

For the attention of Philip Forster

16/09/2019

Dear Philip,

PROPOSAL: Use of Land as a cemetery

LOCATION: Land to the West of Friars Court, Bangor-on-Dee, Wrexham

Thank you for consulting Natural Resources Wales (NRW) about the above, which was received on 26/06/2018.

We have significant concerns with the proposed development as submitted. We recommend that you should only grant planning permission if the scheme can meet the following requirements and you attach the conditions listed below. Otherwise, we would object to this planning application.

Summary of Requirement and Condition

Requirement 1: A revised Flood Consequences Assessment (FCA) is required to demonstrate the risks and consequences of flooding can be managed to an acceptable level.

Condition 1: All burials in the cemetery shall be:

- i. a minimum of 50 m from a potable groundwater supply source;
- ii. a minimum of 30 m from a water course or spring;
- iii. a minimum of 10 m distance from field drains;
- iv. no burial into standing water and the base of the grave must be above the local water table;

Floodrisk

We write further to our previous consultation responses (CAS-58364-F8L0 29/03/2018 and CAS-71299-P0Y8 dated 29/11/2018) and submission of a revised flood consequences assessment produced by Unda referenced V2.0 210319 (88158-Dewey-Bangor on Dee) and dated March 2019. Together with a confirmation of the proposed use of the site as a cemetery as highly vulnerable development category by the Local Planning Authority (LPA).

The proposed cemetery would change the use from agricultural or non-planning use site to highly vulnerable use, immediately east of the main flood defence which provides protection to the village of Bangor on Dee and within Development Advice Map (DAM) Zone C1.

TAN 15 directs development away from Zone C and requires all development within DAM Zone C1 to meet the four justification tests, and whilst this is matter for the LPA, this site would not form previously developed land and would not meet the tests prior to the examination of the fourth test and the assessment of a flood consequences assessment.

The revised FCA suggests the proposed use would be less vulnerable development and would be subject to low frequency of burials i.e. two per year and low vehicle movements. It details fair to poor conditions of defences, crest levels and current standard of protection and places emphasis on the site being defended from flood risks. Table 2 shows that the site would be at significant flood risk from the undefended scenario during the range of probability events detailed, it does not include any details of any breach assessments or blockage of the 2012 Bangor on Dee modelling study or acknowledge any of the limitations to this study. It acknowledges that because of the clay construction of the embankment it would be susceptible to breach, with an allowance for climate change which informs whether the development is acceptable. Although NRW and our predecessors have carried out maintenance and improvements works on these defences as part of flood alleviation scheme, no scheme can completely remove the risk of defence failure and TAN15 refers to this source of risk. Whilst the FCA refers to breach, no assessment has been made for a breach in the defences for the 1% design event + climate change allowances required to meet A1.14 and we would not consider that this is a residual risk.

The Bangor on Dee modelling study completed in 2012 assessed the 1% breach event but this did not include an allowance for climate change. It is unclear if the revised FCA has amended the model outputs of this study to factor in an allowance for climate change within Table 2. Figures 9 and 10 in the FCA shows the 1% undefended scenarios with an allowance for climate change depths and velocities. These would suggest the site would be unable to comply with this 1% breach design event with climate change scenario requirements of TAN 15. Figure 11-12 indicate there would be sections of the access and egress route that would be unable to meet requirements of A1.15.

The requirements for a fluvial breach assessment in terms of TAN 15 are clearly set out in OGN100 on the Natural Resources Wales website <https://cdn.naturalresources.wales/media/684120/ogn100-flood-risk-management-modelling-blockage-and-breach-scenarios.pdf?mode=pad&rnd=131909171450000000>

No details have been submitted by the applicant to address the significant impacts and concerns in relation to the flood embankment. No detail has been submitted in relation to the alterations required to create a ramped access track and parking area within the site, and the potential impacts on the crest level of the flood defence embankment and other flood defence assets and any of the corresponding flood risk activity permit requirements, future maintenance or liability. The application site does not include the entire track along the embankment and whether this access would be sufficient in terms of its construction and width and compatibility with other users, and it has not been explained why an alternative access from friars court could not be achieved.

In conclusion there are two key issues for this development, the first of which relates to the use of the flood embankment for access and the proposed alterations to facilitate the new cemetery; this embankment is the principal flood defence embankment for the village of Bangor on Dee. The second issue relates to the development and change of use, which as a new highly vulnerable development would be subject to flood risk over 100 year plus lifetime with climate change and is unable to meet the requirements of TAN 15. The FCA should be updated to consider the above.

Requirement 1: A revised Flood Consequences Assessment (FCA) is required to demonstrate the risks and consequences of flooding can be managed to an acceptable level.

If the LPA is minded to approve the application contrary to our recommendation we would ask NRW be notified and allowed sufficient time to provide any further representations required.

We reiterate our comments provided previously, that the development would require a flood risk activity permit under Environmental Permitting (Flood Risk) Regulations 2016 from Natural Resources Wales and from details provided, it is unlikely to be permitted.

Land Contamination

We have reviewed the risk assessment submitted in support of the proposal (Proposed Extension, Bangor On Dee Cemetery – Tier 1 Risk Assessment. Smith Grant LLP, October 2014). We note the overall risk scoring as low – due to the low burial rate of 2 burials per year. We therefore request that the following condition be imposed on any planning permission granted for the site.

Condition 1: All burials in the cemetery shall be:

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- ii. a minimum of 30 m from a water course or spring;
- iii. a minimum of 10 m distance from field drains;
- iv. no burial into standing water and the base of the grave must be above the local water table;

Reason: To protect the quality of controlled waters in the local area.

In relation to the water table, we do not have any groundwater level monitoring boreholes which are relevant to this proposal. However, the report submitted with the application '*proposed extension, Bangor – on-Dee Tier 1 Risk Assessment for Bangor on Dee Community Council*' reported that the shallowest groundwater on site was encountered at 2.9 meters below ground level, compared to a typical burial depth of 1.8 meters below ground level. In other areas of the site, no groundwater was encountered. The depth to groundwater may vary – however based on these numbers it would seem that the water table could reasonably be expected to be deeper than the graves. However, application of the condition would still seem appropriate to protect the quality of controlled waters in the local area.

Protected Species

The application is supported by an ecological submission (reference Roe, R (2017). Land at Friar's Court, Bangor on Dee: Ecological; Survey Report Kingdom Ecology. Unpublished. The proposal is:

- Not likely to be detrimental to the maintenance of the favourable conservation status of any local populations of European protected species; and
- Not likely to adversely affect any local populations of British 'fully' protected species.

Please do not hesitate to contact us if you require further information or clarification of any of the above.

Our comments above only relate specifically to matters that are listed in our 'Consultation Topics' document (September 2018) which is published on our website: (<https://cdn.naturalresources.wales/media/686847/dpas-consultation-topics-august-2018-eng.pdf?mode=pad&rnd=131819256840000000>). We have not considered potential effects on other matters and do not rule out the potential for the proposed development to affect other interests, including environmental interests of local importance.

Yn gywir / Yours sincerely,

Daniel Davies

Daniel Davies

Cynghorydd Cynllunio Datblygu / Development Planning Advisor

Cyfoeth Naturiol Cymru / Natural Resources Wales