Department of Environment & Transport
and Sustainable Growth

Hertfordshire

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Contact Katherine Ashworth
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Date 16 March 2023

Dear David

RE: 6/2022/1355/MAJ - Former Beales Hotel Comet Way Hatfield AL10 9NG

Thank you for your re-consultation on the above site, received on 17 January 2023 for the demolition of existing building and construction of 145 residential units (Use Class C3) with private and communal amenity space, landscaping, access, associated car and cycle parking, refuse and recycling storage and supporting infrastructure at the Former Beales Hotel Comet Way Hatfield AL10 9NG. We have reviewed the application as submitted and wish to make the following comments.

The applicant has submitted additional documents to clarify that green roofs and permeable paving are proposed within an updated drainage drawing of these features however, no detailed drainage design has been provided. This updates the previous proposal to discharge all surface water run-off from the roof, car park and access road areas to an underground tank beneath the under-croft car park which will then need to be pumped into a Thames Water sewer (permission received) at a discharge rate of 3.5l/s. However, the green roof and permeable paving clarifications have not been included in the Flood Risk Assessment (FRA) and Drainage Strategy.

We **maintain our objection** to this planning application in the absence of an acceptable Flood Risk Assessment (FRA) / Drainage Strategy / supporting information relating to:

- Flood risk to the development
- Impacts from the development adversely effects flood risk elsewhere
- Development not complying with NPPF, PPG or local policies

Reason
To prevent flooding in accordance with National Planning Policy Framework paragraph 167, 169 and 174 by ensuring the satisfactory management of local flood risk, surface water flow paths, storage and disposal of surface water from the site in a range of rainfall

events and ensuring the SuDS proposed operates as designed for the lifetime of the development.
Summary of reasons

1. Compliance with the SuDS hierarchy
2. Lack of appropriate surface water quality treatment
3. Lack of a surface water management train
4. Insufficient supporting surface water calculations

We will consider reviewing this objection if the following issues are adequately addressed.

1. We understand that the applicant is proposing to include a green/blue roof for the roof area, rain-gardens and permeable paving on the access road. The applicant has updated a drainage drawing with the additions however, the FRA/Drainage Strategy does not reflect these changes. As this is full application with the final layout being agreed, we require the detailed design of all features proposed. We require further commentary and a drawing of how the green roof, raingardens and permeable paving will connect into the wider drainage network. We would also expect that full above ground green SuDS be utilised as much as possible, e.g., water reuse, green roofs, bio-retention areas, attenuation basins or ponds etc. in accordance with the four pillars of SuDS.

2. Prior treatment stages such as permeable paving have briefly been included on a drawing however, the paving has not been sized. We note on the drawing that the use of smart sponges is still proposed however, we reiterate that this is not a sustainable way of treating diffuse pollution at source. We therefore, expect the applicant to incorporate other SuDS such as permeable paving or filter strips for the access road prior to discharge into the attenuation features. A proprietary product such as a ‘smart sponge’ would only be acceptable as an additional treatment stage for a sensitive discharge location.

   We note that the site lies in Source Protection Zone II. Therefore, the proposed strategy must provide a robust level of treatment in accordance with the Environment Agency’s guidance. Infiltration in Zone I is unacceptable however, possible in Zone II and III with appropriate additional step of treatment for a sensitive location. The applicant must demonstrate that they have complied with the CIRIA SuDS Manual in relation to water quality treatment and additional mitigation may be needed if the discharge location is deemed sensitive. Paragraph 174 of the NPPF and PPG specifically states that SuDS can improve water quality.

3. The applicant has now included the use of green roofs, permeable paving and raingardens in additional to a geocellular tank lengthening the surface water management train for the development. This allows the surface water to be managed in stages providing resilience to the system and reduces the risk of failure.

   However, no commitment to their use has been included in the FRA/Drainage Strategy and accompanying drawings. As the principals in the FRA/Drainage Strategy will be taken forward, we require all statements in the FRA to be reflective of the new proposed strategy which includes additional SuDS features. In response to EAS comments, as this is full planning stage, we require the detailed design of all the

proposed drainage features regardless that the additional features do not remove the need for a geo-cellular attenuation device. We acknowledge that the applicant has sized the proposed geo cellular attenuation device however, if infiltration proves viable, higher storage volumes will be required, much higher than at present. The features should be sized for the worst case scenario of infiltration drainage at 1 x 10^{-6} m/s, which will require a greater amount of storage on the site. This could be provided within permeable paving areas.

4. We acknowledge that the applicant reiterates that *'the agreed outfall to Thames Water is not an alternative discharge option, this outfall will be required even if there is small scale infiltration in the form of unlined permeable paving'.*

   However, in the absence of infiltration testing at the locations and depths of the permeable paving, this statement is not in accordance paragraph 167 of the NPPF and SuDS Non-Statutory Technical Standards (SNSTS) S7 and S8. Commentary has not been provided in accordance with the four pillars of SuDS and rainwater harvesting has not been evidenced or justified as to why is not viable. We require the applicant to include specific required investigations and assessments regarding the future provision of SuDS including how investigations will be undertaken to evidence that the SuDS disposal location hierarchy has been proven such as:

   a) Infiltration has been shown to be favourable (using BRE365 or equivalent testing) but further detailed information is required for shallow infiltration features, where they are located so the required space can be identified for infiltration features.
   b) Calculation of the brownfield site pre- and post- development runoff rates and volumes. As the site is brownfield, we require details if the site has been returned to greenfield runoff rates and volumes in the strategy. If this is not possible, we require at least 50% betterment to runoff rates and volumes and justification if it cannot go back to greenfield rates and volumes in accordance with SNSTS S3 (no pumping stations should be necessary without significant justification why drainage cannot be discharge via gravity).
   c) Areas that are deemed sensitive and require additional water quality treatment, such as groundwater source protection zones and groundwater / surface drinking water safeguarding zones.

5. Section 3.9 details the existing drainage through CCTV survey and does not detail the pre-development runoff rate. Section 5.1-5.4 of the FRA uses the Modified Rationale Method to calculate pre-development brownfield runoff rate however, we require pre-development greenfield runoff rates (using FEH to calculate) to also be supplied. The post development runoff rates for all rainfall return periods up to and including the 1 in 100 year plus climate change event should be modelled using the most up to date FEH rainfall model (see below), FSR is not accepted. We note that only the 1 in 100 year plus climate change surface water calculations have been provided. Surface water calculations should also be provided including half drain down times for the 1 in 1 year, 1 in 30 year, 1 in 30 year plus climate change and 1 in 100 year with an associated drainage layout plan drawing.

   We require a full detailed drainage plan including location of SuDS measures, pipe runs and discharge points, informal flooding (no flooding to occur below and including the 1 in 30 year rainfall return period). This drawing should correspond with any

modelling labels of drainage runs and SuDS features showing storage volumes. The drawings currently are not acceptable for full application as they do not include proposed pipe numbering, manhole cover levels, invert levels and finished floor levels necessary for review at detailed design. Drawing must include locations, depth and extent of any flooding at 1 in 100 plus 40% climate change.

6. The applicant shall confirm if urban creep is applicable or been included in the SuDS storage calculations. Any flatted development is not expected to include a 10% urban creep allowance on impermeable areas.

7. The applicant should note that for all infiltration SuDS features, the drainage calculations should show the volumetric runoff coefficient (Cv) =1. Volumetric runoff coefficient (Cv) values used for network analysis currently are 0.75 and 0.84 for summer and winter respectively. Given the drainage calculations only consider runoff generated by the positively drained area which comprises impermeable surfaces (i.e hardstanding and roofs), the selected Cv values are unlikely to be characteristic for infiltration SuDS, thus higher values (e.g Cv = 1.0) should be applied.

8. As the planning permission is for full application, detailed design should be provided at this stage. Therefore, all drawings should be marked as 'final drawings' not 'preliminary' or 'draft' unless further details are to be submitted via discharge of condition.

9. A Construction management plan for surface water runoff is required for the development including the temporary measures required to prevent the increase of flooding during demolition of the existing building in accordance with SuDS Non-Statutory Technical Standards S13 and S14. At this stage a high-level indication of how this would be approached should be provided.

Informative to the LPA

For further advice on what we expect to be contained within the FRA to support a planning application, please refer to our Developers Guide and Checklist on our surface water drainage webpage https://www.hertfordshire.gov.uk/services/recycling-waste-and-environment/water/surface-water-drainage/surface-water-drainage.aspx this link also includes HCC's policies on SuDS in Hertfordshire.

Erection of flow control structures or any culverting of an ordinary watercourse requires consent from the appropriate authority, which in this instance Hertfordshire Lead Local Flood Authority the Local Council (if they have specific land drainage bylaws). It is advised to discuss proposals for any works at an early stage of proposals.

In December 2022 it was announced FEH rainfall data has been updated to account for additional long term rainfall statistics and new data. As a consequence, the rainfall statistics used for surface water modelling and drainage design has changed. In some areas there is a reduction in comparison to FEH2013 and some places an increase (see FEH22 - User Guide (hydrosolutions.co.uk)). Any new planning applications that have not already commissioned an FRA or drainage strategy to be completed, should use the most up to date FEH22 data. Other planning applications using FEH2013 rainfall, will be accepted in the transition period up to 1 April 2023. This includes those applications that

are currently at and advanced stage or have already been submitted to the Local Planning Authority. For the avoidance of doubt the use of FSR and FEH1999 data has been superseded by FEH 2013 and 2022 and therefore, use in rainfall simulations are not accepted.

Please note if, you the Local Planning Authority review the application and decide to grant planning permission, you should notify the us, the Lead Local Flood Authority, by email at FRMConsultations@hertfordshire.gov.uk.

Yours sincerely

Katherine

Katherine Ashworth
SuDS and Watercourses Support Officer
Environment & Transport and Sustainable Growth

Annex

The following documents have been reviewed, which have been submitted to support the application;

- Flood Risk Assessment and SuDS Report prepared by EAS, ref 3657/2022 Rev Final B, dated 03 May 2022.
- EAS Response to LLFA Comments prepared by EAS, no ref, subject 6/2022/1355/MAJ – Former Beales Hotel Comet Way Hatfield AL10 9NG, dated 11 January 2023.
- Site Location Plan, prepared by Alan Camp Architects, drawing no. GA-SL-00 Rev PPL01, dated 27 May 2022.
- Proposed Site Plan, prepared by Alan Camp Architects, drawing no. GA-SP-L00 Rev PPL01, dated 27 May 2022.
- Landscape Masterplan, prepared by Guarda Landscape, drawing no. GUA-DR-L-015 Rev P02, dated April 2022.
- Phase I Geoenvironmental Assessment Report, ref 1444 R01: Issue 2.1, dated 28 April 2022.