.

We would also be grateful to receive any relevant data that you hold that might aid the understanding of the local environment and contribute to the robustness of the assessment

We would also be pleased to receive your advice regarding:

- any local institutions, groups or individuals, or other local sources of information that you recommend be consulted as part of the EIA;
- any current or recent projects being undertaken in the vicinity of the proposed development area, which include examples of good practice in lighting design.

We would be like to contact you to discuss the above matters further. If you have any questions, please do not hesitate to contact the undersigned.

We would be grateful for your early response.

Yours faithfully

Josephine Morrison

Encl.
Method Statement

cc.
Johnnie Grant, Rothiemurchus Estate
Mark Turnbull, mtl
Howard Brindley, Brindley Consulting
Andy Mackenzie, MBEC
Rose Kelly, Mott MacDonald Ltd