

Wrexham County Borough Council
Planning Officer
16 Lord Street
Wrexham
LL11 1LG

Date: 30th June 2016

Dear Sir/Madam,

**OUTLINE APPLICATION FOR RESIDENTIAL DEVELOPMENT (17 DWELLINGS) AND NEW ACCESS
LAND WEST OF AND ADJOINING CRAIG COTATGE STATION ROAD BANGOR ON DEE
WREXHAM**

Thank you for referring the above planning application received at our office 13th June 2016.

Flood Risk

The site lies partially in Zone C1 as defined by Welsh Government's Development Advice Map (DAM) as referred to under TAN15: Development & Flood Risk. Our Flood Map information confirms that the site lies partially within the extreme flood risk outline.

In accordance with A3.10 of TAN15, we have significant concerns regarding this application as submitted for the following reasons.

We have considered the Flood Consequences Assessment (FCA) (Richard Broun Associates, 5065, April 2016) submitted in support of the application. As set out below the FCA has failed to demonstrate that the consequences of flooding can be acceptably managed in accordance with TAN15 over the lifetime of development.

Reasons:

- The FCA proposes to raise parts of the site, to provide a development plateau, in order to reduce flood risks to the proposed dwellings. It proposes to lower land levels in the rear gardens of the properties in order to provide compensatory flood storage. We have reservations on how the functionality of the proposed compensatory flood storage areas could be protected over the lifetime of the development when such compensatory measures are proposed to be located in the rear gardens of the dwellings. In addition, the FCA has also failed to consider the impact of the development in terms of flood risk on neighbouring properties and elsewhere on the flood plain during the of the 0.1% AEP event, where the proposed development plateau is shown to flood. In particular, the FCA has failed to consider the additional flood storage losses associated with additional engineering operations on the development plateau. For example, the proposed properties and ancillary works (including driveways and access roads are likely to be needed to be raised to facilitate the elevated finished floor levels of the properties) could result in further

displacement of flood waters, in addition to that already identified within the FCA. This requires further assessment within the FCA, and additional mitigation may be required to offset any adverse impact.

- The FCA appears to provide “volumetric” flood storage compensation as a method of minimising off site flood risk impacts. Such proposals simply involves lowering land within the application area. Natural Resources Wales typically requires compensatory flood storage to be provided on a “level for level” basis – i.e. any loss of flood storage must be compensated for by the reduction in level of nearby ground, such that the same volume is available at every flood level before and after the works and that it can freely fill and drain (CIRIA report C624, 2004). In order to mirror the existing situation for a particular flood, each stage or level (0.2 metre vertical intervals for example) is provided with the same storage volume, cut and fill must equate on a level for level basis. It is not adequate compensation to excavate holes in the floodplain and or provide low level volumes to replace high level flood plain. This issue requires further analysis and discussion in the FCA.
- It is necessary for the FCA to undertake a review of JBA’s hydrological data (JBA, River Dee at Bangor on Dee Flood Risk Mapping Study, May 2012) and the review should consider the use of the latest ReFH methodology. NRW’s Flood Risk Mapping Study has been used as the primary source of flood risk information within the FCA and the Applicant needs to demonstrate, in their FCA, that the data remains fit for purpose.
- We consider that section 5.2 of the FCA is potentially misleading as it states that the “development remains flood free during all scenarios”. Drawing 5065-09 “Typical Section (Existing and Proposed)” plan in the Appendices of the FCA shows that the development site and the proposed properties are shown to flood during the extreme 0.1 % annual exceedance probability flood event. External flood depths on the development plateau are shown to exceed 700mm during the extreme flood event.

Although the following does not form part of our objection, we consider it essential that your Authority take the following elements into account when determining whether the flood risk can be managed in accordance with TAN15.

- Natural Resources Wales has serious concerns about the depth of potential flooding within the rear gardens of the proposed dwellings. The FCA shows that the depths of flood water in some gardens could exceed 2 metres during the 1% Annual Exceedance Probability (AEP) climate change breach flood event. The FCA shows that flooding depths in the rear gardens during the extreme 0.1% AEP flood event could increase to approximately 2.8 metres. Such flooding depths would pose an **extreme flood hazard** (severe danger to all including the emergency services) to the future occupants / users of the development should they decide to venture into the rear gardens during flood conditions. The FCA fails to consider or discuss this issue in any detail. These depths, within the curtilage of a residential property, are clearly far in excess of the requirements of both A1.14 and A1.15 of TAN15, and would pose a risk to life (based on hazard mapping) to anyone entering the garden – **your authority may therefore consider this to be a reason for refusing the application.**
- The FCA has failed to consider all four tests set out in table A1.15 of TAN15 and has therefore failed to demonstrate that access and egress routes to and from the development site will remain operational under all flood conditions. In view of this we would strongly advise you to consult your Emergency Planning Team / Local Resilience Forum to discuss the acceptability of the developer’s proposals on matters such as emergency plans, procedures and measures to address structural damage. Please be advised that Natural

Resources Wales is not the appropriate body to advise on the appropriateness of flood evacuation measures or the safe access / egress aspects of a development proposal as our role is limited to the issuing of flood warnings.

If a revised FCA is not submitted, or if any subsequent revised FCA fails to demonstrate that the consequences of flooding can be acceptably managed over the lifetime of the development, then the application should be refused in accordance with the requirements of TAN15.

Management of surface water

We would recommend that your Authority consult your Drainage Department, who act as Lead Local Flood Authority (LLFA), on matters relating to this application. The Applicant has indicated their intention to dispose of surface water via infiltration techniques, although no information / evidence has been submitted to demonstrate that such options are feasible on the development site. The LLFA may require further information to demonstrate that ground conditions are conducive to soakaway / infiltration techniques.

Flood Risk Activity Permit

Please be advised that a Flood Risk Activity Permit may be required under the Environmental Permitting Regulations for any works or structures located in, under, over or within 8 metres of the bank top of Graig Lane Drain, designated "main river". We will utilise the Environmental Permitting Regulations to control development (including site layouts) to ensure that our access requirements to the watercourse are maintained. Further advice and information is available on our website at:

<http://naturalresources.wales/apply-for-a-permit/flood-risk-activities/?lang=en>

River Dee SAC

Given proximity to the River Dee SAC/SSSI, we recommend that the applicant submit an appraisal of potential impacts on the River Dee

Foul drainage

We see from your website that Dwr Cymru have submitted an objection to the above proposal. We would like to highlight that NRW would object if any non-mains drainage is recommended.

Contamination

A preliminary risk assessment has not been submitted and so we have no understanding as to whether land contamination exists at this site or not. In line with the advice given in Planning Policy Wales, we understand that the Authority must decide whether to obtain such information prior to determining the application or as a condition of the permission. We recommend the Authority refers to its own environmental advisors.

Water Framework Directive

The River Dee is an EU designated WFD waterbody ref: GB111067057080. This stretch of the Dee is referred to as 'Dee Chester Weir to Ceriog'. NRW would not want to see any deterioration in its current WFD status.

Similarly, Dungrey Brook (ref: GB111067052040) is WFD waterbody, approx. 300m to east. NRW would not want to see any deterioration in status. There is also a WFD biological monitoring point d/s at Dungrey Bridge - ref. RVBIPR144398.

Pollution Prevention Guidelines

We would refer the applicants to the following best practice 'pollution prevention guidelines' :

- [PPG 3: Use and design of oil separators in surface water drainage systems](#)
- [PPG 4: Treatment and disposal of sewage where no foul sewer is available](#)
- [PPG 6: Working at construction and demolition sites](#)
- [PPG 22: Incident response - dealing with spills](#)
- [PPG 26 Safe storage - drums and intermediate bulk containers](#)

During the development stage, should any environmental incident occur, report immediately to NRW incident hotline on 0800 80 70 60 (24hr).

Ecology

An initial ecological survey was carried out by Clwydian Ecology (Reference Bennett, D. (2015) Ecological Assessment for land at Statio Road, Bangor on Dee, Wrexham, North Wales. Clwydian Ecology . Unpublished.

It appears that a subsequent preliminary ecological appraisal was subsequently carried out

The results of the initial ecological survey indicate the proposal is not likely to be detrimental to any populations of protected species.

We note the report identifies one temporary pond. In addition, other ponds are located within 250m of the application site.

We note from distribution of records and from modelling that the great crested newt is absent from the Dee Flood plain. Consequently, we consider the species is not likely to be present in ponds identified above. As such, we do not consider the proposal is likely to impact on the great crested newt.

Yn gywir / Yours' faithfully,

Ruth Prichard

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cc: