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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.

As mentioned in our previous letter, we note that the proposed, updated drainage strategy does not comply with the originally approved plans for drainage sub-catchments and phasing arrangements. Therefore, the applicant should update phasing and drainage sub-catchments plans for the entire Former Shredded Wheat Site with precise, estimated maximum allowable discharge for each phase and sub-catchment. We have noticed that major changes relate to drainage sub-catchment 1 and 2.

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.

As we have highlighted in our previous letter, an updated, detailed drainage plan has been submitted. We understand that new phasing areas and new sub-catchment approach have been proposed. Therefore, the proposed drainage strategy will only be approved if the applicant update the phasing and drainage sub-catchments plans for the entire site with precise, estimated maximum allowable discharge for each phase and sub-catchment. This should include all proposed phases on the development site. No additional information has been submitted by the applicant to overcome this.

In the submitted response to point 1 the applicant has indicated that phase 1 of the proposed development is comprised of sub-catchment 1 and part of sub-catchment 2. Therefore, as both sub-catchments depend on each other, at this stage to approve discharge of condition for phase 1, we require full drainage details of sub-catchment 1 and sub-catchment 2. This should include full modelling, final detailed drainage layout and full details of the proposed SuDS features.

Moreover, in the same point the applicant has indicated that 3 surface water outfalls are being proposed with a total discharge rate of 12.91 l/s. However, based on the drainage drawing that the applicant referred to 066571-CUR-00-00-DR-C-90003 "PROPOSED DRAINAGE LAYOUT (PHASE 1)" we were only able to identify 2 outfalls from the site for phase 1. Therefore, this should be clarified by the applicant. In addition, based on the response to Thame Water dated 28/11/2019, the applicant has indicated that a maximum of 6.1 l/s of surface water discharge for phase 1 has been proposed. This is inconsistent with the information submitted to the LPA before and the additional information included

in the letter to the LLFA. This should be clarified. The final area and drainage sub-catchments included in phase 1 of the development have to be identified, clarified and full drainage details should be provided.

Point 2 of condition 5 requests confirmation of the capacity study results and agreement for the proposed discharge rates and connection points from each future sub-catchment. We note that in the latest response from December 2019, Thames Water have recommended discharge of condition. We understand that this relates to the proposed discharge rates and storage volumes for each phase of the development (which does not comply with the submitted drainage drawing). However, we have not found any capacity study result to be submitted and agreed. If Thames Water do not require this to be undertaken, we would advise that the applicant should provide evidence of this. We note that the applicant refers to Thames Water letter: Wastewater Pre-planning enquiry: Confirmation of sufficient capacity. Thames Water Ref: DS6045396. However, we believe that discharge rates and connection points have been changed since then.

In line with point 3 of the condition, we would advise that Greenfield runoff rates should be estimated for the development site. Based on the submitted information, we were unable to identify these estimates. The final discharge rate from the site should be 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. Based on the submitted information we understand that there are 3 different catchments proposed within phase 1 of the proposed development. It should be clarified which catchments do the applicant refers to. We note that attenuation volumes for storage tanks, ponds and permeable paving features have been estimated. Moreover, the proposed discharge rates and storage volumes are inconsistent with the information submitted to Thames Water. This should be clarified. Full details of each phase and sub-catchment have to be provided.

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.

As we have stated in our previous letter, based on the review of the submitted information, we have noticed multiple drainage network connections coming from outside of the development site or new connections coming towards the phase 1 development area drainage network. This means that the original sub-catchment approach has not been followed. We would advise that this should be clarified by the applicant. Full details of the updated drainage sub-catchment approach should be clarified and provided. Moreover, as we have stated above, the applicant should clarify the inconsistency between information submitted to the LLFA and Thames Water.

We would advise that full details of two overflow basins/ dry swales located to the south west from the development site should be provided, as they will provide significant storage volumes for the development site.

No drain down times or half drain down times for all storage features included within the drainage proposal have been provided.

As included in point 3 of condition 6, the applicant should demonstrate an appropriate SuDS management and treatment train and inclusion of above ground features reducing the requirement for any underground storage. The applicant has provided a brief description of the proposed SuDS management stages for the proposed car parking areas. However, no information has been provided on the proposed roads. This should be clarified. Moreover, it should be clarified and demonstrated why underground storage features have been included in the proposed strategy. At this point major storage volumes have been provided in underground tanks and not on surface storage features.

Based on the assessment of the submitted information, no detailed engineering drawings of the proposed tanks and dry swales have been provided.

We note that 2 hydrobrakes flow controls have been identified on a drainage layout drawing. We note as well that catchpit manholes have been proposed at each attenuation tank.

Based on point 7 of condition 6, details regarding any areas of informal flooding should be provided. In the latest calculation submitted to Thames Water, we note that some flooding areas have been identified for the 1 in 100 year including 40% for climate change. This should be identified on a layout with its volume and depth.

Based on the submitted documents, no details of exceedance routes have been provided as well.

Having reviewed all the information submitted to the LPA and available on the planning portal, we would advise the applicant to revise all documents available online. We believe there are some documents that are referenced in the latest response from the drainage consultant but are not available on the planning portal.

Informative to the LPA

As we have stated in our previous letter, in relation to condition 5 and 6, we note that the updated drainage strategy submitted by the applicant does not comply with the originally approved plans for drainage sub-catchments and phasing arrangements. Therefore, we would strongly advise the LPA that the applicant should update phasing and drainage sub-catchments plans for the entire Former Shredded Wheat Site with precise, estimated maximum allowable discharge for each phase and sub-base. Major changes relate to drainage for sub-catchment 1 and 2. Without this information it is impossible to estimate the impact of the proposed drainage strategy on the future phases and drainage sub-catchments approved at the original planning application stage.

Moreover, we note that the applicant referred to some documents that are not available online. We advise the LPA that this should be clarified by the applicant.

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

www.hertfordshire.gov.uk

