

Application no: 19/02550/F

Location: Land to the east of M40 and south of A4095, Chesterton, Bicester

Lead Local Flood Authority

Recommendation:

Objection

Key issues:

Further information and clarification of points listed below required.

Detailed comments:

Discharge noted to be to Gagle Brook ordinary watercourse. Riparian ownership and consent to discharge to be justified. Ditch condition and capacity to take additional flows to be demonstrated.

Borehole/BRE to determine level of ground water to be provided.

Section 4.2.2. states that there will be an “increase in peak discharge from that of a greenfield site.” This should not occur and robust justification as to why this is deemed the case to be provided.

Section 5.2.2. identifies the use of Qbar methodology. For a site this size FEH should be used, (Qmed).

MicroDrainage calculations provided use default Cv values, these are not representative of the site. It is recommended values of 0.95 for roofs and 0.9 for paved areas are applied. The designer must justify where a Cv of less than 0.9 has been used.

Calculations should be undertaken for all relevant return periods and identify the critical duration used.

A sub-catchment approach should be applied to surface water management, with clearly defined flow controls, on site utilising a method of dispersed site storage.

Ground water depth to bottom of proposed tanking/attenuation requires justification as does the need for buried attenuation when it appears there is ample space to use on the surface SuDS and surface water management techniques.

Flow control from site should ensure greenfield discharge for relevant return periods, i.e. 1:10, 1:30, 1:100 and 1:100 + 40% climate change. It is doubtful the current proposed attenuation approach will maximise the attenuation and simply allow free discharge up to the 1:100 + 40%.

Section 5.1 notes proposal to divert two ditch lines. This should not be undertaken. It is also unclear what is meant by the two ditch lines being incorporated into the car park. It is noted that the proposed diversion had been previously agreed, evidence of this needs to be provided.

In conjunction the diversion of the two ditch lines is noted to have a potential impact on existing pond levels. Pond levels should remain unaffected to protect and promote bio-diversity.

With the amount of green space on site it is felt the use of on the surface SuDS features has not been maximised. Additional techniques should be explored, e.g. bio-retention, rain gardens etc.

Surface water storage locations, extents and critical levels including freeboard require further explanation.

Although we acknowledge it will be hard to determine all the detail of source control attenuation and conveyance features at concept stage, by Outline Design Stage we will expect the Surface Water Management Strategy to set parameters for each parcel/phase to ensure these are included when these parcels/phases come forward. Space must be made for shallow conveyance features throughout the site and by also retaining existing drainage features and flood flow routes, this will ensure that the existing drainage regime is maintained, and flood risk can be managed appropriately.

By the end of the Outline Design Stage evaluation and initial design/investigations Flows and Volumes should be known. Therefore, we ask that the following Pro-Forma is completed and returned as soon as possible:



OCC Pro-Forma.pdf

Officer's Name: Adam Littler
Officer's Title: Drainage Engineer
Date: 08 January 2020
