



B A Y N H A M M E I K L E
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Reference: JH / 12690 – 27.05.2021

LLFA Objection – Condition 2

Reference: RE: 6/2021/0505/COND – H R Owen. Mosquito Way, Hatfield, AL10 9WN

Date of Objection: 22.04.2021

Condition 2 States:

Development must not commence until a detailed surface water drainage scheme for the site based on the approved drainage strategy and sustainable drainage principles, has been submitted to and approved in writing by the local planning authority. The scheme must subsequently be implemented in accordance with the approved details before the development is completed.

The Scheme must include:

- a. Demonstrate an appropriate SuDS management and treatment train and inclusion of above ground features reducing the requirement for any underground storage. Blue roofs, permeable paving areas and above ground storage structures should be considered within the development;*
- b. Detailed modelling to demonstrate how the system operates during up to an including the 1 in 100-year critical duration storm event including an allowance for climate change. This should include half drain down times for all storage features;*
- c. Final drainage layout plan showing pipe networks. The plan should show any pipe 'node numbers' that have been referred to in network calculations and it should also show invert and cover levels of manholes. Total storage volume provided within each storage structure should be identified;*
- d. 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;*
- e. Final detailed management plan to include arrangements for adoption an any other arrangements to secure the operation of the scheme throughout its lifetime.*

Reason: To prevent the increased risk of flooding, both on and off site in accordance with the Nation Planning Policy Framework.

We advise the LPA that the information submitted in support of condition 2 in relation to surface water does not comply with the requirements set out in condition 2. Therefore, we recommend to the LPA not to discharge condition 2.



We acknowledge the applicant has provided a drainage strategy based on 122 l/s discharge, but with slightly updated network. Detailed modelling has been submitted to support the latest design.

However, no assessment of the provided treatment train has been provided. We would like to highlight that some drainage or road gullies are connected directly into the underground network.

The below sets out the treatment train which has been provided previously. The current proposals are in line with the treatment train in terms of source control, site control and regional control.

Source Control	Soft landscaping strategy
Site Control	Permeable paving Attenuation
Regional Control	Vortex controls Site wide attenuation pond Site wide interceptors

Source Control:

Green roofs: Space is limited due to the need to provide for plant and vehicle display areas on the roof. Also, cost to the structure roofs can be considerable. Therefore, green roofs have been disregarded.

Permeable surfaces: A soft landscaping strategy has been designed which contributes to limiting the developments impermeable areas. (soft landscaping strategy attached).

Rainwater harvesting: Rainwater harvesting will be disproportionate in terms of cost and function in regards to the proposed development features (Toilet, sinks etc.) Therefore, rainwater harvesting has been disregarded.

Site Control:

Ponds / Detentions basins: the site layout does not allow the space required for any type of open feature within the surface water drainage system.

Filtration: Permeable aisles are implemented into the design to filter any run off from external areas. Within the yard we are proposed a full retention petrol interceptor.

Attenuation: A large cellular tank is proposed as a way to store backed up water on site and ensure that any flooding within the 100 year event + CC is contained on site.

Regional Control:

Discharge Control: The drainage strategy includes a vortex control to limit the development discharge to the historically agreed 122 l/s.



Attenuation Pond: The overall Hatfield Business Park drainage strategy which our development will be discharging into has a large attenuation pond as shown on the attached plan (6763_102G_Schematic Storm Drainage).

Across the Hatfield Business Park there are a series of petrol interceptors, permeable paving and attenuation throughout the individual plots. The plots discharge into the infrastructure drainage which has an adequate volume of attention. Prior to surface water discharging offsite the overall Business Park flows are further attenuated within large ponds as shown on plan 6763_102G_Schematic Storm Drainage.

In terms of drainage or road gullies connecting directly into the underground network, at the front of the development this is limited to the 4 gullies at the main access which are not included within the permeable paving, this equates to a total area of 0.018 Ha. Within the back of the development where a service yard slab is proposed, run off passes through a full retention oil separator.

An updated drainage layout has been provided. It seems like the latest drainage strategy drawing does not fit with the submitted location and block plan drawing number S-001 Revision C, which in our understanding is the latest plan proposed. Therefore, the applicant should clarify that.

The layout of the development has been advanced through the detail design process and differs to that shown on drawing number S-001 Revision C. Please see attached plans 1226-001-CP2 Landscape GA 1 of 2 and 1226-002-CP2 Landscape GA 2 of 2 by Macgregor Smith which has recently been submitted for planning amendments.

The drainage layout indicates multiple connections from green spaces and tree pits. Based on the original design, those spaces were designed as permeable, therefore, the application should clarify if those areas have been included in the positively drained areas in the model. Moreover, overall, actively drained area within the entire development site should be identified.

Additional area from tree pits have been included within the drainage model. The below table gives a breakdown of impermeable and permeable areas, this should be read in conjunction within drawing 12690 / SK144 enclosed within the submission.

Permeable Area	0.155 Ha
Impermeable Area	2.075 Ha
Total Area	2.23 Ha

At SMH26 it seems to be an additional connection provided. It should be clarified what this is and the final connection into the existing Thames Water drainage network should be identified.

The spur shown out of SMH26 is an existing pipe and has been removed from the plan to remove any ambiguity or confusion. The developments final connection is into SMH26 which was constructed prior to works within Plot 5000A starting.



We would like to remind that no surface water drainage should be provided beneath a building. Connection between SMH15 and SMH17 should be clarified.

*Storm run between SMH15 and SMH17 is **not** beneath any building and is beneath an external slab.*

In addition, in the north western part of the site we have noticed that rainwater pipes are proposed to discharge at flood level. We would like to advise that appropriate connections into the wider network should be provided. No discharge to impermeable surface will be allowed.

Please see attached latest drainage plan which eliminates this.

At the front of the site, to the left from the access road, looks like an updated layout is being considered with multiple perforated land drainage pipes. It should be clarified what will be drained at this location as at this point it is very unclear.

This is a strip of landscaping which includes some tree pits. The associated areas have been included within drainage model.

The application has provided detailed engineered drawings some of the proposed SuDS features. However, we understand that geocellular storage has been removed and Tubosider has been proposed instead. Therefore, the provided drainage details should be updated and full design of the Tubosider should be provided.

Please see attached final design from Tubosider.

We would like to remind that all updates should be appropriately indicated in the drainage modelling and on the drainage layout.

Noted and updated information enclosed within this response.