

## Glyn Rhonwy Pumped Storage Development Consent Order

Deadline 4 – Applicant’s Responses to Written Submissions made at Deadline 3

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# SUMMARY

## **1.1 Introduction**

- 1.1.1 A number of Written Representations were made by Interested Parties at Deadline 3 on 27<sup>th</sup> April 2016.
- 1.1.2 This document provides SPH's response and comments on these written submissions.
- 1.1.3 Where relevant cross-references are provided to other submission documents.

# 1 Gwynedd Council

Paragraph in Response	Applicants Response
<p>Firstly, I can confirm that officers of Gwynedd Council will be attending both Issue Specific Hearings in relation to the application by Snowdonia Pumped Hydro Ltd for an Order Granting Development Consent for the Glyn Rhonwy Pumped Storage Scheme. It is likely that 7 officers will be in attendance, certainly no more than 10.</p> <p>Comments and documents submitted at deadline 2 have been circulated to relevant services within the Council. They have been reviewed in full by relevant officers. Gwynedd Council's initial response to this information is that there are no additional comments to those previously given at deadline 2. However, it is respectfully requested that the Council wishes to reserve the right to respond further at the Issue Specific Hearings and/or to further comments submitted or requested. Gwynedd Council</p>	<p>The Applicant has no comment on this section</p>

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<p>look forward to receiving the detailed agenda for the Issue Specific Hearings in order to prepare beforehand.</p> <p>It is considered that this submission is in accordance with the deadline for receipt of submissions as stipulated by the Inspector in his Notification of Hearings and revision to the Examination Letter dated 18th April 2016.</p> <p>If you require any further information, do not hesitate to contact the service.</p>	
<p>Gwynedd Council also submitted an email received from Gwynedd Archaeological Planning Service in response to the ExA's Written Question 5.11 regarding paragraph 11.7.35 of the Environmental Statement. The response from GAPS states the following:</p> <p>I've checked through the original ASIDOHL2 report I received and approved in 2013 in relation to the TCPA and compared this with the most recent submission which accompanies the DCO. It is clear that the impacts on the registered Historic</p>	<p>The Applicant notes this response from GAPS. Prior to the submission of the DCO Application, the Applicant did submit the draft Environmental Statement chapter and ASIDOHL to GAPS for their review as outlined in paragraph 11.4.6 of the ES Chapter. Minor amendments to the chapter were requested and incorporated prior to submission.</p> <p>The Applicant wishes to draw attention to their response provided in relation to Gwynedd Council's written representation contained within document SPH_GREX_WED3_01. The</p>

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<p>Landscape are significantly greater than they were for the TCPA, however it would appear that this increase in impacts mainly affects HLCA 6 (Glynrhonwy Quarry) where significant numbers of archaeological monuments will be lost, many of which are of high value and where a large percentage of the character area (from 7.3% to 31.2%) will be affected by the proposed development.</p> <p>HLCAs 07 and 45 were not directly affected by the TCPA whereas the DCO affects a small number of high value sites. This is a serious historic environment impact and robust mitigation and enhancement measures will need to be put in place to ensure these losses are adequately compensated. However, whilst the impact on significant elements of both HLCAs 07 and 45 would be considered ‘considerable’ the proportion of the HLCAs affected is very limited as stated by the applicants in stage 5 of the ASIDOHL. It does not therefore seem unreasonable to allow the author to reduce these effects</p>	<p>Applicant can confirm that Gwynedd Council’s comments regarding the scope of the Written Scheme of Investigation and watching brief of any excavation near the bombstore for the spillway infrastructure have been incorporated into the revised scope of the Archaeological Enhancement and Compensation Strategy. This was outlined in the revised Schedule of Other Required Plans and Strategies (document reference SPH_GREX_DCOD2_04 (rev1))</p>

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<p>in this context.</p> <p>I would however stress that the impacts on the industrial archaeological remains in particular are high although they do not reach the threshold to tip the balance of the ASIDOHL2 process in this case.</p>	

## 2 Jeff Taylor

Mr Jeff Taylor also submitted a series of attachments with his response which haven't been attached here for ease of responding.

Paragraph in Response	Applicants Response
<p><b>MUNITIONS</b></p> <p>I refer to the documentation accompanying my written representation and sent to the Inspector on CD and now published on the PINS website along with my Written Representation. It consists of a number of documents discovered in the public domain at Gwynedd Archives (Caernarfon Records Office). I note that these documents are no longer viewable at Gwynedd Archives, who now say the documents are being “re-reviewed” by the MoD.</p> <p>The Applicant say of their specially commissioned desk study by the consultants Zetica</p> <p><i>This detailed assessment has identified the potential for</i></p>	<p>The list in the Zetica report is a replication of the final clearance statement detailing the live recoveries of UXO from the quarry pits. Zetica’s report also demonstrates the wide variety of ordnance that was present at RAF Llanberis for instructional purposes for the RAF School of Explosives which was based there during WWII. The DEOD letter reflects this, with a number of bombs discovered in the 1970s requested for their own use. These bomb types do not appear in the final live recovery list – or any of the EOC progress reports – indicating that they were removed to DEODS rather than disposed of locally.</p> <p>The list cited in Zetica’s report is that compiled at the end of the EOD operation. The American report was published before the</p>

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<p><i>Unexploded Ordnance (UXO) containing high explosives or pyrotechnic materials to remain onsite. ZeticaUXO made requests for the release of relevant records in order to provide suitable levels of confidence for any risk assessment. The information provided corroborative evidence which, alongside ZeticaUXO's experience, provides for high confidence of understanding and due regard for those UXO hazards that could reasonably be expected</i></p> <p>This report describes an inventory of munitions found and refers to a single large 1000pound bomb</p> <p>But the attached letter from the Defence Ordnance Disposal School <i>DEOD visit July 1973</i> is effectively a “shopping list” of items required for training purposes and is way in excess of that detailed by Zetica .</p> <p>It includes 4 x 1000pound bombs, 2 x 1800pound bombs and a german 500kg bomb why do they not include this?</p> <p>There is a similar scale of discrepancies between Zetica's</p>	<p>EOD operation was completed and hence the discrepancies.</p> <p>This is compounded by the fact that the American report does not always differentiate between 'inert' and 'live' ordnance. The American report was focused on the method of ordnance disposal, with a particular focus on EOD techniques and plant used, with the quantities and types of ordnance present of secondary importance.</p> <p>The tabun chain-of-custody is extremely well documented, corroborated by operational record books and an extensive Board of Inquiry carried out in 1969. The transcripts of the Board of Inquiry have been obtained by the Applicant and contain several sworn witness statements from personnel working at RAF Llanberis and RAF Llandwrog that tabun bombs were never disposed of at Glyn Rhonwy. The testimony of an officer who claimed to have dumped 'phosgene' bombs in the quarry pits was comprehensively discredited.</p>

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<p>inventory and that listed by a team of US Military specialists Scitek who visited the site in 1974 and issued the report, now available in the public domain, <i>Llanberis - an american report</i> - also now available in the documentation submitted with my Written Representation</p> <p><b>In regard to chemical weapons the applicant says</b></p> <p><i>With respect to chemical weapons, corroborative evidence (verified by several sources – please see Appendix 2.13 of ExA First Written Questions) has identified that the site was used as a transit-stop for Tabun-filled munitions on their way for disposal via RAF Llandwrog. There is a clear recorded chain of custody for this. A past board of inquiry (responding to similar queries raised here) concluded that there was no evidence tha these munitions were disposed of within the quarry pits at RAF Llanberis.</i></p> <p>However, the file KC 250 GR III bomb photos, obtained from the</p>	<p>No evidence has been found to suggest that the discarded bomb is either Tabun-filled or that it is at Llanberis. There are no annotations on the back of the photograph, or any accompanying documents, indicating its origin. All the photos are located within a brown envelope entitled ‘Sandcastle’. RAF Llanberis was not involved in Operation Sandcastle, which involved the transportation of tabun bombs from RAF Llandwrog to Cairnryan in Scotland, from where they were sea-dumped. If a tabun bomb had been found at Llanberis, not only would there be extensive records of such, but the remainder of the RAF’s EOD operation in the 1970s would have been managed in a very different manner. The bomb in the picture is a design ubiquitously used by both British and German forces with conventional fillings. The Porton Down correspondence does not confirm whether the bomb was British or German but in all cases the most likely filling was conventional such as an oil incendiary. It should be noted that when the EOD diving team</p>

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<p>Glyn Rhonwy document collection and found in an envelope marked "sandcastle" shows pictures of new Tabun nerve gas bombs in the manufacturing stage, and also at least one discarded Tabun bomb laying in a crevice in slate, almost certainly (because of context) "pit 2c", the Applicants Q6.</p> <p><b>The Applicant also says</b></p> <p><i>Additionally, during the extensive Explosive Ordnance Disposal (EOD operation in the 1970s, no chemical munitions are recorded as having been found and there is no evidence of any exposure to chemical weapons for EOD personnel.</i></p> <p>However, I refer you to the letter regarding a visit to Llanberis of Porton Down chemical weapons specialists file Ref. 71 MU 4111 3 11 MEA This letter mentions an injury to a Corporal due to suspected chemical weapons contamination, a number of suspected chemical weapons, and mustard gas containers (using the code description for mustard gas, Y3. It goes on to</p>	<p>undertook a reconnaissance of the lake in Pit 2C in 1971 they identified numerous types of conventional ordnance, including 250lb Light Case incendiary bombs.</p> <p>Records of leaking tabun bombs at RAF Llandwrog demonstrate the grave concern caused by such a scenario, with an extensive investigation carried out by personnel from Porton Down (including taking blood samples from all officers handling the bombs). There is no evidence that a comparable event occurred at Llanberis and this, coupled with the records regarding the chain of custody of the tabun bombs, confirms that no disposal of such ordnance took place at the site.</p> <p>Direct evidence of Y3 mustard-filled containers has only recently been corroborated. This documentary evidence had not previously been provided to Zetica by the archives staff (it is suspected that it was overlooked but found when the records were more formally catalogued by the archive staff). The low quantities of 'live' Y3 containers reported do not impact upon the</p>

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<p>declare the whole of the contents of the pit as contaminated.</p> <p>The Zetica report even mentions the mustard gas on page 76 in its transcribed appendix 1 list of live recoveries using the code name Y3 but overlooks that this refers to containers of Mustard Gas.</p> <p>File PRB 2757 prints 1-99</p> <p>Page 1 photo 8 shows a typical mustard gas / Y3 container .. rather bigger than the “one liter” size mentioned.</p> <p>Page 4 photo 34 shows munitions part covered by slate debris which is probably too heavy to have moved, leading us to suspect that munitions remain buried under rubble still.</p> <p>Elsewhere in this documentation is correspondence with Porton Down describing the removal to Porton Down of a "250pound" German bomb suspected of being a chemical weapon (reference to follow)</p> <p>There is no evidence that the clearance effort got to the bottom</p>	<p>overall site UXO risk assessment. The evidence continues to point to a low risk of chemical weapons being found on the site. Any future risk mitigation will provide for appropriate measures should any additional ‘live’ Y3 containers be found. It is important not to link Mustard Gas with Nerve Agents such as Tabun, These are very different agents with very different purposes and hazards which is reflected in the extreme precautions and accounting seen for the Tabun bombs transported through Llanberis to Llandwrog. This is further reflected in the relative responses of EOD personnel/Porton Down to the discovery of leaking Tabun bombs at Llandwrog and the Mustard Gas containers found at Llanberis, the latter being a far more routine procedure.</p> <p>With respect to the Y3 bottles found, these are 1l in volume and are contained within a 65lb case.</p>

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<p>of the pile. The MoD did not declare the site cleared</p> <p>And the evidence presented here suggests that there is much still to be uncovered in Pit 2c including chemical weapons</p> <p><b>How have Zetica missed so much critical information which appears to come from same collection of documents as all the supporting documentation in their report, and which we have been able to learn simply by diligently examining the collection?</b></p>	<p>With respect to munitions covered in slate debris, whilst there was a concerted effort by the RAF EOD team (with help from the Royal Engineers) to remove as much ordnance as possible, it is acknowledged that some ordnance will remain. As such, we will be putting in place an Ordnance Management Strategy to deal with any ordnance that may remain.</p>
	<p>The 250lb bomb referenced is not referred to in the documents as a suspected German device. It was common practice for any ordnance items that could not be positively identified to be sent to Porton Down as a precaution. There is no confirmation that the item in question was chemical filled and it is acknowledged in the document that it resembled a target indicator/incendiary device, which are recorded as having been disposed of at RAF Llanberis. It should also be noted that the document in question was not included within the same file as the bomb in the crevice</p>

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	that relates to the operation 'Sandcastle' photos and is therefore unrelated.
<p><b>WATER MONITORING</b></p> <p>In response to my representation regarding water monitoring they say</p> <p><i>Sediment sampling was attempted at 20 different locations within Q6 and multiple times in Q1 but no discernible sample was obtainable due to a lack of sediment being present.</i></p> <p>This is no surprise .. the floor of the quarry is strewn with coarse slate rubble .. the sediment will be below this rubble .. and the divers were well aware of the risk from munitions and sensible enough not to touch the substrate and turn rocks over looking for sediment. But it is very likely that the base layer of this rubble will contain the HIGHLY PERSISTENT residues from ordnance burning and the chemical weapons residues (SIMILARLY PERSISTENT IN THE CASE OF MUSTARD GAS) which constitute the health, safety and pollution threat from</p>	<p>The Applicant has already provided a response to this topic as part of First Written Questions and responses to Relevant Representations at Deadline 2 and also in response to Written Responses at Deadline 3, and therefore has nothing further to add.</p>

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<p>reworking this material.</p> <p><b>So the sampling effort fails to address a major potential for contamination and the risks remain substantially unquantified.</b></p>	

### 3 Mads Huuse and Dr Jane Huuse

Paragraph in Response	Applicants Response
<p>Whilst we hope SPH will address our more complete submission of March 2016 in detail, we provide here some observations on their responses to our initial representations provided in SPH_GREX_RRD2_01. We also comment on the revised DCO. SPH dismissed our representations submitted January 2016 by stating that pumped storage is efficient and environmentally sound and that the traffic increases would be significant but not too significant and unlikely to cause structural damage.</p>	<p>The Applicant can confirm that a detailed response was provided to both Respondents in documents SPH_GREX_WED3_01 submitted at Deadline 3. The Applicant also disputes that the Respondents representations were dismissed.</p>
<p>We do not doubt that pumped storage is beneficial to the environment and the grid, but merely that the proposed scheme has a small energy output for a large environmental footprint, particularly when compared to much more output-significant schemes such as Dinorwig. If one would seek to balance the</p>	<p>The Environmental Statement submitted as assessed the effects the Development may have on the environment. The conclusions of which have been accepted by Gwynedd Council, NRW, CADW and the Snowdonia National Park Authority. By “large environmental footprint” we assume the Respondent is</p>

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<p>grid by Glyn Rhonwy-scale storage, one would need to spoil vast tracts of beautiful upland areas as opposed to a few significant developments such as Dinorwig. The applicant completely failed to address this most significant challenge to their scheme in their response.</p>	<p>referring to the physical size of the Development rather than its environmental impact. Pumped Storage is one of the most environmentally benign, mature and energy dense energy storage technologies. The majority of the Development site that would contain above ground structures are currently two fenced-off quarries and empty industrial platforms. Once completed these fenced quarries will become fenced reservoirs , the penstock will be underground and so have no “footprint” above, and the power house will be situated on the vacant industrial platform at Glyn Rhonwy. The Applicant would also like to point out that alternative storage technologies suggested by various respondents are not currently at a comparable scale or maturity to pumped storage; They also have significant adverse environmental and social impacts associated with their production – especially in the countries where raw materials for batteries are mined. The Applicant does not consider this a poor use of the Development site, and future sites around the UK</p>

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	<p>should be considered on their respective merits and potential effects.</p>
<p>The traffic issue is a little more convoluted and we provide the following comments against the response:</p> <p>SPH states that they have added 25% to be on the safe side ('worst case scenario'). However, the developer already provided a construction traffic estimate for Ffordd Cefn Du in their 2012 planning application. That estimate was only a quarter of the estimate provided in the 2015 application, despite the company director stating in press releases and personal letters to residents that "nothing above ground will change in the 2015 scheme". His statement is clearly false.</p> <p>The 25% buffer should be viewed against the use of a revised traffic count which puts base traffic flow on Ffordd Cefn Du at 50% greater than their own traffic count from 2012. We request the full details of the 2015 count to verify the validity of the count and the nature of the traffic. In March 2016 we carried out a</p>	<p>The Applicant refers the Respondent to the detailed response provided at Deadline 3 in document SPH_GREX_WED3_01.</p> <p>The Applicant has also provided the 2015 traffic counts (document reference SPH_GREX_WED3_04).</p> <p>In addition the Applicant has updated and revised the Construction Traffic Management Plan (document SPH_GREX_DCOD3_07) and also the Noise Management Plan which includes details about the vibration monitoring (document SPH_GREX_DCOD3_06).</p> <p>For details on the highway improvements to Ffordd Cefn Du, we would refer the Respondent to document SPH_GREX_WED3_03 which details the improvements, programme, construction methods and location of passing places.</p>

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<p>detailed traffic count at the Waunfawr crossroads also surveyed by SPH and a count of traffic movements above the Fford Cefn Du cattlegrid. This count was within 10% of the QBC/SPH 2012 traffic count, further suggesting their 2015 count is spuriously high and unsuitable as a baseline.</p> <p>As set out in our more detailed representation submitted in March 2016, the traffic increases on Ffordd Cefn Du will be more than doubled at the cross roads in most months and the increase above the cattle grid will be quadrupled. In terms of HGV traffic it will be an increase of 10-35 times (1000-3500%) relative to the base flow of 1-2 HGVs per day on Ffordd Cefn Du (East).</p> <p>SPH suggests widening the road to 4 m between the cattlegrid and Q1 and construct passing spaces at set/strategic intervals. Where are these passing spaces meant to be exactly?</p> <p>We do not want a wide road going to Q1 as this would potentially open up the presently peaceful and beautiful hillside</p>	

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<p>for further developments, potentially ruining it for generations to come. We strongly object to the widening of the road and to the construction of passing spaces which inevitably end up being used as parking spaces by drug users and tourists alike. Should development go ahead along Ffordd Cefn Du we urge the developer not to locate passing spaces near properties along Ffordd Cefn Du as this would cause enhanced nuisance and blight to the affected properties.</p> <p>We are genuinely concerned for our safety and property. The developer claims that construction traffic is proven not to cause structural damage. However, other credible sources claim that construction traffic can cause significant structural damage to houses. Such opposite viewpoints are common in science and to be fair, the developer really should take a more balanced view when exercising their 'best judgement' when evaluating the impact of their actions on residents and leisure users of Cefn Du. We reiterate that many of the houses in upper Waunfawr</p>	

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<p>have no foundations and are located on precarious slopes of 20-25% average gradient with some sections being vertical. In some cases houses are located adjacent to and below the road level with abnormal loads and HGV road trains providing real threats to the stability of ground and buildings.</p> <p>In summary, the use of Ffordd Cefn Du to access Q1 for this development is unacceptable as the route is unfit for purpose and the impact of construction traffic would be adverse in the extreme. Many residents are considering leaving the area altogether because of the nuisance and danger posed by the development. Why will the developer not consider the construction of a short track within the development boundary to take construction traffic directly up to Q1 via Q6? This would avoid serious congestion of the local road network and years of nuisance and erosion of the quality of life and leisure activities on Cefn Du.</p>	

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<p><u>Revised DCO</u></p> <p>The revised DCO is not acceptable. The development should not go ahead on the grounds that it has poor output to footprint ratio. It would set an unfortunate precedent for small-output installations with large environmental footprints. The DCO should outline an alternative construction route for Q1 and it should be clear about how the developer will minimize the adverse impact on residents and hill users alike. The common land grab along Ffordd Cefn Du is not acceptable. The diversion of footpaths around Chwarel Fawr is unacceptable as the proposed site plan will hamper access to large parts of the mountain by severing popular paths used by walkers and riders alike. The DCO if granted should stipulate that the Ffordd Cefn Du and the area around Q1 and Cefn Du cannot be subsequently developed or used for any other activity than its presently peaceful recreational purpose.</p>	<p>The Applicant refers the Respondent to the detailed response provided at Deadline 3 in document SPH_GREX_WED3_01 which outlines that alternative routes have been considered previously.</p> <p>The acceptability of the development or otherwise is a matter for the Secretary of State and not the DCO itself.</p> <p>The land required for the access improvements in the common along Ffordd Cefn Du is presented as a worst case scenario and includes working room around the improvements to allow for micro-siting; in reality, the eventual land take will be smaller than stated. Even so, the worst case area shown is relatively small, coming in at less than 1% of the area of the common at Cefn Du.</p> <p>The applicant does not agree with the assertion that the diversion of footpaths on Cefn Du are unacceptable. The main public rights of way across Cefn Du will be diverted either temporarily or permanently to ensure public access is</p>

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	<p>maintained. Currently, informal trails have formed naturally around the perimeter of the fenced area around Chwarel Fawr; it is envisaged that new informal trails will form in the same way over time, however where informal trails are affected by the construction or operational fencing, efforts will be made to connect them where possible with for example vegetation clearance and new signage if necessary.</p> <p>Any future development proposal would require to be determined on the facts and circumstances of the relevant application. As explained in the detailed response provided at Deadline 3 in document SPH_GREX_WED3_01 the Applicant considers that any attempt to prevent future development through the DCO would be ultra vires.</p>

## 4 Natural Resources Wales

Paragraph in Response	Applicants Response
<p>Thank you for your Notification of Hearings and a revision to the Examination timetable letter, dated 18th April 2016.</p> <p>The purpose of the Natural Resources Body for Wales (NRW) is to ensure that the environment and natural resources of Wales are sustainably maintained, sustainably enhanced and sustainably used. In this context sustainably means with a view to benefitting and in a manner designed to benefit the people, environment and economy of Wales now and in the future. Our functions are set out in the Natural Resources Body for Wales (Functions) Order 2012. Our advice and comments to the Planning Inspectorate (PINS) are therefore provided in the context of this remit.</p> <p>We provide the following responses in respect of Deadline 3.</p>	<p>The Applicant has no comments on this section</p>

Paragraph in Response	Applicants Response
<p><b>ISSUE SPECIFIC HEARINGS (17<sup>TH</sup> &amp; 18<sup>TH</sup> MAY 2016)</b></p> <p>We plan on attending the Issue Specific Hearing on the 17<sup>th</sup> May 2016.</p> <p>We are not planning to attend the Issue Specific Hearing on the draft DCO on 18<sup>th</sup> May 2016.</p>	<p>Noted</p>
<p><b>COMMENTS ON WRITTEN REPRESENTATIONS</b></p> <p>We have considered the written representations submitted by other parties on or before 13 April 2016 (Deadline 2).</p> <p>A significant number of concerns have been raised regarding the previous historic uses of the site. We are satisfied that these concerns will be fully addressed within Requirement 13, Land Discovery Strategy of the draft Development Consent Order. Requirement 13 (3) requires the applicant or undertaker to carry out any remediation in accordance with a submitted and approved Land Discovery Strategy.</p> <p>We do not wish to make any further comments on any written</p>	<p>The Applicant has no comments on this section</p>

Paragraph in Response	Applicants Response
representations.	
<p><b>RESPONSES TO COMMENTS ON RELEVANT REPRESENTATIONS (RRS)</b></p> <p>There are no comments on the relevant representations submitted by NRW on 15 January 2016.</p>	<p>The Applicant has no further comments on this section</p>
<p><b>COMMENTS ON LOCAL IMPACT REPORTS (LIRS)</b></p> <p>We do not have any comments on the LIRs.</p>	<p>The Applicant has no further comments on this section</p>
<p><b>COMMENTS ON RESPONSES TO EXA'S FIRST WRITTEN QUESTIONS</b></p> <p>We make the following comments:</p> <p><b>Drainage</b></p> <p>Within the applicant's response to Question 8.8, they have stated that the Application includes "the proposal to form a drain, consisting of a tunnel between the base of Q5 under the Clegir Road and discharging into Q6." The application for the discharge consents did not include this potential additional flow,</p>	<p>The Environmental Statement outlines the potential for an engineering solution or a drain between Q5 and Q6 should the base of Q5 be lower than the maximum operational water level within Q6. As paragraph 3.7.26 of Chapter 3 Design Evolution and Alternatives outlines, the inclusion of Q5 in the ES was a precautionary measure on this basis. Section 4.8 of Chapter 4 Project Description goes into detail about how this can only be confirmed at the detailed design stage as access to this quarry</p>

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<p>and therefore if such a proposal is to be implemented, the information relating to the discharge consent application needs to be updated or amended.</p> <p>Within document reference, SPH’s Deadline 2 – Table of DCO amendments: Requirement 20 (1) Excess water management strategy it is stated: “The Applicant is currently in discussion with NRW on a substantial change to the wording of this Requirement and has made no change at this time pending that revision.”</p> <p>We wish to make clear that NRW has not been in discussion with the applicant regarding a change to the wording of this requirement. We have, however, been in discussion regarding amending the wording of the Water Management Plan (requirement 8) and also including an additional requirement relating to a Drainage Plan.</p>	<p>is unsafe. It should be noted that there is no water currently ponding in Q5. If required, the proposed drainage would maintain the current local drainage regime if, as expected, “free” discharge is achievable into Q6. It is understood that the base level of Q5 is above the maximum operating water level in Q6 thereby allowing a direct discharge of water from Q5 to Q6 without water accumulating in Q5. If the relative levels are not appropriate and the water level in Q5 has to rise to achieve the required discharge level into Q6, this has no significant impact on water/drainage flows. This simply would be a modification to the existing drainage system which will result in water accumulating in Q5 but continuing to drain through Q6 at a slightly higher level. Therefore the Applicant queries why an application for discharge consent is required if a drainage solution would simply be replicating the current situation, if indeed a drainage solution is required to be implemented.</p> <p>If NRW can provide a reason an application is required, either</p>

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	<p>the Applicant or their appointed Principal Contractor will apply for this at the appropriate time, as and if required.</p> <p>With regards to the wording of Requirement 20, NRW are correct that this substantial change relates to Requirement 8 Water Management Plan and therefore this was an error. A revised Water Management Plan and Excess Water Management Strategy has been submitted at Deadline 3 and also to support the ongoing discharge consent applications.</p>
<p><b>Landscape</b></p> <p>We are satisfied that the approach to the Landscape and Reinstatement Plan suggested by ourselves directly to the applicants during the Examination, and included within our written representation at Deadline 2, has been taken on board, and included within section 4.6 of the updated Code of Construction Practice.</p>	<p>The Applicant has no further comments on this section</p>

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<p><b>COMMENTS ON THE APPLICANT’S REVISED DRAFT DCO</b></p> <p>On 30 March 2016, NRW submitted advice and comments as a statutory party under the Planning Act 2008 and Infrastructure Planning (Interested Parties) Regulations 2010 (as amended) and ‘interested party’ under s102(1) of the Planning Act 2008 (as amended). In that document, we suggested a number of amendments to the provisional draft DCO (document 3.01) as submitted within the application. Some of the amendments we have suggested have been accepted and incorporated into the revised draft DCO; others have not (including our recommendations in relation to amendment of Articles 6 and 30).</p> <p><u>Article 6(2), (3)</u></p> <p>Unfortunately, as the applicant identified in its Deadline 2 response to relevant representations, NRW’s submissions dated 30 March 2016 contained a typographical error, for which we apologise. Our suggested amendment of Article 6(2) should</p>	<p>The Applicant does not accept the proposed Article 6(3) for the reasons set out in the table of DCO amendments submitted at Deadline 3.</p> <p>The Applicant accepts that the term used in the EIA legislation is “likely” and that the change proposed aligns with that. The Applicant has amended the wording of article 6(2) as suggested and this will be shown in revision 5 of the DCO.</p>

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<p>have read:</p> <p>‘deviation under paragraph (1) is not permitted if it is likely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.’</p> <p>We consider that our suggested amendment of Article 6(2) of the draft DCO is preferable in order to ensure consistency with EIA legislation. In our view, as drafted, Article 6(2) in its use of the word ‘unlikely’ is not consistent with EIA legislation, which is premised on ‘likely’ effects.</p> <p><u>Article 30</u></p> <p>In respect of our suggested amendment of Article 30 of the draft DCO, NRW concedes this point. We are satisfied with provision made in the DCO for protection and mitigation for any tree felling to be subject of the Habitat Management Plan, as set out in requirement 12 (see: Part 2 of Schedule 1 to the draft DCO).</p> <p>Our comments are provided without prejudice to any decision</p>	

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NRW may make on any application made to it by the applicant for an Environmental Permit under the Environmental Permit Regulations 2010 (EPR), or Abstraction Licence under the Water Resources Act 1991.	

## 5 Tony Grant

Paragraph in Response	Applicants Response
<p>The following points arise from reading the submissions from SPH to previous queries from several interested parties. Firstly, I shall address those in their document SPH_GREX_FWQD2_01.</p> <p>Following question 7.3 they say:</p> <p>‘Professional judgement has been used to derive magnitude of construction noise effects.....The smallest change in noise that is perceivable to the average human ear is 3 dB.’</p> <p>This is nonsense. Decibels (dB’s) are measurements of <b>loudness</b> on a logarithmic scale, and 3dB represents a doubling of loudness. The lowest limit of human hearing is taken to be 0dB at 1000 Hz, but of course, individual human’s thresholds vary considerably (see University of Salford report after 7.22) and so, in and of itself, it is a somewhat arbitrary figure. Also, unless a reference figure is given, 3dB by itself is meaningless, i.e. 3dB greater or less than what?</p> <p>Similarly, the phrase ‘professional judgement’ features throughout the documentation, without either naming the professionals, nor how their judgement was sought, or arrived at, and is thus meaningless.</p>	<p>Decibels are logarithmic ratios that allow the measured amplitude of a given variable to be compared to a reference level. As such a 3 dB increase/decrease in decibels represents a doubling/halving of acoustic energy regardless of the starting point. For example 83 dB represents twice the energy of 80 dB and 93 dB represents twice the energy of 90 dB.</p> <p>However the human perception of loudness is different. Extensive psychoacoustic research during the last century showed that a doubling of perceived loudness occurs with an increase of around 10 dB and that the smallest perceptible change is around 3 dB.</p> <p>This conclusion forms one of the points for noise assessment and is referenced in many guidance documents including Planning Policy Wales, Technical Advice Note (Wales) 11, Noise, which states</p> <p><i>‘A change of 3 dB(A) is the minimum perceptible under normal conditions’</i></p> <p>The published guidance and planning framework for acoustics require that professional judgement be applied to interpretation of the acoustic context of a given scenario in a given area. This judgement is based on the accumulated experience of the acoustics profession shared through technical papers and published guidance and individual experience of similar projects. The consultants within AECOM Acoustics take an active role in the development of this shared knowledge through contributions to various working groups, conferences and standards committees. AECOM Acoustic takes an active role in Institute of Acoustics (IOA) and Association of Noise Consultants (ANC) meetings, conferences and groups and has attended meetings and consultation responses on revised standards such as BS 4142, BS 8233 and the new planning guidance (ProPG Planning and noise). AECOM Acoustic group have regular knowledge sharing discussions and a working group in relation to EIA. Members of the AECOM Acoustics team are members of various committees and working groups including:</p> <ul style="list-style-type: none"> <li>• The steering group on behalf of London Authorities Noise Action Forum (LANAF), drafted London Good Practice Guide Noise &amp; Vibration Control for Demolition and</li> </ul>

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	<p>Construction</p> <ul style="list-style-type: none"> <li>• ANC Membership Steering Committee</li> <li>• ANC Good Practice Committee on best practice guidance on construction noise</li> <li>• BSI EH/001/04 Machinery noise committee</li> <li>• IoA Instrumentation Group</li> <li>• BSi rep on the CEN/TC 256/SC 1/WG 40 on railway noise barriers</li> </ul>
<p>Following question 7.4 they say: 'At lower frequencies, people are less sensitive to vibration.'</p> <p>This is not true, and I will quote from the reference SPH make to the University of Salford's research into LFN later in this submission, following 7.22.</p> <p>Table 13-2 refers to 'Un-reinforced or light framed structures Residential or light commercial type buildings' but fails to address the affects of vibration on old stone-walled properties without foundations.</p>	<p>Human response to vibration is both frequency and direction dependent. It is also different for different parts of the body and affected by whether a person is sitting, standing or lying down. In each condition there is a certain frequency at which sensitivity is greatest with a tailing off of sensitivity with both increase and decrease in frequency.</p> <p>However, within the particular context of vibration in the home taking into account the sensitivities involved and the expected sources of vibration, the statement is correct and was reproduced from Table B 1 in BS 5228:2-2009 Code of practice for noise and vibration control on construction and open sites- Part 2 Vibration.'</p> <p>Table 13-2 is taken from BS 7385. Although it does not specifically mention old stone walled properties without foundations, it is still applicable as it relates to all residential properties.</p> <p>The Applicant intends to instruct an independent company to undertake structural surveys of all concerned properties (subject to being allowed such access as is necessary to do so by the owners). This will either be directly by the Applicant or through its appointed Principal Contractor. A baseline vibration survey will be undertaken prior to construction commencing and regular checks throughout the construction phase, and then a final survey post construction and when the Development is in operation.</p> <p>Vulnerable properties will be identified through the structural surveys and the baseline vibration survey and any appropriate mitigation measures such as even slower speed restrictions, would be implemented. The Applicant cannot be held accountable for any pre-existing stability issues but will apply appropriate measures to ensure that the construction phase activities will not exacerbate them.</p>

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<p>Following question 7.9 they say:</p> <p>‘(Construction traffic vibration) confirmed that effects at NSRs fronting the road will be temporary adverse. Roads should be kept in good condition as most vibration effects occur from irregularities of road surfaces.’</p> <p>This is only true for traffic travelling at ‘normal’ road speeds on main highways/thoroughfares.</p> <p>‘A speed limit for HGVs should also be applied to this road given the short distance to NSRs.’</p> <p>This will actually exacerbate the problems stemming from vehicle vibration, see my remarks following 7.18 below.</p> <p>‘Based on research related to this issue, it is not considered that vibration effects will cause cosmetic or structural damage to the properties. Vibration effects have not been quantified at this stage.’</p> <p>Again this is contrary to SPH’s assertion that sound and vibration monitoring was undertaken during a survey on the Cefn Du green lane in 2015, supposedly monitoring the construction traffic for the preliminary drilling. As stated in my remarks for the previous deadline, the equipment was installed several days <b>after</b> the arrival of the heavy machinery, and removed the <b>day before</b> the work ceased.</p>	<p>A speed limit below that currently in place and taking into account measures for mitigation of noise and vibration will be imposed via the Construction Traffic Management Plan (CTMP).</p> <p>Vibration monitoring was not carried out as part of any assessment for the DCO application; vibration measurements taken during the preliminary ground investigation works have not been used for assessment within the ES. The applicant has dealt with the respondent’s points on this matter in document ref SPH_GREX_WED3_01.</p>
<p>Following question 7.10 they say:</p> <p>‘However please note once the construction methods are confirmed the principal contractor will undertake an updated construction noise assessment, therefore the spatial extend of the impacts may vary.’</p> <p>From which SPH appear to be saying that current figures for sound and vibration within their documentation may be disregarded as fictitious for future actual construction traffic.</p>	<p>The construction noise assessment has been based on likely construction methods and plant, based on knowledge and information available at the time of the assessment. The principal contractor will undertake an updated construction noise assessment once the actual construction methods, plant, location and duration etc. are known; therefore there may be some variation in the predicted noise levels and the spatial extent of the impacts (although this is considered unlikely given the ‘worst case scenario’ assessment reported in the submitted ES). However the construction noise limits in the noise management plan which will be secured by DCO requirements 6 and 11 will still have to be met. Therefore, further predictions will be made once the actual methods that the contractor wishes to use are known. If these predictions show the limits being exceeded, changes will have to be made to the methods or programme or mitigation measures to bring the noise back into line with the requirements.</p>

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<p>Following question 7.13 they say:</p> <p>a. Given the close proximity of NSRs to the Q1 access route, groundborne vibration at NSR locations has been identified as a potential issue. Research has shown that there is no recognised reliable method for making quantified predictions of construction traffic vibration. Based on guidance in (Design Manual for Roads and Bridges (DMRB) Volume 11 Section 3 Part 7 HD 213/11 (revision 1) 'Noise and Vibration' threshold levels at which adverse effects are predicted to occur have been quantified at 0.3 mm/s. Measurements of vibration at the foundations of buildings considered to be at high risk should be taken to establish whether construction traffic vibration levels would be likely to exceed the threshold values or increase PPV levels to more than 0.3 mm/s. Vibration measurements of existing traffic along these particular routes should also be undertaken to determine the existing vibration levels. Which again begs the question of the validity of any supposedly previously recorded data from 2015. And subsequently -</p>	<p>Vibration monitoring was not carried out as part of any assessment for the DCO application; vibration measurements taken during the preliminary ground investigation works have not been used for assessment within the ES. The applicant has dealt with the respondent's points on this matter in document ref SPH_GREX_WED3_01.</p>
<p>Following question 7.18 they say:</p> <p>The length of Ffordd Cefn Du up to Q1 will be resurfaced and as such the road surface should not vary by 20mm and will be a brand new surface; The road surface will be monitored throughout construction, with any damage repaired. This will be governed by the Section 278 agreement.'</p> <p>The problem with the green lane is that the road surface is superficial, there is no underlying road bed. And 20mm variation does not account for the vagaries of the weather, with problems arising from the severity of winter conditions and snow, drifts, and ice on the road surface grossly overriding the 20mm variation, together with the effects of irregular gritting.</p> <p>HGV's stopping and starting lead to low frequency/high amplitude vibration from the superstructure of the vehicles themselves, which is more of a problem if vehicles are not well-maintained. Thus sub-surface pressure waves build up and worst case scenario result in the increasing amplitude of resonant frequency initiating widespread structural damage. A smooth road surface in no way modifies these vibrations, but the substrate here is such that it actually moves with the passage of heavy vehicles over it, which is obvious from the damage to the lane</p>	<p>As previously stated the road will be resurfaced and maintained. It is acknowledged that weather conditions may lead to variation in the road surface.</p> <p>The stopping and starting of HGVs leads to airborne noise. The resurfaced road will be maintained throughout the construction phase, which will help to minimise the vibration from the vehicles.</p> <p>As stated above, the applicant intends to instruct an independent company to undertake structural surveys of all concerned properties. This will either be directly by the Applicant or through its appointed Principal Contractor. A baseline survey will be undertaken prior to construction commencing and regular checks throughout the construction phase, and then a final survey post construction and when the Development is in operation. If vulnerable properties are identified through the structural and baseline vibration surveys, any appropriate mitigation measures such as even slower speed restrictions, would be implemented. The Applicant cannot be held accountable for any pre-existing stability issues but will apply appropriate measures to ensure that the construction phase activities will not exacerbate them.</p>

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<p>following previous incursions of heavy traffic.</p>	
<p>Following questions 7.20 &amp; 22 they say:                      ‘An updated draft NMP will be provided at Deadline 3’.                      ‘The noise limits will be confirmed in the noise management plan.’                      How much time will we then have to thoroughly read this NMP, and comment on it before final decisions are made by P.I.?</p>	<p>The Applicant has not commented on this section although the examination schedule is outlined in the Rule 8 letter published on the PINS website for the Development.</p>
<p>Further to 7.22 they say:                      ‘Specifically with regard to low frequency noise (LFN), BS4142:2014 makes reference to the University of Salford ‘Procedure for the assessment of low frequency noise complaints - NANR45’ (2005) for the assessment of LFN.’                      Now, looking at this reference, some of the germane points relating to this development are as follows:                      ‘A sound level meter kit is required consisting of:                      a sound level meter                      a field calibrator or pistonphone.                      Both the meter and calibrator should have a UKAS calibration certificate, preferably issued within the two years preceding the measurements.                      LFN is often at the extreme of the usable frequency range of the instrumentation, and so special care is required to ensure the reliability of the results. If the meter has a UKAS calibration certificate this usually means that it underwent the “verification” procedure for sound level meters according to BS7580 Part 1 (1997) on the date of the certificate. In the verification test the lowest frequency for a full acoustic check is 125Hz: third octaves down to 31.5Hz are checked electrically but not acoustically. This is sufficient for the majority of sound measurements, and is also probably satisfactory for LFN in most cases. However, there is no guarantee of accuracy without an acoustic check at the frequency being measured, which in the case of LFN is often around 40Hz, and could extend down to 10Hz. An acoustic check at lower frequencies than is normally carried out during verification is therefore advisable if possible. This could be achieved</p>	<p>The quoted text from NANR 45 relates to the assessment and measurement of low frequency noise (LFN). All of the points are valid in that context but as yet no measurement of LFN has been undertaken for the DCO application as the Glyn Rhonwy plant currently doesn’t exist and therefore cannot be emitting any LFN. It would be inappropriate for the assessment to investigate or comment on any possible LFN from other sites and the requirements for control of LFN from Glyn Rhonwy are not dependent on pre-existing levels.                      The noise surveys undertaken in 2012 and 2015 were to establish the existing ambient and background noise levels at representative locations in the vicinity of the scheme. This is the information which is relevant to the assessment at this stage of the Development.</p>

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<p><i>for example using a calibrator such as a multi-frequency calibrator which itself has a traceable calibration at low frequency, or by making a special request to a calibration laboratory.</i></p> <p><i>Field calibration should be carried out before and after each test and the results recorded.</i></p> <p><i>A suitable calibration signal should be recorded on tape recordings (if used) at the beginning and end of each recording.</i></p> <p><i>The Leq,T, should be recorded in the third octave bands between 10Hz and 160Hz for comparison with the criterion curve. An averaging time, T, of 5 minutes is usually appropriate, although there may be good reasons to use a different value in other situations. It is also advisable to record L10 and L90 in the same bands since these provide information about the character of the sound and how it fluctuates which can be useful in analysis. Many modern meters allow continuous logging of short term Leq, in which case a sample time of 1 second will be sufficient to allow the variation of sound with time to be examined. If a short term Leq facility is not available then a longer averaging time may be used provided it allows 5 minute values to be derived.</i></p> <p><i>In order to listen to recordings an appropriate low frequency loudspeaker, such as a subwoofer is required. The lower limiting frequency needed will depend on the sound being investigated.</i></p> <p><i>Recordings can be played back at elevated level to assist identification.</i></p> <p><i>If the 80, 100, 125, or 160Hz bands exceed the curve, this may be due to traffic (occasionally this may apply to the 63Hz band). Traffic noise may be recognised by listening to audio recordings.</i></p> <p><i>Also, traffic noise levels tend to show time patterns that are recognisable with peaks at rush hour and a “trough” in the small hours of the morning between 2 and 4am.</i></p> <p><i>The criterion curve below 31.5Hz is based on average threshold of audibility for steady sounds.</i></p> <p><b><i>However, individual thresholds vary considerably.</i></b> <i>Also, unsteady sounds with an Leq lower than the threshold curve may be audible. Therefore, if a sound is recorded as up to say 5dB below the criterion curve this does not necessarily mean it is inaudible to the complainant.</i></p> <p><i>Fluctuating sounds are known to be more disturbing than steady sounds by an equivalent of about 5dB. The criterion curve should be relaxed by 5dB for steady sounds to take account of this.</i></p>	

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<p><b><i>It should be borne in mind that low frequency noise only slightly above threshold of audibility can cause considerable disturbance and appears to be more difficult to shut out or get used to than other types of noise. This may be counter intuitive when compared with the annoyance caused in other (not low frequency) situations where the level needs to be significantly higher than threshold before the noise could be considered a nuisance.'</i></b></p> <p>There does not appear to be any adherence to these principles within any of the documentation supplied by SPH. The reference given to tape recording indicates the time elapsed since this research was carried out at Salford, and would now be initially recorded digitally on data cards/sticks. Further to my previous written submission on how I would have proceeded with ascertaining accurate noise levels, following a link from the University site I came across the following which reinforces the points I made, and is part of a report on LFN from an international acoustic conference:</p> <p><i>'A case study is used in the paper and includes measurement data for locations at varying distances (kilometres) from major industrial facilities to show where LFN impacts are expected according to the application of various guidelines. The focus of the case study is on rural environments with relatively low ambient noise and sparsely populated land.'</i></p> <p><i>'Noise surveys were undertaken using Brüel &amp; Kjær 2250 Type 1 sound analysers, with microphones fitted with seven inch wind shields. All acoustic instrumentation employed throughout the monitoring programme had current National Association of Testing Authorities (NATA) or manufacturer calibration certificates. Instrument calibration was checked before and after each measurement survey, with the variation in calibrated levels being nil or negligible (i.e. not exceeding ±0.5 dB).'</i></p> <p><i>'Mobile weather stations were installed immediately adjacent to the noise monitors.....for the purpose of noise data exclusion (e.g. rainfall and/or wind speeds above 5 m/s as per AS1055.1). The measured parameters include wind speed, wind direction, temperature, humidity and rainfall at microphone height.'</i></p>	
<p>FYI: Acoustic Glossary: <i>'the A-weighting filter covers the full audio range - 20 Hz to 20 kHz and the shape is similar to the</i></p>	<p>The measurements/ survey data referred to in ES Chapter 13 is A-weighted, and as stated in the response above, the noise surveys undertaken in 2012 and 2015 were to establish the existing</p>

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<p>response of the human ear at the lower levels</p> <p>A-weighted measurements only correlate well with the perceived loudness at low sound levels, as originally intended, so many people object to the general use, often supported by regulations, for most noise measurements.’</p> <p>Which, of course, are the measurements referred to throughout the SPH literature. Moreover, in a reply to my original objections to this development SPH wrote the following:</p> <p>‘The potential issue of low frequency noise (LFN) has been considered within the noise assessment contained with the ES – specifically Section 13.8.12 which provides information on methods and procedures for noise complaints and 13.8.13 which outlines how known component interactions have been recognised and can be mitigated. Therefore LFN will be considered throughout the detailed design for the Development and mitigated through design. Since the construction of Dinorwig, technology has improved and the regulation of low frequency noise has been implemented. Careful selection of equipment, use of mitigation measures such as vibration isolation, mufflers, attenuators, etc. will be considered during the design phases including building design of both the underground turbine hall and above ground power house. The turbines themselves are located approximately 70m beneath ground level. DCO Requirement 7 requires an operational noise management plan which includes the undertaking of noise assessments once fully commissioned. If LFN effects are present at NSRs and Gwynedd Council receives complaints, an appropriately scoped ‘Procedure for the assessment of low frequency noise complaints NANR45’ (NANR45) assessment will be carried out with plant in situ to quantify the LFN effects from pumping and other operational processes. Further mitigation measures will be designed as necessary following this assessment.</p> <p>However, this fails to address the main problem of the transmission of LFN, and what is needed if it is to be eliminated as far as is practical is acoustic decoupling, of which there is no mention in any of the SPH literature. Use of a system such as the RoGlider (initially developed to protect buildings against earthquake damage) which essentially mounts a building/structure on flexible lead rubber bearings, would be a viable means of achieving this.</p>	<p>ambient and background noise levels at representative locations in the vicinity of the scheme and not as part of the assessment of LFN.</p> <p>As stated in ES Chapter 13 and previous responses, LFN will be considered during the detailed design stage and various mitigation measures will be assessed and if necessary incorporated into the final design of the scheme. As set out in guidance it is preferable, easier and often cheaper to address LFN through detailed design than to try and retrofit attenuation measures once plant is operational. The Applicant is following a pro-active approach to prevent problems arising and an Operational Noise Management Plan will be implemented.</p>
<p>Following the rest of the replies in the SPH document, the first appendix table 1 includes the</p>	<p>Noted</p>

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<p>following:</p> <p>‘Confirmed likely traffic numbers’</p> <p>‘Confirmed likely durations for construction methods’</p> <p>Confirming something ‘likely’ seems to me the same as saying that this is a definite maybe. And by who and how was the likelihood confirmed?</p>	
<p>From 7.17:</p> <p>‘A local liaison group, including local councillors, residents and representatives of the developers, will be set up to discuss matters relating to public protection.</p> <p>Communication with the local community during the construction period will be used to notify residents of the work schedule, give advance notice of when higher levels of noise are expected due to specific operations and provide channels through which to provide comments and complaints. The logistics of such a group should be agreed between the local council, representatives of the developers and residents.’</p> <p>Under whose auspices will this group be established, and what will be the initial method of communication be to ensure that ALL interested parties have their input/say/involvement from its inception?</p>	<p>The Applicant is committed to the development of this Group. The Code of Construction Practice outlines the responsibility of the Environmental Liaison Officer who will invite representatives of the local community to be part of the Group. This will be a legal requirement through the discharge of DCO Requirement 6. We therefore refer the Respondent to the CoCP for further details.</p>
<p><b>In An Emergency.....</b></p> <p>An exceptionally serious point which has been overlooked to date (although it was pointed out originally before Gwynedd Council passed the 49.9MW scheme) is that the green lane up to Cefn Du is the ONLY emergency access route to the properties along this lane. There are several elderly and disabled residents who have medical problems, and have recently needed emergency treatment, necessitating immediate transfer to hospital via the emergency ambulance service. The proposed increase in traffic on this route puts their lives at risk.</p>	<p>Ffordd Cefn Du is to be widened past the cattle grid this will therefore provide an improvement to the existing situation. Furthermore, during the works any contractor will have to maintain access for emergency vehicles at all times. Under section 1 of the Emergency Workers (Obstruction) Act 2006 it is a criminal offence for any person to obstruct or hinder an emergency worker responding to an emergency.</p>
<p>Moreover, should a queueing system for HGVs be established above the cattle grid, then there is another serious risk to residents which comprises of the likelihood of several vehicles sitting there waiting to descend, but whilst waiting they will almost certainly leave their engines running, especially in cold weather. This will result in noxious diesel fumes descending into properties</p>	<p>It is not proposed to introduce a queueing system for HGV’s above the grid although they may have to wait for a short time in a passing place to allow either another HGV to pass or to give way to other road users, as controlled through the CTMP .</p>

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<p>downhill, and cause breathing difficulties or worse for many residents, especially when a temperature inversion occurs in the valley, a frequent phenomena in the winter months.</p>	
<p>Aside from these concerns, another point which has been overlooked is the main local use of the green lane by farmers for their livestock. As well as their vehicular traffic of slow moving tractors, the sheep, horses, dogs and cats simply jump, leap, scurry, wander up, down and across the lane completely disregarding any vehicular traffic.</p> <p>At the risk of repeating myself, these points alone relating to the risk to life, health of humans and animals should render the route completely unfit for purpose, irrespective of road surface, traffic management, etc.</p>	<p>As previously mentioned in the CTMP HGV's would be instructed to use the passing places to wait in order to give way to local traffic. The widening of the route above the cattle grid will also provide an improvement over the existing situation.</p>
<p>In conclusion:</p> <p>Reading through the various documents submitted by SPH since the meetings in Llanberis in early March has been a daunting task, and I can only cover a few of the points that have struck me as erroneous. Sorting fact from fallacy has proved difficult and time consuming, and commenting on the areas I know to be incorrect, leads me to cast doubt on virtually all of SPH's assertions regarding this development. Throughout their replies to concerns raised are peppered with responses such as:</p> <p>'no adverse effects'</p> <p>'not significant/no significant effect'</p> <p>'no real impact'</p> <p>'negligible'</p> <p>'no permanent significant impact'</p> <p>and I would now seriously question every statement containing one or more of these assertions.</p> <p>Finally, I apologise that due to the time constraints imposed by everyday life, I may not have made myself entirely coherent in my attempt to enumerate all the errors and omissions which I have discovered in the documents. I look forward to being able to elaborate on the above submission at the hearing on 17th May.</p>	<p>The Applicant has no further comment</p>