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Date: 22<sup>nd</sup> January 2021

Dear Mr Lowden,

**STATUTORY PRE-APPLICATION CONSULTATION - TOWN AND COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE) (WALES) ORDER 2012 AS AMENDED**

**PROPOSAL: Lateral extension to the working area and changes to the form of two waste slate tips**

**LOCATION: Penrhyn Quarry, Bethesda, Gwynedd, LL57 4YG**

Thank you for providing a requisite notice to us under Article 2D of the above Order. We received a copy of your proposed application on 11<sup>th</sup> December 2020.

**Based on the information provided, we have significant concerns with the proposed development. To overcome these concerns, we would recommend to the planning authority that the following requirements should be met before permission is granted and the condition listed below is attached to the permission. Otherwise, we would object to the planning application.**

Requirement 1 (Eryri SAC): Should the Local Planning Authority be minded to proceed under the provisions of regulation 64 of the Conservation of Habitats and Species Regulations 2017, then further information should be submitted to fulfil Regulation 68.

Requirement 2 (Eryri SAC) – The applicant revises the Hydrogeological Risk Assessment to demonstrate how indirect hydrological effects on SAC habitats will be avoided

Requirement 3 (Eryri SAC) – Further information about current and expected dust deposition rates and likely effects on SAC habitats to be provided.

Requirement 4 (Eryri SSSI) - Further information (lichen survey results) about each of the boulders supporting lichens of interest to be submitted

Requirement 5 (Eryri SSSI) - A suitable assessment of chough habitat loss to be provided.

Requirement 6 (Water quality) – The applicant submits a site drainage drawing to show where the water flow from the new extended section of the quarry will go to, this to include any run-off, along with evidence that the site settlement lagoons, ponds and their operation are sufficient for the proposed quarry extension and increase in heights of two tips.

Requirement 6 (Protected Landscapes) – The applicant revises the overall final restoration landform

Condition 1 (Protected Species) - Biosecurity Risk Assessment

## **Protected Sites**

Eryri Special Area of Conservation (SAC)

### *General comments*

We have concerns that the proposal would be likely to have significant effects on the Eryri SAC. We note that you have provided a Report to Inform Habitat Regulations Assessment (SLR Consulting, April 2020), from herein referred to as the RIHRA, in support of your application. We advise that there are a number of impact pathways that are of concern, which are discussed (points 1-4) further below.

The HRA to be undertaken by the Local Planning Authority (LPA) should consider the impact pathways on the SAC. Should the LPA also conclude that the proposed development is likely to have a significant effect on the European site, we would look forward to being consulted on their appropriate assessment under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (herein referred to as the 'Habitats Regulations').

### *1. Direct habitat loss of SAC habitats*

The proposed extension is entirely within the Eryri SAC and will lead to the direct loss of habitats within these protected areas.

Section 7.1.1 of the RIHRA states that the proposal will result in the direct loss of 1.74 ha of SAC habitat, comprising of Blanket Bog, Wet Heath and Dry Heath. Section 7.96 of the Ecology chapter acknowledges that no mitigation is available to avoid or reduce this impact: *“No mitigation measures are proposed to mitigate for functional loss of SAC area or loss of extent of SAC habitat features. It is not possible to reduce the impact of the permanent habitat losses predicted within the scope of current quarry design”*.

Section 7.100 of the Ecology chapter states that these losses in SAC habitat would be contrary to the conservation objectives of the SAC. NRW agree with this conclusion and advise that the proposal would adversely affect the integrity of the SAC.

Should the LPA conclude that the proposals would have an adverse effect on the SAC, and is satisfied that there are no alternative solutions and that the project must be carried out for imperative reasons of overriding public interest, then compensatory measures would need to be secured in order to fulfil the requirements of Regulation 68. We note that no information has been provided to fulfil the requirements of Regulation 68.

Requirement 1: Should the Local Planning Authority be minded to proceed under the provisions of regulation 64 of the Conservation of Habitats and Species Regulations 2017, then further information should be submitted to fulfil Regulation 68.

Both loss of habitat due to the extended quarry void and habitat loss due to the repositioning of the existing SAC habitat mitigation leat is relevant here.

## *2. Indirect hydrological effects on the condition of SAC habitats*

The Water Environment chapter discusses hydrogeological conditions, but it does not provide a clear picture of the likely hydrogeological connectivity from the proposed quarry extension to water dependent SAC habitats down gradient from this area and the foreseeable impacts of extended quarry workings.

There is reference to a 1996 hydrogeological assessment, but this report has not been provided and it is unclear how much of this study relates directly to the extension area, the level of detail of the assessment, and how relevant this assessment is now.

It is evident that the hydrogeological situation is complicated and that although near surface bulk materials are predominantly of low permeability there is secondary storage and permeability in the fractured bedrock, and additionally and importantly, the superficial deposits are highly variable in composition, distribution and hydrogeological character. Unfortunately, this brings with it a lack of clarity with respect to the degree of hydraulic connectivity between the various ground units and the risks, responses and impacts on these units resulting from the proposed extended quarry workings. The nature of impacts to the hydrology, hydrogeology and the ecology may for example be more direct (i.e. loss of habitat) or more indirect (i.e. through compromising the hydraulic connectivity between the various units by affecting hydraulic gradients). These 'indirect' impacts may therefore not be immediately discernible.

The hydrogeology section of the water chapter acknowledges that groundwater occurs in both the bedrock and in superficial deposits, and that water is irregularly distributed and transported. The information also indicates that water comes to the surface from below ground to produce surface water features, and presumably maintains sub-surface water levels to some degree in at least some areas, whilst concluding without clear evidence that the likelihood of an impact on SAC habitats is "unlikely".

The Hydrogeological Risk Assessment, where considering impacts from de-watering on Gwaen Gynfi Heathland, makes several assertions based on inadequate or no supporting evidence, including stating that “*Impacts, if any, attributed to the quarry void would have already manifested*”. We advise there is insufficient evidence to support the assertions made in the EIA and that indirect hydrological effects cannot be ruled out.

Further, more detailed information based on historic data, further field monitoring and investigations is needed. A clearer baseline needs to be established against which forecast impacts can then be properly measured and evaluated as part of the environmental impact assessment. This needs to take account of the importance of groundwater level responses that are both sufficiently discretised temporally (e.g. ‘real time monitoring’ using dataloggers) and collected across seasons (throughout the year), and in the context of climate change predictions. Groundwater level responses should be reconciled against rainfall events so that behavioural variability and trends can be understood. In the absence of clear evidence and additional information as advised above, NRW consider that adverse effects on water dependent SAC habitats down gradient from the extension cannot be ruled out.

Requirement 2: The applicant revises the Hydrogeological Risk Assessment to demonstrate how indirect hydrological effects on SAC habitats will be avoided

The following section titled ‘*Effectiveness of current hydrological mitigation (leat)*’ is intrinsically linked to the hydrogeological comments section above, notably in the need to incorporate groundwater monitoring and assessment data into discerning how the leat functions.

This issue is closely related to that of the current mitigation leat.

### *3. Effectiveness of current (and proposed) hydrological mitigation leat*

The leat installed as a result of a historic extension permission (C12/0874/16/MW - 2012) to mitigate for impacts on water supply to the Gwaen Gynfi bog (SAC/SSSI habitat) has been in place since 2014. The leat experienced major erosion problems and its construction was subsequently modified in 2016. This leat was constructed partially within the SAC and outside of the planning boundary for the 2012 permission and it is not clear how it currently complies with the relevant, existing permission or the Habitats Regulations.

We also have concerns that it has not been demonstrated that the leat fulfils its original mitigatory function. Some simple vegetation monitoring at and (rather far) down gradient of the leat has taken place but this appears to have only been conducted twice (2010 & 2019) and it does not seem to be robust enough (low spatial and temporal resolution with very few data points) to allow detection of subtle changes let alone attribute changes to hydrological conditions. There does not appear to have been monitoring of the water table which would have significantly complemented the vegetation monitoring. This lack of evidence makes it very uncertain whether further reliance on this intended mitigation method would be appropriate.

Further information based on field data (including control sites) obtained over a suitable timeframe is likely to be needed to allow the effectiveness of the current mitigation leat / shallow groundwater recharge to be assessed properly. The design of monitoring should also allow for the assessment of the potential impacts of the proposed extension to be made and likely success of a modified leat and shallow groundwater recharge system.

The mitigation leat needs to be evaluated in the context of damage that its modification, on top of that it has already caused, may cause versus the long-term benefit (effectiveness as mitigation) of it.

Any modified leat, if deemed appropriate, would need to be better designed and implemented than the 2014 leat to avoid impacts from erosion and deposition of material into SAC habitats. It is not clear how these risks are proposed to be managed. Specific detail about a revised leat is currently lacking.

We would also have concerns about the ongoing inspection, maintenance and operation of the leat and culvert arrangement into perpetuity. Clarification is also required as to whether there will be a restored/naturalised system post-mining activities once the site is decommissioned. If no such measures are proposed any design needs to factor this into account.

The additional information outlined above should be provided within the revised Hydrogeological Impact Assessment (see Requirement 2 above)

#### 4. Dust deposition risks to SAC habitats

Potential risks from air quality changes affecting SAC features are discussed in the environmental assessment however we do not consider that likely significant effects can be ruled out. There is no measurement of expected contribution from the quarrying activity against existing background levels of dust deposition in relation to SAC habitats.

It appears that no off-site particulate monitoring, in meaningful locations, is being undertaken at present, with a monitoring site at Mynydd Llandegai apparently having ceased operating in 2013. This monitoring site may also only have measured concentrations of particulates in the air rather than deposition rates, and may have been too far away to have been relevant to the SAC. This means the assessments are only judgment based with little, or no, site-specific evidence as support. If, as stated in the air quality assessment, deposition rates are highest within 200m of dust generating activity and the extension brings such operations closer to sensitive habitats, which it would, then this should be the focus of assessment and monitoring.

Requirement 3 - Further information about current and expected dust deposition rates and likely effects on SAC habitats to be provided.

We recommend applying a 200mg/m<sup>2</sup>/day dust deposition rate limit, but also considering the suitability of a less conservative 500mg/m<sup>2</sup>/day limit.

## 5. Loss of Common Land

The land within the proposed extension is Common Land. This does not appear to have been discussed in the environmental impact assessment. Loss of the common has implications for land management within the SAC with the potential of concentrating existing grazing rights over the remaining common. This could have site management implications with regards to habitat condition and securing favourable management. A portion of the Common Land was lost as part of a prior extension to the quarry so this change would act in combination. These implications will need to be assessed in the HRA to be undertaken by the LPA.

### Eryri Sites of Special Scientific Interest (SSSI)

The proposal is located within the Eryri SSSI. The special features of the SSSI include blanket bog and heath features (which are also SAC features). The above concerns relating to the SAC also apply to these habitats as SSSI features. In addition to these features, we also consider that the proposal may damage two other SSSI features: the lichen assemblage, and chough.

#### *Risks to SSSI lichen feature*

The Ecology chapter discusses the risk of the extension on lichens. The proposed extension will affect several boulders that support lichens that constitute the notified lichen assemblage feature of the SSSI.

The presented ecological assessment classifies the lichens as probably of less than Regional importance, implying that the species of interest are under recorded (i.e. more common than current records suggest), are not SSSI qualifying; and that proposed efforts to translocate lichens would reduce any impact to acceptably low levels.

NRW consider that the importance of the lichen interest has been underplayed, especially in light of updated SSSI selection criteria for lichens, and that the lichens are within a SSSI for which they form part of a lichen assemblage (notified feature). This makes them of national importance.

NRW advise that additional information (lichen survey) is required for each of the boulders supporting lichens of interest to understand the risk to the feature and whether mitigation would be likely to be successful, and whether damage to the feature could reasonably be expected to be avoided. We advise that the original lichen survey results from 2010 and 2019 surveys need to be submitted. If the 2019 survey “was not reported in a format for inclusion” then the original unedited work by the surveyor should be provided, to at least show where they went, what they found, and what their conclusions were.

Requirement 4: Further information (lichen survey results) about each of the boulders supporting lichens of interest to be submitted

### *Risk to Chough (SSSI feature) feeding habitat*

Chough are a SSSI feature and nest within Penrhyn quarry. A key supporting habitat for the species is short-sward, grazed grassland. Chough have not been discussed in the ecological impact assessment so we cannot comment upon whether it may have been adequately assessed, the most likely risk being an impact from loss of the currently grazed grassland in the proposed extension area. We advise that information should be provided on the suitability and value of the habitat on site for foraging chough.

Requirement - A suitable assessment of chough habitat loss to be provided.

### **Water Quality**

You must comply with your existing Environmental Permit conditions or apply for a variation as necessary.

A site drainage drawing is required to show where the water flow from the new extended section of the quarry will go to, this to include any run-off. Evidence is required that the site settlement lagoons, ponds and their operation are sufficient for the proposed quarry extension and increase in heights of two tips.

Silt laden run-off routinely enters the Afon Ogwen from the quarry access road and public road to the A5. The extended life of the quarry would mean that this issue will extend further into the future too, unless it is properly addressed. This is of significant concern regarding the Afon Ogwen where siltation of salmonid and aquatic invertebrate habitat will be occurring.

This issue is probably contrary to current conditions under which the site operates and is a known problem that does not appear to be being addressed as a priority.

Requirement 6: The applicant submits a site drainage drawing to show where the water flow from the new extended section of the quarry will go to, this to include any run-off, along with evidence that the site settlement lagoons, ponds and their operation are sufficient for the proposed quarry extension and increase in heights of two tips.

### **Landscape**

The Snowdonia National Park boundary lies close to the quarry to the south and east and the quarry lies within the setting of the National Park.

The proposals involve a 4.3ha extension to the south west of the existing quarry and increases in height of 2 spoil tips within the quarry. This would result in changes to the proposed final landform restoration.

The proposals would result in some adverse effects, including changes to the skylines from locations at lower elevations and an extended operational timescale of 4-5 years. Overall, the changes to landscape character within and views from and towards the National Park

would be limited, due to the existing context of a very large working quarry. We agree with the assessment in the Landscape and Visual Impact Assessment, that there are unlikely to be significant adverse effects on the National Park.

Nevertheless, there would be some adverse effects on the National Park, and these should be minimised as far as possible in order to conserve and enhance its special qualities. We note that no additional mitigation is proposed and the revised landforms would be restored in accordance with the final restoration. We advise that, given that the final tip landforms would require revision, further consideration of the overall final restoration landform is required. The additional spoil could be used to infill and re-grade some of the highly engineered benches within the south quarry, for example, reducing the height and steepness of the final tip landforms at the same time.

We require further explanation of this matter and reasons for not considering changes to the overall restoration landform in the light of the changes proposed.

Requirement 6 (Protected Landscapes) – The applicant revises the overall final restoration landform

### **Protected Species**

We consider that the application has fully considered any impacts on protected species and have no further concerns in this regard.

However, we consider biosecurity to be a material consideration owing to the nature and location of the proposal. In this case, biosecurity issues concern invasive non-native species (INNS) and diseases.

We understand that surveys identified the presence of wall cotoneaster.

We therefore advise that any consent includes the imposition of a condition requiring the submission and implementation of a Biosecurity Risk Assessment to the satisfaction of the LPA.

Condition 1 - No development including site clearance with the potential to impact on invasive species, shall commence until a site-wide Biosecurity Risk Assessment has been submitted to and approved in writing by the Local Planning Authority. The risk assessment shall include measures to control, remove or for the long-term management of invasive species both during construction and operation. The Biosecurity Risk Assessment shall be carried out in accordance with the approved details.

Justification: To ensure that an approved Biosecurity Risk Assessment is implemented to secure measures to control the spread and effective management of any invasive non-native species at the site.

### **Other Matters**

Please note, if further information is prepared to support an application, it may be necessary for us to change our advice in line with the new information.

Our comments above only relate specifically to matters included on our checklist, *Development Planning Advisory Service: Consultation Topics* (September 2018), which is published on our [website](#). We have not considered potential effects on other matters and do not rule out the potential for the proposed development to affect other interests.

In addition to planning permission, you are advised to ensure all other permits/consents/licences relevant to the development are secured. Please refer to our [website](#) for further details.

Further advice on the above matters could be provided prior to your planning application being submitted, however there would be a charge for this service. Additional details are available on our [website](#).

### **Advice for the Developer**

#### Watercourses

You may need permission from Gwynedd Council (Alan Osborne Williams) to do the work on any minor watercourses. Pollution prevention measures would be expected. A Method Statement would be required for work undertaken as part of the site alterations if in close to or in any watercourse. This would need to be submitted to our local Environmental Team at NRW prior to commencement of the works.

#### Sewage Facilities

You should ensure that existing sewage package treatment plant is of sufficient capacity if site personnel will increase as a result of the proposed extension and increase height to two tips works.

#### Waste Management

If the spoil heaps stay on site it'll be classified as "re-use". If, however, the intention is to take any spoil off-site then consultation with NRW's local Waste Team is required.

If you have any queries on the above, please do not hesitate to contact us.

Yours sincerely,

#### **Mr. GARETH THOMAS**

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**Siaradwr Cymraeg / Welsh Speaker** 