

Cherwell District Council
Planning & Development Services
Bodicote House White Post Road
Bodicote
Banbury
OX15 4AA

Our ref: WA/2021/129106/03-L01
Your ref: 21/01630/OUT
Date: 24 January 2022

Dear Sir/Madam

Outline planning application for residential development (within use class C3), open space provision, access, drainage and all associated works and operations including but not limited to demolition, earthworks, and engineering operations, with the details of appearance, landscaping, layout and scale reserved for later determination

Land at North West Bicester, Home Farm, Lower Farm and SGR2, Caversfield

Further to our previous responses to the above application, we have reviewed the fluvial modelling which has been undertaken by the applicant in order to establish the extent of flood risk to this site.

We have considered the following in order to compile this response:

- Hydraulic modelling submitted to us on 11th November 2021.
- Flood Modelling Report, Firethorn Developments Limited, Land at North West Bicester, Vectos, October 2021
- Flood Risk Assessment and Surface Water Drainage Strategy, Firethorn Developments Limited, Land at North West Bicester, Vectos, Issue 3, April 2021 (Appendix 13.1 of the Environmental Statement)

The proposed residential development site lies on the edge of two ordinary watercourses, the Town Brook to the east of the site and an unnamed watercourse to the west of the site.

The Flood Risk Assessment (FRA) details the hydraulic modelling of the two local watercourses in order to better define the flood zones. Our review of the hydraulic model and associated hydrology has highlighted several issues that need addressing before the results can be accepted. These issues are set out in the attached Environment Agency model review response which has been copied to the applicant for their consideration and the required actions will be need to be undertaken.

The applicant will need to address and update the attached spreadsheets and re-submit these, alongside any additional evidence required to enable a second review to take place. As we are currently unable to agree the model results, we **maintain our objection** to the application.

Please note that the FRA will need to be updated and potentially revised once the model has been signed off as being a suitable evidence base, and our objection will remain until this has been done. This is necessary to ensure the correct extent of flooding affecting the site is established and the reserved matters application will ensure that no development is located within the accepted flood risk areas both now and in the future due to climate change, in line with the principals of the FRA.

In addition, the FRA advises that finished floor levels of all properties are set at least 150mm above existing ground level. While this should be sufficient if no development is proposed within areas of flood risk, we would advise as a precaution against any unpredicted flooding, finished floor levels of properties should be at least 300mm above the appropriate climate change flood level.

We also note that the hydraulic modelling undertaken employs flood flow estimates which equate to approximately 1.3l/s/ha during a 1% annual probability event and 0.4l/s/ha in a 50% annual probability event. This is what we would expect of such a permeable catchment. However, the allowable discharge from the proposed attenuation ponds is detailed to be significantly higher at 2l/s/ha for all events; including the 50% event. The implication being that post development flows will be greater than existing for all flood events up to and including the 1% event, including an appropriate allowance for climate change. There seems to be a disconnect between the methods used to determine appropriate site runoff and the flood flow estimates used in the hydraulic modelling. The FRA argues that detailed site investigations show that the site is more impermeable than implied by the data sets normally used to estimate runoff. However, this logic has not been carried through when the flood estimates for the hydraulic models have been derived. We are concerned that either the flood estimates used in the hydraulic model underestimate flood flows or that the allowable discharge from the proposed attenuation ponds is too high. We consider this should be brought to the attention of the Lead Local Flood Authority in their capacity of commenting on the surface water drainage proposals.

Overcoming our objection

To overcome our objection, the applicant should submit revised evidence which addresses the points highlighted above and within the attached Environment Agency model review response.

If this cannot be achieved, we are likely to maintain our objection. Please re-consult us on any revised details submitted and we'll respond within 21 days of receiving it.

Closing comments

If you are minded to approve the application contrary to this advice, we request that you contact us to allow further discussion and/or representations from us in line with the Town and Country Planning (Consultation) (England) Direction 2021.

Should you require any additional information, or wish to discuss these matters further, please do not hesitate to contact me on the number below.

Yours faithfully

Miss Sarah Green
Sustainable Places - Planning Advisor

Direct dial 0208 474 9253

Direct e-mail planning_THM@environment-agency.gov.uk

Enc. Environment Agency hydraulic model review response_1st review
Environment Agency hydrology review_1st review

End