Cyfoeth Naturiol Cymru
Natural Resources Wales

Ein cyf/Our ref: CAS-150445-X9B3
Eich cyf/Your ref: 60160078

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AECOM
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10/06/2021

Annwyl Syr/Madam / Dear Sir/Madam,

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

BWRIAD / PROPOSAL: THE IMPLEMENTATION OF THE FLOOD ALLEVIATION WORKS, INCLUDING NEW SURFACE WATER MANAGEMENT ASSETS, SUCH AS DITCHES AND FLOOD BUNDS, TOGETHER WITH ROAD RE-PROFILING AND NEW KERB LINES ALONG THE WEST ROAD, VILLAGE GREEN ROAD AND SIGINGSTONE LANE.

LLEOLIAD / LOCATION: LLANMAES, LLANTWIT MAJOR, THE VALE OF GLAMORGAN.

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 14 May 2021.

We have concerns with the application as proposed because inadequate information has been provided. To overcome these concerns, you should provide further information in your planning application regarding flood risk modelling. If this information is not provided, we may object to the planning application when formally consulted by the planning authority. Further details are provided below.

We also advise that based on the information submitted to date, we would ask the planning authority to include a condition for a Construction Environmental Manangement Plan on any planning permission granted.

We also include advice regarding possible changes which could be made to secure water quality and biodiversity benefits.

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 wish to undertake

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. This 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. We advised you of this matter in an email to Athan Tzovaras, dated 21/05/2021, but we received no response.

Therefore, 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.

Further Advice
Section 6 of TAN15 requires the Local Planning Authority (LPA) 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 the LPA consider 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 the LPA to inform us, in accordance with paragraph 11.7 of TAN15, if they are minded to grant permission for the above application contrary to our advice.

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
Whilst we are supportive of the scheme in principle, we consider the scheme should be designed to achieve maximum multiple benefits. For example, the design of the ditches to ensure they are not only of benefit to flood risk but also provide ecological/biodiversity benefit. Green engineering options should be the preferred option wherever suitable.

These changes would help achieve the objectives and the local authority's duties under the Environment (Wales) Act 2006, which places a duty on public bodies in the exercise of their functions to seek to maintain and enhance biodiversity.

Having reviewed the 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 exception possibly 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 variation (undulations) are provided in both the banks and, in particular the bases, to create varying habitats. Scrapes of varying depths could be excavated in the bases to hold water for longer and therefore further diversity 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. The Village Green Ditch in particular, would benefit from a two-stage channel with a narrowed low-flow channel (or, at least, retained at its existing width). Widening the low-flow channel 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 appears 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 60160078-ACM-SHT-30-9000-CT-9005 show that the inverts of the culverts are at the same level as the base of the respective proposed drains. We would suggest the inverts of the culverts and headwalls are buried below the bases by 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 upstream 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 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). Furthermore, we would suggest that scour protection, ideally matting if it is robust enough, is also placed along the Llanmaes Brook, opposite the confluences of Ditch 1 and Ditch 3, to reduce the likelihood of erosion at those locations.

It is also noted that the proposal is for Ditch 3 to join Llanmaes Brook at approximately 90º. We would strongly recommend the confluence is instead at a gentle angle (i.e. similar to the confluence of Ditch 1 with the brook), which will reduce the likelihood of scour. 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".

We would be happy to be involved in detailed design of the scheme to ensure multiple benefits are derived, maximise biodiversity gain and ecosystem resilience. If you would like further advice from us ahead of the submission of a planning application, this could be provided through our charged Discretionary Advice Service. Further details and the application process can be found on our website.

European Protected Species

We recommend you seek the advice of the Local Authority's ecologist to determine if there is a reasonable likelihood of European Protected Species' being present within the application site. If so, in accordance with Technical Advice Note 5: Nature Conservation and Planning (paragraph 6.2.2) surveys may be required. Any survey should be carried out in accordance with relevant best practice guidelines. The LPA will consult us again if any survey undertaken finds that EPS are present at the site and they require further advice from us.

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.

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

Yn gywir / Yours faithfully

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