

Director of Environment & Infrastructure:
Mark Kemp



Clare Howe
Welwyn Hatfield Borough Council
The Campus,
Welwyn Garden City
Herts
AL8 6AE

Post Point CHN 215
Hertfordshire County Council
County Hall, Pegs Lane
HERTFORD SG13 8DN

Contact Julia Puton
Email FRMConsultations@hertfordshire.gov.uk

Date 07 February 2020

RE: 6/2019/1788/COND – Former Shredded Wheat Site, Broadwater Road, Welwyn Garden City, AL8 6UN

Dear Clare,

Thank you for re-consulting us on the above application for the submission of details pursuant to condition 5 (Surface water Discharge) 6 (Drainage System) 52 (Provision of open space/play space) 35 (Delivery of accessible Housing) 13 (Highways) 37 (Vehicle access Point to Pall Mall Site) 50 (Refuse Storage Arrangements) on planning permission 6/2018/0171/MAJ, at Former Shredded Wheat Site, Broadwater Road, Welwyn Garden City, AL8 6UN.

In relation to conditions 52, 35, 13, 37 and 50, this is something we cannot advise on, as it does not relate to flood risk or surface water drainage.

Following our review of the updated plans submitted to the LPA, we understand that the applicant submitted updated sub-catchment plans for the original South Site of the entire Former Shredded Wheat Factory site. We note that 3 drainage sub-catchments have been identified. We note as well that major changes have been proposed to drainage sub-catchments.

Condition 5 states:

No development of any phase or block shall take place until confirmation of the final surface water discharge rates and connection points into the surface water sewer for that phase or block have been submitted to, and approved in writing by the Local Planning Authority. The scheme shall subsequently be implemented in accordance with the approved details before the development is completed.

This shall include the following:

- 1. Surface water discharge rates and connection points into the public surface water sewer for each future sub-catchment included within the entire development site.*

2. *Confirmation of the capacity study results and agreement for the proposed discharge rates and connection points from each future sub-catchment for surface water sewer network undertaken in line with Thames Water recommendations.*
3. *Limiting the surface water run-off generated by the critical storm events so that it will not exceed surface water Greenfield run-off rates (or as close as possible rates) for the relevant rainfall events for the 1 in 1 year event, the 1 in 30 year event and the 1 in 100 year event including plus 40% of climate change allowance. If Greenfield run-off rates cannot be achieved, strong technical justification should be provided. As a minimum 50% betterment in run-off rates for each sub-catchment should be provided following the relevant rainfall events including the 1 in 1 year event, the 1 in 30 year event and the 1 in 100 year event including plus 40% of climate change allowance. No increase of the risk of flooding off-site should be identified.*
4. *Confirmation of attenuation volumes required for each phase identified within the development proposal. Final results should be appropriately split between future sub-catchments identified within the drainage strategy.*

REASON:

1. *To ensure the facilitation of required attenuation volumes in line with the prior agreed discharge rates.*
2. *To prevent the increased risk of flooding, both on and off site.*

We advise the LPA that the information submitted in support of condition 5 in relation to surface water for phase 1 does not comply with the requirements set out in condition 5. Therefore, we recommend to the LPA not to discharge condition 5 for phase 1.

The applicant has submitted the Proposed Drainage Layout drawing, revision P06, dated 10.01.2020. We note that the final discharge rates have been updated and limited to Greenfield runoff rates for the relevant rainfall events. Therefore, a complex flow controls are being proposed for all three proposed outfalls. We are happy to see that the applicant was able to restrict the final discharge from the site to Greenfield runoff rates. From the general notes included on the drainage layout drawing we note that an updated modelling should be provided. However, no such modelling has been submitted to the LPA. Therefore, we would advise the LPA that the applicant should provide an updated modelling in accordance with the latest updates.

We note that an updated catchment layout drawing has been provided. However, as we have stated in our previous letter, having reviewed all details submitted in support of the new, proposed drainage sub-catchments, as the LLFA, we were only able to identify 2 different drainage sub-catchments (sub-catchment 1 and 2). Sub-catchment 2 and 3 are linked together via the proposed dry pond and therefore should be identified as one drainage sub-catchment. Therefore, this should be appropriately modelled as such.

We understand that permeable paving structures have been proposed for surfacing for private terraces, parking spaces and footpaths. Modelling should correspond with the updates. We have noticed that some of these areas have been connected into the wider drainage network on the development site. However, based on the documents provided in support of the 6/2019/1788/COND planning application, the applicant still has not provided any information on the identified contamination areas. Therefore, the proposed drainage strategy including infiltration into the ground from permeable paving areas should not be acceptable.

In relation to point 1, we can confirm that the applicant has submitted an updated drainage layout for the entire South Site (three sub-catchments in total). Drainage details of sub-catchment 1, sub-catchment 2 and sub-catchment 3 have been provided. However, as we have stated before, the submitted modelling and the drainage catchments plan should be updated and should only include two different drainage sub-catchments.

Moreover, as the updated network model has not been provided we are unable to assess the provided manhole network, the provided invert and cover levels in the model.

The submitted drainage layout identified three overflow features (dry pond). As we have stated in our previous letter, we would advise that this should be clarified and appropriately modelled. The applicant should clarify at which rainfall event the proposed overflow features will be used and what will be the maximum water level in each feature.

In relation to point 2 of condition 5, no confirmation that the capacity study is no longer required. Based on that, we would advise that clear confirmation that the capacity study is not required should be provided by the applicant.

In line with point 3 of the condition, the final discharge rates from the site have been limited to Greenfield runoff rates for the relevant rainfall events.

Point 4 of condition 5 requests confirmation of attenuation volumes required for each phase identified within the development proposal and its split between future sub-catchments identified within the drainage strategy. No updated modelling has been provided to support the latest scheme changes.

Condition 6 states:

No development of any phase or block shall take place until the design of the drainage scheme for that phase or block has been submitted to, and approved in writing by the Local Planning Authority. The drainage system for future sub-catchment shall include a restriction in run-off and surface water storage on site based on the sub-catchment approach of the strategic system. The scheme shall subsequently follow the agreements described in Condition 5 – Agreement for Discharge Rates and Connection Locations for Future Sub- Catchments and Phasing Arrangements, and shall be implemented in accordance with the approved details before the development is completed. Detailed drainage design for each sub-catchment shall include the following principles:

- 1. Providing storage to ensure no increase in surface water run-off volumes for all rainfall events up to and including the 1 in 100 year including plus 40% for climate change event and details as how this is to be achieved.*
- 2. Detailed calculations to demonstrate how the system operates during up to and including the 1 in 100 year critical duration storm event including drain down times for all storage features included within the drainage proposal.*
- 3. Demonstrate an appropriate SuDS management and treatment train and inclusion of above ground features reducing the requirement for any underground storage.*
- 4. Full detailed engineering drawings including cross and long sections, location, size, volume, depth and any inlet and outlet features. This should be supported by a clearly labelled 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 volumes provided within each future sub-catchment should be identified.

5. *Where an outfall discharge control device is to be used such as a hydrobrake or orifice, this should be shown on the plan with the rate of discharge stated.*
6. *Silt traps for protection for any residual tanked elements.*
7. *Details regarding any areas of informal flooding (events those exceeding 1 in 30 year rainfall event), this should be shown on a plan with estimated extents and depths.*
8. *Full details of any required mitigation/ management measures of any identified source of flooding.*
9. *Details of final exceedance routes, including those for an event which exceeds to 1:100 rainfall event including climate change event.*

REASON: To prevent the increased risk of flooding, both on and off site.

We advise the LPA that the information submitted in support of condition 6 in relation to surface water for phase 1 does not comply with the requirements set out in condition 6. Therefore, we recommend to the LPA not to discharge condition 6 for phase 1.

In relation to point 1 of condition 6, as we have stated above, the applicant should provide the latest modelling. As phase 1 drainage network includes drainage sub-catchment 1 and 2, all information should be updated and submitted in support of this phase.

Full details of the proposed overflow basins/ dry ponds should be provided, as they will provide significant storage volumes for the development site.

In relation to point 2 of condition 6, the latest drainage model should be submitted to the LPA.

Half drain down time should be established. If the appropriate half drain down times cannot be delivered, the applicant should design the network so that it will cope/ accommodate the 1 in 30 year rainfall event within 24 hours.

As included in point 3 of condition 6, no information on the provided SuDS management and treatment train and inclusion of above ground features reducing the requirement for any underground storage have been provided. As we have stated before, we would advise that bypass separators have high maintenance risk and we would advise the use of on surface treatment only. The proposed development is for residential use, therefore any risk of failure should be minimised. Based on the provided information we do not believe that the proposed road drainage provides an appropriate treatment train.

Moreover, as we have stated in our previous letter, it is unclear why underground storage features have been prioritised above on surface SuDS storage features. At this point major storage volumes have been provided in underground tanks and not in on surface storage features. No additional information has been provided to overcome this point.

In relation to point 4 of condition 6, detailed drainage layout has been submitted. However, a catchment map will need to be updated.

The applicant has submitted multiple drawings of proposed drainage network structures and the proposed SuDS ponds for phase 1. We acknowledge that cross sections have been provided. However, no information on planting and landscaping has been provided. As the proposed features will act as amenity features and should provide multiple biodiversity and sustainability benefits, we believe as this information is crucial on determination if the proposed features are fit for purpose.

In relation to points 5 and 6 of condition 6, as we have stated before, we are satisfied with the information provided. However, we would like to remind that the submitted drainage layout drawing should be updated in line with the above comments.

Based on point 7 of condition 6, details regarding any areas of informal flooding should be provided, where appropriate. These areas should be identified on a layout with its volume and depth. The submitted exceedance route drawing is not sufficient to overcome this point.

In relation to point 8 of condition 6, as informal flooding has been identified for sub-catchment 3 for the 1 in 100 year rainfall event including 40% for climate change, the applicant should clarify how this will be managed. We are concern, as it looks like the flooding will occur within a building. No information has been provided to overcome this point.

In relation to point 9 of condition 6, as we have stated before, we are satisfied with the submitted details of exceedance routes.

Informative to the LPA

Based on the assessment of the submitted information it looks like the applicant may have prepared additional modelling and updated report. However, no such documents have been submitted to the LPA and uploaded on the planning portal. Therefore, this should be clarified with the LPA.

We would like to remind that this is detailed stage and therefore full details of the proposed drainage strategy have to be provided. Having reviewed the submitted information, we would advise that the applicant needs to undertake changes to the proposed modelling of the proposed drainage network. Some layout changes may also be required.

We would advise the LPA that the applicant should discuss with the LLFA further updates of the proposed drainage scheme.

Should the LPA decide not to discharge condition 5 or 6 and require further information from the applicant, we would be happy to offer any further advice on any subsequent information received by the LPA.

Please note if the LPA decide to discharge condition 5 and 6 we wish to be notified for our records should there be any subsequent surface water flooding that we may be required to investigate as a result of the new development.

Yours sincerely,

Julia Puton
SuDS Officer
Hertfordshire County Council