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08/10/2021

Annwyl Syr/Madam / Dear Sir/Madam,

BWRIAD / PROPOSAL: FLOOD ALLEVIATION SCHEME FOR LLANMAES VILLAGE

LLEOLIAD / LOCATION: LLANMAES, LLANTWIT MAJOR

Thank you for consulting Cyfoeth Naturiol Cymru / Natural Resources Wales about the above, which we received on 24.8.21.

We received a statutory pre application consultation notice for this proposal under Article 2D of the Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2012. We provided a substantive response to that consultation on 10th June 2021. A copy of our response to the statutory pre-application consultation is attached for your information.

We have concerns with the application as submitted because inadequate information has been provided in support of the proposal. To overcome these concerns, you should seek further information from the applicant regarding flood risk modelling. If this information is not provided, we would object to this planning application. Further details are provided below.

We also advise that based on the information submitted to date, conditions regarding a Construction Environmental Management Plan and land contamination should be attached to any planning permission granted AND the document identified below should be included in the approved plans and documents condition on the decision notice. Without the inclusion of these conditions and document we would object to this planning application.

- *Llanmaes Flood Alleviation Scheme (FAS). Preliminary Ecological Appraisal* by AECOM dated March 2021.

Please note that this is an interim response only. We are unable to advise fully at this stage with regard to flood risk management as the hydraulic model used to inform the Flood Consequences Assessment is currently under review. Once this review is complete we will provide a further response to your Authority.

Flood Risk

Our Flood Risk Map confirms the site to be partially within Zone C2 of the Development Advice Map (DAM) contained in TAN15. Due to the complex nature of the risk and consequences of flooding associated with the proposed development, we are currently undertaking a detailed review of the hydraulic modelling information to ensure that it is fit to inform the Flood Consequence Assessment (FCA) prepared by AECOM, dated 16/04/21.

This review may find anomalies/discrepancies in the model which will need to be addressed to ensure that it is representative of the risk of flooding and fit to inform the FCA. The review is likely to take up to 6 weeks to complete and depending on differing factors, may take longer. We reserve the right to request further information to establish the risks and consequences of flooding if necessary.

Until we confirm that the model is representative of the flood risk, we are unable to advise whether the consequences of flooding outlined in the FCA can be managed to an acceptable level. Once the review has been undertaken we will provide a further response to your Authority.

Further Advice

Section 6 of TAN15 requires your Authority to determine whether the development at this location is justified. Therefore, we refer you to the tests set out in section 6.2 of TAN15. If your Authority considers the proposal meets the tests set out in criteria (i) to (iii), then the final test (iv) is for the applicant to demonstrate through the submission of an FCA that the potential consequences of flooding can be managed to an acceptable level.

In summary, we have concerns with the proposal as submitted. We would recommend planning permission is refused if these concerns are not addressed.

We would ask you to inform us, in accordance with paragraph 11.7 of TAN15, if you are minded to grant permission for the above application contrary to our advice.

Notwithstanding the above advice, please be aware that TAN 15 and the Development Advice Map (published in 2004) are being replaced. The new TAN 15 and Flood Map for Planning are available to allow local planning authorities, developers, planning consultees and the public to prepare for when they come into force. The changes will then come into effect on **Wednesday 1 December 2021** and from this date onwards, applications will be determined based on the new TAN 15 and Flood Map for Planning. We therefore advise you to consider how this change may affect your determination of this application. Should you require further advice from us once the new TAN 15 has been published, please reconsult us.

Water Quality

To fully understand the pollution risks arising from the proposed scheme, we would request the following condition be attached to the planning permission:

Condition: No development, including site clearance, shall commence until a site wide Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP should include:

- Construction methods: details of materials, how waste generated will be managed;
- General Site Management: details of the construction programme including timetable, details of site clearance; details of site construction drainage, containments areas, appropriately sized buffer zones between storage areas (of spoil, oils, fuels, concrete mixing and washing areas) and any watercourse or surface drain;
- Biodiversity Management: details of tree and hedgerow protection; invasive species management; species and habitats protection, avoidance and mitigation measures;
- Soil Management: details of topsoil strip, storage and amelioration for re-use;
- CEMP Masterplan: details of the extent and phasing of development; location of landscape and environmental resources; design proposals and objectives for integration and mitigation measures;
- Resource Management: details of fuel and chemical storage and containment; details of waste generation and its management; details of water consumption, wastewater and energy use
- Traffic Management: details of site deliveries, plant on site, wheel wash facilities;
- Pollution Prevention: demonstrate how relevant Guidelines for Pollution Prevention and best practice will be implemented, including details of emergency spill procedures and incident response plan;
- Details of the persons and bodies responsible for activities associated with the CEMP and emergency contact details;
- Landscape/ecological clerk of works to ensure construction compliance with approved plans and environmental regulations.

The CEMP shall be implemented as approved during the site preparation and construction phases of the development.

Justification: A CEMP should be submitted to ensure necessary management measures are agreed prior to commencement of development and implemented for the protection of the environment during construction.

Water Quality and Biodiversity Benefit

As previously raised by us, it appears the applicant has overlooked our Statutory Pre-application Consultation response. This is unfortunate as we provided detailed advice regarding how the scheme could be designed to achieve maximum multiple benefits. We explained, for example, the design of the ditches could not only function as flood risk management, but also provide ecological/biodiversity benefit. We consider green engineering options should be the preferred option wherever suitable.

It appears that the proposals are the same as those published under the Statutory Pre-application Consultation. This is a missed opportunity to maximise biodiversity gain and provide ecosystem resilience.

Therefore, although we do not raise any objection to the proposal on these grounds, we recommend you discuss with the applicant whether there is scope to implement part or all of the following advice, without the need to amend the flood risk modelling (which would result in further delays). We remind you that the local authority (as applicant and as planning authority) have duties under Section 6 of the Environment (Wales) Act 2016 which places a duty on public bodies in the exercise of their functions to seek to maintain and enhance biodiversity.

Our detailed advice is repeated below. We advise that this is given further consideration:

Having reviewed the various drawings, it would appear that the proposed “ditches” are, on the whole, a series of wide, linear retention basins. These are presumably dry for most of the year, the possible exception being the Village Green Ditch. The drawings show these having flat bases, varying in width from 1m to 26m, though mainly 4m (Ditch 1); 0.5m to 1m (Ditch 2); 4m throughout (Ditch 3); and approximately 1m (Village Green Ditch), with banks set at a uniform angle, though varying from ditch to ditch and, occasionally, on different areas of the same ditch. We would therefore strongly recommend that variations (undulations) are provided in both the banks and, in particular, the bases in order to create varying habitats. Scrapes of varying depths could be excavated in the bases to hold water for longer and therefore to further diversify habitats. Furthermore, two-stage channels could be used instead of the flat bases, each with a low-flow channel, say 0.5m wide (and sinuous in the particularly wide areas of the ditches), that would retain water for longer. In particular, the Village Green Ditch would benefit from a two-stage channel with a narrowed low-flow channel (or, at least, retained at its existing width). The proposal to widen the low-flow channel of the Village Green Ditch will, in “normal” flow conditions, almost certainly bring about sluggish flow velocities, enhanced fine-sediment deposition, increased temperatures (due to the reduced depth) and the deterioration of habitats and biodiversity.

It would appear that the only control on flows from the flood-bunds into the ditches and from one part of the ditch system into the next is the cross-section of the culverts (piped and boxed), rather than any of the openings being perched above the base (apart from the raised overflow pipes on the flood bunds). For example, drawings 60160078-ACM-SHT-30-9000-CT-9004 and -9005 show that the inverts of the culverts are at the same level as the base of the respective proposed drains. We would suggest, in fact, that the inverts of the culverts and headwalls are buried below the bases by, say, 150mm (with an increase in the structure cross-section accordingly) to allow for a continuation of soil and habitats along the structure.

We welcome the proposed use of erosion-control matting up- and downstream of the various flow control structures and elsewhere, rather than the use of riprap or blockstone, which offer almost no biodiversity benefits. However, we would recommend that the matting is slightly buried under the soil surface, rather than laid on top of it, and further strengthened by suitable planting (which is usually the manufacturers’ installation guidance).

We would also be concerned about scour / erosion on the Llanmaes Brook opposite the confluences of Ditch 1 and Ditch 3 caused by discharge from those two channels (in particular from Ditch 3, as it joins the brook at approximately 90o). From the submitted information, it would not appear that any thought has been given to the potential for scour on the brook. We would therefore strongly suggest that the potential for scour is considered. If the conclusion is that there is a potential for scour, appropriate protection, ideally matting if it is robust enough, should be placed along the right bank of the Llanmaes Brook opposite the confluences. The potential for scour on Llanmaes Brook from Ditch 3 could be greatly reduced if the angle of that confluence was reduced to a gentle angle (i.e. similar to the confluence of Ditch 1 with the brook). However, to curve round in such a way will, of course, mean that the downstream end of Ditch 3 will have to extend further across into the neighbouring field, so therefore a slightly larger “land take”.

European Protected Species

We welcome the submission of the following report in support of the above application:

- *‘Llanmaes Flood Alleviation Scheme (FAS). Preliminary Ecological Appraisal’* by AECOM dated March 2021.

We have concerns with the application as submitted. However, we are satisfied that these concerns can be overcome if the planning consent secures the implementation of the mitigation recommendations set out in section 6.3 of the above report. Therefore we advise that above report is included in the approved plans and documents condition on the decision notice. Please note that without the inclusion of these documents in that condition we would object to this planning application.

We take this opportunity to advise the applicant that should protected species be encountered during the course of development works, the project ecologist overseeing the works should be contacted in the first instance, rather than NRW. It is their responsibility to advise if and how works should proceed, and whether a protected species licence is required (taking account of the nature of the potential use of the site by the species in question and in taking forward the development, the relative risk of breaching the legal protection afforded the species and its habitat).

Land Contamination

We note the Preliminary Sources Study Report available on your Authority’s website relates to the St Athan Northern Access Road development rather than the Llanmaes flood alleviation.

With regards to this planning application, we would recommend the following condition be attached to any planning permission issued:

Condition If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until a remediation strategy detailing how this unsuspected contamination shall be dealt with has been submitted to and approved in writing by the Local Planning Authority. The remediation strategy shall be carried out as approved.

Justification: To ensure the risks associated with previously unsuspected contamination at the site are dealt with through a remediation strategy, to minimise the risk to both future users of the land and neighbouring land, and to ensure that the development can be carried out safely without unacceptable risks.

Other Matters

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.

We advise the applicant that, in addition to planning permission, it is their responsibility to ensure they secure all other permits/consents/licences relevant to their development. Please refer to our [website](#) for further details.

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

Yn gywir / Yours faithfully

Annabelle Evans

Cynghorydd - Cynllunio Datblygu / Advisor - Development Planning
Cyfoeth Naturiol Cymru / Natural Resources Wales