

**Application no: 20/03619/F**

**Location:** Heyford Park, Camp Road, Upper Heyford

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## **Drainage**

### **Recommendation:**

Objection

### **Detailed comments:**

The LLFA was under the impression that infiltration is no longer feasible due to contamination issues however, partial infiltration is being proposed throughout the system and for the new pond. There is also no detailed BRE 365 testing across the site to clarify more accurate infiltration rates if infiltration is feasible.

There also appears to be issues with the calculated discharge rates for this parcel. The PBA FRA (ref 33374/4000 Rev B, 05.12.16) calculated the following greenfield runoff rates based upon a 12.5ha (the site is noted as 12.04ha?) parcel area:

Q1 – 4.2 l/s

Qbar – 5 l/s

Q30 – 9.9 l/s

Q100 – 12.9 l/s

The PBA FRA produced in Dec 16, has used 30% climate change factor for peak rainfall.

The 40% climate change factor came into effect in Feb 16 so should have been used to calculate the required storage volumes.

The current Woods Hardwick designs have also only applied the 30%cc to the detailed design, when a 40% allowance needs to be considered in the attenuation calculations.

In addition, the peak discharge for the current Woods Hardwick designs have used the Q100 12.9 l/s rate as the limiting rate. Therefore, during all events up to the 100y (i.e. the 1y and 30y events), the discharge from the site will be greater than the current equivalent greenfield runoff rate, contrary to current guidance.

The attenuation basin TWL during the 100y+30% event is 122.377mAOD with the GL of 123.090, there is sufficient freeboard and is likely to be ok during the +40%cc event but needs checking.

**Officer's Name:** Richard Bennett

**Officer's Title:** Flood Risk Engineer

**Date:** 02 March 2021

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