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Lead Local Flood Authority
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Contact Katherine Ashworth
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Date 17 May 2023

Dear Louise

RE: 06/2023/0435/COND at Hertfordshire Constabulary, Stanborough Road, Welwyn Garden City, Hertfordshire, AL8 6XF

Thank you for your consultation on the above site, received on 3 March 2023 for the submission of details pursuant to condition 5 (surface water drainage scheme) on planning permission 6/2021/2125/MAJ. We have reviewed the application as submitted and wish to make the following comments.

Condition 5 states:

No development of any phase of the development hereby approved shall take place until a detailed surface water drainage scheme for that phase based upon the site-based principles set out in the approved Drainage Strategy produced by Aecom, Project No 60600329 Ref HCHQ-ACM-XX-XX-RP-CE-000002, dated 15 June 2021, has been submitted to and approved in writing by the Local Planning Authority. The scheme shall subsequently be implemented in accordance with the approved details.

The scheme shall include:

- 1. Final infiltration testing to be conducted to BRE Digest 365 Standards at the exact location and depth of the proposed infiltration features.*
- 2. A final detailed drainage plan including the location and provided volumes of all SuDS features, pipe runs, invert levels and discharge points. It should be highlighted where the restriction devices to limit the surface water discharge are to be located. If there are any areas to be designated for informal flooding these should be shown on a detailed site plan.*
- 3. Based on the obtained infiltration testing results, final, detailed post development calculations/modelling in relation to surface water for all rainfall events up to and including the 1 in 100-year return period including a + 40% allowance for climate change. Half drain*

down times of all SuDS structures have to be clarified and should be obtained at below 24 hours.

4. Full assessment of proposed SuDS treatment and management stages for all surface water runoff from the proposed development including the haul road.

5. Detailed engineered drawings of the proposed SuDS features including cross section drawings, their size, volume, depth and any inlet and outlet features including any connecting pipe runs.

6. Clarification around lifetime of the proposed construction haul road whether it is a temporary feature to be used during construction or a permanent feature. The road will need to be positively drained during its lifetime.

Reason

To prevent the increased risk of flooding, both on and off site in accordance with the National Planning Policy Framework and Policy R7 of the District Plan 2005.

Based on the information provided by the applicant we are not able to advise the local planning authority that condition 5 can be discharged as information is still required to address point 3.

1. The strategy now proposes that the areas previously proposed to drain via infiltration will now be designed to drain via gravity to an existing surface water drain within the Herts Police Headquarters site. These features will continue to offer treatment and attenuation to runoff. **No further information required.**
2. Point 2 requires a detailed drainage plan as seen in Appendix D drawings. It is noted as part of the works the attenuation pond will be enlarged to accommodate inflow from the HQ building with the existing inlet maintained as well as restricted inflow from the Dog Unit. **No further information required.**
3. Point 3 requires final detailed post development calculations/modelling for all rainfall events including half drain down times for the attenuation features. The attenuation pond will be enlarged to accommodate unrestricted discharge from the HQ building (which forms part of the Phase 2 works) and attenuated discharge from the Dog Units. No manhole schedule has been provided therefore; we cannot accurately assess the modelling calculations with the drainage plan in order to check pipe lengths etc. Additionally, we require the 1 in 1 year, 1 in 30 year with climate change and 1 in 100 year events.

The previously agreed discharge rate for the site was 3.41l/s for the HQ building. However, as infiltration is not viable, the rate has been reduced to 2.51 l/s to share the discharge rate among other areas of the site. We understand the Phase 2 Western Car Park discharge rate was 0.9l/s however, this has increased to 4.1l/s in order to achieve a half drain down time of less than 24 hours for the permeable paving. The Phase 3 Car Park permeable paving has been modelled using a discharge rate of 2.7l/s to achieve a sub-24 hr half drain time. We note the discharge rate for the Dog Unit is 1.2l/s. All discharge rates equal 10.51l/s for the discharge to Ex MH58 and 1.4l/s for the Decant Building, equating to a discharge rate of no more

than 12l/s. We acknowledge that the rates provide a betterment to existing brownfield discharge rates and understand that Thames Water have accepted the discharge rates. **No further information required.**

Flooding of 1.4m³ occurs in the Causeway modelling calculations in Appendix C for the 1 in 100 year plus 40% climate change for the Dog Unit. The applicant has demonstrated that the flooding could be fully contained to the south of the estate road in Ponding Area 1 and 2 which is acceptable. Flooded volumes are predicted in the MicroDrainage modelling calculations for the 1 in 30 year and 1 in 100 year plus climate change for the Attenuation pond and HQ building. Flooding of 4.7m³ occurs in the 1 in 30 year event. We require the applicant to justify why this volume cannot be stored on site or within the drainage system. **We await further information.**

4. We note that runoff will drain through rain gardens before entering the pipe network which discharges into the enlarged attenuation basin that includes sediment forebays. From the Simple Index Assessment sufficient treatment to mitigate the associated pollution hazards for all areas has been provided. **No further information is required.**
5. Detailed engineering drawings of the proposed SuDS features and other drainage elements for the Phase 2 and 3 drainage are presented in Appendix D. Detailed drawings of the enlargement of the attenuations tank have been provided in Appendix F. **No further information required.**
6. We acknowledge that a surface water drainage strategy has been prepared in relation to the Haul Road which is a temporary feature and will only be in operation during the construction of the new Police HQ and removed following completion of onsite works.

Due to the likely long duration build out time (including phased development proposals), a plan and supporting calculations and drawings have been provided. However, we require a timeline of how temporary measures will be put in place to protect the water environment and any newly built SuDS features. We acknowledge that filter drain will collect runoff from the carriageway and discharge to an open attenuation basin/swale which outfalls to the existing private surface water network at 3.0l/s. This will include any temporary water quality and flow control devices. **No further information required.**

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 is Hertfordshire Lead Local Flood Authority and 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 \(hydro-solutions.co.uk\)](https://www.hydro-solutions.co.uk/FEH22-User-Guide)). 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 an 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;

- HCHQ Resubmission to Discharge Outstanding Drainage Conditions, prepared by AECOM, ref HCHQ-ACM-00-XX-RP-00006, dated 22 February 2023.
- Site Location Plan, prepared by Vincent and Gorbing Limited, dwg no. HCHW-VGA-XX-XX-DR-AR-00100, Rev PL01, dated July 2021.
- Planning Condition Discharge Letter, prepared by Vincent and Gorbing Limited, ref 7645/SC/TM, dated 24 February 2023.