

Glyn Rhonwy Pumped Storage Development Consent Order Statement in Respect of Statutory Nuisance



PINS Reference	EN010072	
Document No.	5.02	
Regulation	5(2)(f)	
Author	AECOM	
Revision	Date	Description
0	October 2015	Submission Version

Contents

EXECUTIVE SUMMARY

SECTION 1	INTRODUCTION
SECTION 2	STATUTORY CONTEXT
SECTION 3	ASSESSMENT OF MATTERS POTENTIALLY ENGAGED
SECTION 4	CONCLUSION
SECTION 5	REFERENCES

Abbreviations & Glossary

BAT	Best Available Techniques
BPM	Best Practical Means
CoCP	Code of Construction Practice
CoPA	Control of Pollution Act
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
DMP	Dust Management Plan
ECoW	Environmental Clerk of Works
ES	Environmental Statement
GLA	Greater London Authority
IAQM	Institute of Air Quality Management
MTAN	Minerals Technical Advice Note
MW	Mega Watt
NMP	Noise Management Plan
NSIP	Nationally Significant Infrastructure Project
Snowdonia Pumped Hydro	The Applicant

EXECUTIVE SUMMARY

- 1.1.1 This report has been produced for the purpose of identifying the matters set out in section 79(1) of the Environmental Protection Act 1990 in respect of statutory nuisances and considers whether the Development would engage one or more of those matters. Where any of those matters may be potentially engaged, the Environmental Statement (ES) sets out the proposals for mitigating or limiting them.
- 1.1.2 This statement concludes that the only matters comprised in section 79(1) of the 1990 Act which may, potentially, be engaged as a consequence of the authorised project are dust, noise and light.
- 1.1.3 This statement concludes that, with the mitigation and control measures proposed in the ES, which will be captured within and implemented by the Construction Traffic Management Plan (CTMP), Dust Management Plan (DMP) and Code of Construction Practice (CoCP), it is not anticipated that a statutory nuisance will result from the construction or operation of the Development, with the exception of 11 properties during part of the construction period.
- 1.1.4 For these 11 properties, some noise impacts arising during the construction phase are predicted to potentially cause a nuisance or be prejudicial to health, but these are specifically related to combined construction activities and are expected to be temporary in nature. It is also considered to be confined to surface working activities as the noise would decrease as the construction activities descended into the quarry voids.

1 INTRODUCTION

1.1 Introduction

- 1.1.1 This Statement in Respect of Statutory Nuisance (“the Statement”) accompanies an application by Snowdonia Pumped Storage (SPH) (“the Applicant”) for development consent under section 37 of the Planning Act 2008.
- 1.1.2 The project for which development consent is being sought (“the Development”) comprises a pumped storage facility whose generating capacity exceeds 50 megawatts (MW). Therefore it is designated as a Nationally Significant Infrastructure Project (“NSIP”) under the Planning Act 2008.
- 1.1.3 This Statement has been prepared pursuant to regulation 5(2)(f) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009. In accordance with that regulation, it identifies whether the Development engages one or more of the matters listed as statutory nuisances in section 79(1) of the Environmental protection Act 1990 and, if so, how the Applicant proposes to mitigate or limit those effects.
- 1.1.4 This Statement has been prepared having regard to the Planning Act *Application Form Guidance* published by the Department for Communities and Local Government in June 2013.
- 1.1.5 Where relevant, this Statement refers to the Environmental Statement (ES) (Volume 2) and the Code of Construction Practice (CoCP) (Volume 3, Appendix 16.1).

2 STATUTORY CONTEXT

2.1 The Requirement for this Statement

2.1.1 Section 37(3)(d) of the Planning Act 2008 requires applications for development consent to be accompanied by documents and information of a prescribed description.

2.1.2 The documents and information are prescribed by the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009. Regulation 5(2)(f) provides that an application must be accompanied by:

“a statement whether the proposal engages one or more of the matters set out in section 79(1) (statutory nuisances and inspections therefore) of the Environmental Protection Act 1990, and if so how the applicant proposes to mitigate or limit them”.

2.2 Categories of statutory nuisance

2.2.1 Section 79(1) of the Environmental Protection Act 1990, as it applies in England and Wales, provides that each of the following matters constitutes a statutory nuisance:

- a) *Any premises in such a state as to be prejudicial to health or a nuisance;*
- b) *Smoke emitted from premises so as to be prejudicial to health or a nuisance;*
- c) *Fumes or gases emitted from premises so as to be prejudicial to health or a nuisance;*
- d) *Any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance;*
- e) *Any accumulation or deposit which is prejudicial to health or a nuisance;*

- f) Any animal kept in such a place or manner as to be prejudicial to health or a nuisance;*
- (fa) Any insects emanating from relevant industrial, trade or business premises and being prejudicial to health or a nuisance;*
- (fb) Artificial light emitted from premises so as to be prejudicial to health or a nuisance;*
- g) Noise emitted from premises so as to be prejudicial to health or a nuisance;*
- (ga) Noise that is prejudicial to health or a nuisance and is emitted from or caused by a vehicle, machinery or equipment in a street or in Scotland, road;*
- h) Any other matter declared by any enactment to be a statutory nuisance.*

2.2.2 Paragraph (h) of Section 79(1) incorporates any statutory nuisances contained in other legislation. The Public Health Act 1936 provides that various other matters are statutory nuisances for the purposes of the Environmental Protection Act 1990. However, none of these matters are considered relevant to the Development.

2.2.3 The remaining sub-sections in Section 79 contain exceptions and definitions. The following exceptions are relevant to the Development:

- Subsection 1(a) any premises in such a state as to be prejudicial to health or a nuisance;
- Subsection 1(b) smoke emitted from premises so as to be prejudicial to health or a nuisance;
- Subsection 1(c) (fumes or gases emitted from premises) does not apply in relation to premises other than private dwellings (s. 79(4));
- Subsection 1(g) noise emitted so as to be prejudicial to health or a nuisance;
- subsection 1(ga) (noise caused by a vehicle, machinery or equipment in a street) does not apply to noise made by, amongst other matters, traffic (s. 79(6A)).

- 1A No matter shall constitute a statutory nuisance to the extent that it consists of, or is caused by any land being in a contaminated state; and
- 1B Land is in a “contaminated state” for the purposes of subsection (1A) if, and only if, it is in such a condition, by reason of substances in, on or under the land, that –
 - Harm is being caused or there is a possibility of harm being caused; or
 - Pollution of controlled waters is being or is likely to be, caused; (In this subsection “harm”, “pollution of controlled waters” and “substance” have the same meaning as in Part IIA of the Environmental Protection Act 1990).

2.2.4 The definitions that are relevant to the Development are:

- “dust” does not include dust emitted from a chimney as an ingredient of smoke;
- “fumes” means any airborne solid matter smaller than dust;
- “gas” includes vapour and moisture precipitated from vapour;
- “industrial, trade or business premises” means premises used for any industrial, trade or business purposes or premises not so used on which matter is burnt in connection with any industrial, trade or business process, and premises are used for industrial purposes where they are used for the purposes of any treatment or process as well as where they are used for the purposes of manufacturing;
- “noise” includes vibration;
- “prejudicial to health” means injurious, or likely to cause injury, to health;
- “premises” includes land and ... any vessel;
- “private dwelling” means any building, or part of a building, used or intended to be used, as a dwelling;
- “road” has the same meaning as in Part IV of the New Roads and Street Works Act 1991; and

- “street” means a highway and any other road, footway, square or court that is for the time being open to the public.

3 ASSESSMENT OF MATTERS POTENTIALLY ENGAGED

3.1 Introduction

3.1.1 The following matters set out in section 79(1) of the Environment Protection Act 1990 are potentially engaged by the Development:

- Air quality impacts that could engage paragraphs (c) (d) and (e) of section 79(1);
- Noise impacts which could engage paragraphs (g) and (ga) of section 79(1); and
- Impacts from artificial light which could engage paragraph (fb) of section 79(1).

3.1.2 Each of these impacts is discussed below.

3.2 Air Quality (Section 79(1)(c, d and e))

Construction Phase

3.2.1 Construction activities can result in temporary effects from dust and material released from blasting. "Dust" is a generic term, which usually refers to particulate matter in the size range 1-75 microns in diameter; the most common impacts of concern from dust emissions are soiling and increased ambient PM₁₀ concentrations (Building Research Establishment, 2003).

3.2.2 The distances from the emission source at which significant construction dust effects are likely to occur are dependent on the extent and nature of mitigation measures, the prevailing wind conditions, rainfall and the presence of natural screening by, for example, vegetation or existing physical screening and also the depth of the activity within the quarries. However, research indicates that effects from construction activities that generate dust are generally limited to within 150-200m of the construction site boundary (Highways Agency, 2007), although guidance issued by the Institute of Air Quality Management (IAQM) requires consideration of effects

up to 350m from the construction area boundary, or 500m from site entrances (Institute of Air Quality Management, 2014).

- 3.2.3 The construction work for the Development requires the use of a range of site plant, such as excavators and piling equipment. All of these plant have an energy demand and some may result in direct emissions to air from exhausts. The key effects during the construction phase are associated with dust-raising activities related to earthworks, construction and vehicles tracking. This includes the handling of spoil and slate waste, loading and unloading of trucks and the movement of the trucks around the construction site and movement of slate material into temporary stockpiles and then the permanent slate mounds at Q1. Other effects during construction are from NO₂ emissions resulting from construction traffic, which may have a specific effect on the residents along the Green Road (from the A4085).
- 3.2.4 ES Volume 2, Chapter 14 Air Quality, Section 14.5 details the assessment of construction phase activities. As discussed in Section 14.5.2, the Minerals Technical Advice Note (MTAN) considered that most effects would occur within 200m of the Development, although Institute of Air Quality Management (IAQM, 2014) considered that receptors within 350m of the boundary are typically at risk from effects from dust. Furthermore, the IAQM states that potential effects may occur up to 500m from the site entrance. Therefore a precautionary approach of 500m has been used.
- 3.2.5 There are up to 24 sensitive receptors (as shown in Table 14-12) located within 500m of the Order Limits or within 100 metres of the construction traffic routes on the local road network (up to 500 metres from site entrances). Eleven of these receptors are residential dwellings, two are hotels, one is a caravan park, one is the Llyn Padarn SSSI, six are industrial, commercial or hi-tech facilities whilst the remaining three are amenity areas.
- 3.2.6 The significance of unmitigated construction-phase dust effects is assessed as major adverse for construction activities on dust receptors in line with IAQM methodology risk categories and of major adverse for dust emissions from construction vehicles.

Construction Phase Mitigation

- 3.2.7 The Development has incorporated mitigation measures for the construction phase which are principally aimed at reducing dust effects from the construction activities and are included in the outline CoCP and associated Dust Management Plan (DMP) and Construction Traffic Management Plan (CTMP).
- 3.2.8 With regard to the regional meteorology, stockpiles and compounds should not be located near the site boundary or upwind of nearby sensitive receptors, i.e. they should be located away from the north east boundary. During high winds, extended dry periods or after recent movement of material, stockpiles should be stabilised and, where appropriate, covered to prevent wind-blown dust. Short-term or temporary controls may include water or polymer sprays, although sheeting, grass seeding or high fences may be more suitable depending on the proposed use of the material. The shape of the stockpiles should also be considered, whereby several smaller piles should reduce wind-blown material compared to few, larger piles.
- 3.2.9 Due to the size of the Development, it is inevitable that concrete batching will occur on site, for example during the construction of the dams. Such equipment should be operated in accordance with Process Guidance Note 3/1 (04) and is regulated under the Environmental Permitting Regulations 2010 (as amended).
- 3.2.10 Gwynedd Council has specifically requested that monitoring should be undertaken, as discussed in Section 14.5 of the ES, including records of baseline conditions prior to work going ahead, with additional monitoring to be undertaken during the works to ensure that effects do not breach acceptable thresholds. This will be included within the DMP.
- 3.2.11 This approach is consistent with best-practice guidance published by IAQM and the Greater London Authority (GLA). The specific methods will require further discussion and liaison with Gwynedd Council, due to constraints imposed by site security, safe access and reliable power supplies. For example, whilst it is provisionally recommended that one or two automatic dust monitors should be operated, in accordance with the GLA guidance,

this will require access to a secure electrical supply, which may not be feasible. Therefore, passive monitoring, such as deposition gauges may be used to measure dust, and passive diffusion tubes used to measure NO₂, as these techniques do not require an electrical supply, but will require good access and potential security fencing.

3.2.12 Detailed and activity specific mitigation measures will be outlined in the CoCP and DMP, which must be enforced and adhered to.

3.2.13 The construction phase will include the mitigation measures presented in Volume 2, Chapter 14 Air Quality of the ES which will reduce the dust risk from each of the sources assessed. The overall significance of effects from construction dust has been determined taking this mitigation into account, and concluded to be minor adverse, which is not significant.

Conclusion

3.2.14 Taking into account the mitigation measures described above, the air quality impacts arising during the construction phase are not predicted to cause a nuisance or to be prejudicial to health.

Operational phase

3.2.15 There are no emissions to air during the operational phase and therefore the operational phase is not predicted to cause a nuisance or be prejudicial to health.

3.3 Noise (Section 79(1)(g) and (ga))

3.3.1 This section addresses the potential of noise during construction activities. Noise impacts due to operational traffic and construction traffic would not constitute a statutory nuisance for the purposes of the Environmental Protection Act (see section 79(6A)).

3.3.2 Within Chapter 13 Noise, Table 13-17 identifies 30 receptors, all residential, which have been assessed for noise and vibration effects during the life cycle of the Development.

Construction Phase

- 3.3.3 Construction noise will be controlled through the implementation of a Noise Management Plan (NMP) with full consideration of BS 5228; provisions for noise mitigation measures and on-site management of noise issues shall be documented in the CoCP. The application of Best Practicable Means (BPM) as defined under Section 72 of the Control of Pollution Act (CoPA) 1974 shall be implemented for the Development, with specific consideration of the tunnelling works.
- 3.3.4 Out of the 30 receptors which have been assessed, 8 receptors (residential dwellings) have the potential to experience temporary, localised, major adverse significance noise effects and 3 receptors who may experience temporary, localised, moderate adverse significance noise effects from combined construction phase activities. For these 11 properties there is the potential for nuisance from construction phase activities.
- 3.3.5 The remaining 19 properties are expected to receive minor significance effects from construction noise. There is potential for moderate adverse significance effects from traffic noise and vibration along the local road network, however as stated in 3.3.1 noise impacts due to construction traffic would not constitute a statutory nuisance for the purposes of the Environmental Protection Act (see section 79(6A)). Effects from surface plant and blasting are considered minor adverse, with tunnelling negligible.

Construction Phase Mitigation

- 3.3.6 The implementation of the NMP and CTMP will mitigate the potential effect from traffic noise and vibration, and surface plant to minor adverse effects and are therefore not significant. Should there still be the potential for moderate or major adverse vibration effects with mitigation measures in place;, the Applicant proposes to install vibration monitors in the potentially most affected properties. Where works vibration levels are found to exceed agreed threshold levels, the source of excessive vibration level generation will be identified, and any additional feasible and reasonable measures available will be implemented to either reduce emissions or reduce the impacts on receivers.

- 3.3.7 The implementation of an Environmental Clerk of Works (ECOW) who will communicate the programme and timetable for critical path construction activities, specifically blasting, combined with the implementation of BPM and COPA will mitigate to a minor adverse effect. This is considered not significant.

Conclusion

- 3.3.8 Taking into account the mitigation measures described above, some noise impacts arising during the construction phase are predicted to potentially cause a nuisance or be prejudicial to health, but these are specifically related to combined construction activities and are expected to be temporary and intermittent in nature from Year 1 Quarter 3 to Year 3 Quarter 1 (i.e. construction noise and vibration effects will cease once the construction works are complete). It is also considered to be confined to surface working activities as the noise would decrease as the construction activities descended into the quarry voids. Construction noise impacts would not be constant throughout the works programme, as the nature of construction work means that a worst-case situation with all plant operating simultaneously and working at its closest approach may only exist for only a matter of days or even hours and there would be regular periods, even during the course of a single day, when plant would not be in operation during breaks or changes of working routine. The exact nature of operations and the actual methods of working will be finalised prior to construction works commencing.

Operational Phase

- 3.3.9 Noise from the operation of the Development will be mitigated through design. Operational noise levels from the Development will be controlled using Best Available Techniques (BAT) in order to achieve appropriate operational noise limits, such that any adverse effects are avoided and operational noise effects are of negligible significance.

Conclusion

3.3.10 Taking into account the mitigation measures outlined above, it is considered the impacts from noise during the operational phase will not cause a nuisance or be prejudicial to health.

3.4 Artificial Light (section 79(1)(fb))

3.4.1 During construction there may be a requirement to light site compounds and construction areas at some times of the day, based on a standard working day which in winter will include some hours of dusk or darkness.

3.4.2 Lighting will be managed through the measures provided in the CoCP, which are as outlined below.

Construction Phase Mitigation

3.4.3 At night and during periods of darkness directional security lighting will be used. Lighting will be sited so as to minimise visual intrusion to Waunfawr, whilst maintaining the safe and efficient operation of the construction site.

3.4.4 Site lighting will be positioned and directed to minimise nuisance to residents, walkers and vehicle drivers. Implementation will conform to requirements and meet the Obtrusive Light Limitations for Exterior Lighting Installations (contained within Table 1 of the Institute of Lighting Engineers Guidance Notes for the Reduction of Obtrusive Light (2005)) so far as it is reasonably practical and applicable to construction.

3.4.5 When lighting is necessary, appropriate lighting will be used to minimise the impact of lighting on ecological resources, including nocturnal species, and neighbours. Lighting will be designed to minimise spillage into surrounding habitats to avoid disturbance to wildlife.

Operational Phase Mitigation

3.4.6 During operation of the Development ancillary and security lighting will be provided on the power house, around the reservoirs and in the small car park area.

3.4.7 A lighting scheme will be provided to Gwynedd Council for approval through a Requirement of the DCO.

Conclusion

3.4.8 Taking into account the management of lighting outlined above and in the CoCP, it is considered the impacts from artificial lighting arising during both the construction and the operational phase will not cause a nuisance or be prejudicial to health.

4 CONCLUSION

- 4.1.1 This Statement identifies whether the matters in respect of statutory nuisance set out in section 79(1) of the Environmental Protection Act 1990 would be engaged by the Development. Where such matters would be engaged, the Statement sets out how it is proposed to mitigate or limit the nuisance caused.
- 4.1.2 The Statement concludes that the following matters set out in section 79(1) could potentially be engaged by the Development:
- (d) Air quality impacts that could engage paragraphs (c) (d) and (e) of section 79(1);
 - Noise impacts which could engage paragraphs (g) and (ga) of section 79(1); and
 - Impacts from artificial light, which could engage paragraph (fb) of section 79(1).
- 4.1.3 For all of the above matters, the Statement concludes that, with the implementation of mitigation and control measures included in the ES, including the CoCP and other measures as set out in ES Chapter 18 Schedule of Mitigation, the Development would not give rise to a nuisance or be prejudicial to health, with the exception of construction noise at 11 residential receptors during some construction operations. For these 11 properties, some noise impacts arising during the construction phase are predicted to potentially cause a nuisance or be prejudicial to health, but these are specifically related to combined construction activities and are expected to be temporary in nature.

5 REFERENCES

The National Archives. Environmental Protection Act 1990. Online at: <http://www.legislation.gov.uk/ukpga/1990/43/section/79> (Accessed 5th January 2015).

The Control of Dust from Construction and Demolition Activities, BRE, 2003

Institute of Lighting Engineers Guidance Notes for the Reduction of Obtrusive Light (2005)

Greater London Authority (GLA) (2014), The Control of Dust and Emissions during Construction and Demolition, supplementary planning guidance

Institute of Air Quality Management (IAQM) (2014), Guidance on the assessment of dust from demolition and construction

Highways Agency 2007, Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1, HA207/07 (Air Quality)

Welsh Assembly Government 2004, Minerals Planning Policy (Wales) Minerals Technical Advice Note (Wales) 1: Aggregates

Control of Pollution Act 1974

BSI, (2009) BS 5228:2009+A1:2014 - 'Code of Practice for Noise and Vibration Control on Construction and Open Sites'

BSI (2014). BS 4142:2014 - 'Methods for Rating and Assessing Industrial and Commercial Sound'