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

Dear Artemis,

Thank you for 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.

In relation to condition 5 and 6, 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-base. 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.

We note that the applicant has submitted an updated, detailed drainage plan. We have noticed that new discharge points are being proposed for sub-catchment 1.

However, no detailed information has been provided for the new discharge points. Invert levels of the connection points into the public sewer need to be confirmed at this stage.

We would advise that Greenfield run-off rates should be estimated for the development site. The final discharge rate from the site should be limited to Greenfield run-off rates.

No confirmation of the available sewer capacity study results has been provided. Moreover, based on the submitted letter from Thames Water dated 12th August, our understanding is that there is no agreement for the proposed discharge rates and volumes at the proposed locations.

Attenuation and storage volumes provided for the entire site need to be identified. Based on the submitted information, only storage volumes of the proposed four underground tanks have been provided as this stage.

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.

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 site drainage network. This means that the sub-catchment approach has not been met. We would advise that this should be clarified by the applicant.

Moreover, full modelling for this drainage sub-catchment should be provided with all additional connections included.

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.

Based on the provided information it looks like the proposed drainage strategy does not cope and manage the run-off from the development site for phase 1 for the 1 in 100 year rainfall event plus 40% for climate change within the development site (red line boundary).

Total storage volumes for this drainage sub-catchment should be provided. Moreover, drain down times for all storage features have not been provided.

We would advise that an appropriate SuDS management and treatment train has not been assessed.

It should be clarified and demonstrated why underground storage features have been included in the proposed strategy. At this point major storage volume has been provided in underground tanks.

No detailed engineering drawings of the proposed tanks and dry swales have been provided.

No details of exceedance routes have been provided as well.

Informative to the LPA

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.

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