Cyfoeth Naturiol Cymru
Natural Resources Wales

Eich cyf/Your ref: EN010072

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Date: 2nd June 2016

Dear Sir,

GLYN RHONWY PUMPED STORAGE SCHEME

PROJECT REFERENCE: EN 010072

Further to our Deadline 4 response dated 26th May 2016, we advised that our comments on the draft plans, agenda item 11.1, and agenda item 6.6 would follow. Our comments on these are below:

Agenda Item 6.6

With regard to the 10 metre buffer zone, we have not specifically requested for a buffer zone in the past. Each area needs to be considered according to the risk in that location i.e. site aspect & environmental risk. This potential pollution risk of run-off entering watercourses will be covered by the Pollution Prevention Plan and Silt Management Plan.

Agenda item 11.1

Excess Water Management Strategy

We have reviewed the submitted Excess Water Management Strategy (Document No SPH_GREX_DCOD3_04 Rev 0 dated 27 April 2016) with regards to flood risk and noted that the document is described as that of an outline strategy describing the principles of managing the water. As such we can only comment on the principles to be adopted and will need further dialogue during the detailed design stage to discuss flow rates and volumes. This will depend on the independent input of NRW's permitting function.

The water input and outputs are noted and it is accepted that rainfall will be the only input once the system is operational. Of the four possible outputs (water losses) the concerns relating to flood risks would be the controlled release or the uncontrolled release. With regards to infiltration/seepage, the reservoirs will be designed in accordance with the recommendations of the engineer in accordance with the requirements of the Reservoirs Act (with regards to reservoir safety). The document suggests that there are no controlled releases associated with the proposal

i.e. no compensation flow is required; however the scour valve testing (as per para. 2.4) would fall under this method of water loss from the system. Uncontrolled releases, although would not be planned, could occur as flow over spillway.

Paragraph 2.2.2 states that the "…maximum allowable rate of water release is to be addressed……will be incorporated in the final 'Excess Water Management Strategy' for as required by Requirement 20 of the DCO……". We assume that this statement has been made as a result of the applicant's intention to provide detailed information at a later (detailed) design stage. As part of the DCO, details will need to be provided and agreed to satisfy the requirement. We do however note and accept the content of para. 2.2.8 which states:

"In the event of an extreme rainfall event, the available storage between Max OWL and the reservoir spillway allows + excess water to be held safely within the system, and subsequently released days after the event. Depending on the position in the generation cycle, the system will have varying capacity to accept incoming water without spill. In the worst case position (Q6 at Max OWL) the system has capacity to accommodate 0.5m depth of rainfall without spill."

Allowable flow volumes and rates must be agreed by NRW to ensure that the releases will not overload the capacity of the channel/structures along Nant y Betws and contribute to any flooding/erosion.

The statement regarding Q1 spillway (para 2.4.8) is again noted and accepted however we advise that this is expanded to state that such prolonged rainfall events would lead to out of channel flows in the Nant y Betws regardless of the development.

In the final Strategy and following detailed design, it would be advisable to support the statement made in paragraph 2.4.10 regarding relief valve at Q6 which currently reads, '…..it is considered that the design draw-down……..0.6 – 1.0m3/s with negligible increase in flood risk….'.

Subject to the above, NRW is satisfied with the outline strategy and approach taken but as stated, we would require to agree the strategy once the detailed design has been done and to release requirement 22 of the draft DCO (revision 4).

Biosecurity Plan

We have reviewed the submitted Biosecurity Plan (SPH_GREX_DCOD3_05 Rev 0 dated 27 April 2016), with regard to the consideration of invasive species introduced as a result of the proposal.

We require the applicants to consider non-native and invasive invertebrate or plant arriving in Llyn Padarn, and what actions they'd take to:
1) prevent the introduction of such species into the proposal through the abstraction from Llyn Padarn, and;
2) if it did become established in the development, what actions they'd take to prevent introduction into the Gwyrfai catchment.

The species to be considered should include invasive species such as signal crayfish, Dikerogammarus villosus (Killer shrimp) or an invasive plant such as Crassula helmsii.

We'd advise including a theoretical response sequence for the additional invasive species as has been set out in the plan for the known INNS present, but against a theoretical "new arrival" INNS,

identifying the broad principles, would make the applicants' assessment and plan much more robust.

We are satisfied with the content of the following draft management plans with regard to the DCO application at this stage, namely:

- Schedule of Other Required Plans and Strategies
- Code of Construction Practice
- Silt Management Plan
- Water Management Plan

It should be noted that NRW's comments on the draft plans are provided in the context of the DCO application. They are independent to any comments or decision NRW may make on any application for an Environmental Permit for operational water discharges under the Environmental Permit Regulations 2010 (EPR), or Abstraction Licence under the Water Resources Act 1991.

Please contact Gareth Thomas, glyn.rhonwy@cyfoethnaturiolcymru.gov.uk or telephone 03000 65 3786 for further advice about this representation.

Yn gywir / Yours' faithfully,

Mr. RICHARD NINNES
HEAD OF ECOSYSTEMS, PLANNING, AND PARTNERSHIPS