

Director of Environment & Infrastructure:
Mark Kemp



Claire Westwood
Three Rivers District Council
Three Rivers House
Northway
Rickmansworth
Herts
WD3 1RL

Lead Local Flood Authority
Post Point CHN 215
Hertfordshire County Council
County Hall, Pegs Lane
HERTFORD, SG13 8DN

Contact Charlotte Kemp
Email FRMConsultations@hertfordshire.gov.uk

Date 21 April 2021

RE: 21/0573/FUL – Development Site, Maple Lodge, Maple Lodge Close

Dear Claire,

Thank you for consulting us on the above application for Comprehensive redevelopment to provide 2 no. warehouse Class E(giii)/B2/B8 units comprising a total of 16,115 sqm including 1,882 sqm ancillary E(gi) office space, access, landscaping and associated works at Development Site, Maple Lodge, Maple Lodge Close.

It is acknowledged that as LLFA we previously provided comments on application reference 19/1179/FUL and the associated appeal. It is acknowledged that the LLFA provided detailed responses to application reference 19/1179/FUL, on submission of additional information for the appeal the applicant subsequently overcame the LLFAs objections, and the LLFA recommended drainage conditions at the appeal, for the applicant to clarify any outstanding technical matters by way of condition.

The applicant has provided the following information in support of the application:

- A Flood Risk Assessment and Drainage Strategy for Maple Cross, Rickmansworth, Ref. T/17/1999/FRA, dated 25 February 2021, Issue 1.6, prepared by Tier Consult.
- MicroDrainage Calculations, dated 25/02/2021, prepared by Tier Consult.
- General Arrangement Drawing showing proposed foul and surface water drainage layout Sheet 1, Project No. T_17_1999, Drawing No. 55-01, Rev. P17, dated 25.02.2021, prepared by Tier Consult.

The drainage strategy is based on permeable paving, geocellular attenuation and restricted discharge to the QBAR greenfield runoff rate of 6.5l/s, with a pumped discharge into Maple Lodge Ditch, which is a Main River.

As this is a greenfield site, the new development should be minimising underground storage. The proposal for geocellular tanks on a greenfield site is justified by the evidence on the presence of groundwater on site and ensuring that sufficient storage is able to be provided to restrict to the QBAR rate. The applicant will need to fully line SuDS features

on site to mitigate against potential groundwater ingress and ensure engineering design against any possible lifting.

With regards to management and treatment of surface water, it is noted how petrol interceptors are proposed. Mechanical methods of treatment require rigorous maintenance regimes, and it is preferred that more on surface solutions are provided. We are pleased to see the use of permeable paving for the parking areas. It is acknowledged that due to the use of HGVs on site, mechanical methods of treatment are likely to be needed. It is recommended to be clarified by way of condition, that the applicant investigates additional provision of above ground management and treatment of surface water. Within the detailed design the applicant will need to explore more appropriate management and treatment of surface water such as the exploration of inclusion of above ground SuDS features such as filter strips e.g. in the north of the site for the linear drainage channel, as well as other locations including exploration of minimising the use of road gullies and if more appropriate on surface SuDS features could be provided.

With regards to the half drain down times of the drainage system, the applicant has detailed within the FRA itself how half drain down times during the 1 in 100 year + climate change event is 11 minutes. However, from a review of the MicroDrainage calculations, it is stated how Half Drain Time has not been calculated as the structure is too full. However, some specific half drain times are provided within the results for the nodes themselves. If half drain down times are unable to be achieved within 24 hours, the applicant will need to ensure that there is adequate storage on site to cater for a 1 in 30-year storm immediately following a 1 in 100 year + climate change event. We would recommend that this is clarified by way of condition.

As riparian owner, the applicant will need to ensure that the Maple Lodge Ditch is in a suitable condition and will need to undertake appropriate maintenance.

The applicant will need to liaise with the Environment Agency regarding any permits required for connection to the main river.

We have reviewed the information submitted in support of this application. In order to secure the final detail of the drainage scheme, and in light of the site-specific concerns previously highlighted on application reference 19/1179/FUL through our consultation responses, we would therefore recommend the following conditions should planning permission be granted:

Condition 1

The development permitted by this planning permission shall be carried out in accordance with the approved Flood Risk Assessment and Drainage Strategy for Maple Cross Rickmansworth, Issue 1.4, dated 22 August 2019, Ref: T/17/1999/FRA, prepared by Tier Consult Ltd and the General Arrangement Drawing showing proposed foul and surface water drainage layout Sheet 1, Project No. T_17_1999, Drawing No. 55-01, Rev. P17, dated 25.02.2021, prepared by Tier Consult. The scheme shall include the following mitigation measures:

1. Provide attenuation to ensure no increase in surface water run-off volumes for all rainfall events up to and including the 1 in 100 year + climate change event.

2. Restrict surface water discharge into Maplodge Ditch (via pump) to the QBAR Greenfield run-off rate (6.5l/s).
3. Implement drainage strategy based on lined permeable paving, lined cellular attenuation and discharge via surface water pump into the nearest watercourse, Maplodge Ditch, which is Main River.

Reason

To prevent flooding by ensuring the satisfactory storage of and disposal of surface water from the site.

Condition 2

No development shall take place until the final design of the drainage scheme is completed and sent to the LPA for approval. The surface water drainage system will be based on the Flood Risk Assessment and Drainage Strategy for Maple Cross Rickmansworth, Issue 1.4, dated 22 August 2019, Ref: T/17/1999/FRA, prepared by Tier Consult Ltd and the General Arrangement Drawing showing proposed foul and surface water drainage layout Sheet 1, Project No. T_17_1999, Drawing No. 55-01, Rev. P17, dated 25.02.2021, prepared by Tier Consult. The scheme shall also include:

1. Detailed engineered drawings of the proposed SuDS features including their location, size, volume, depth and any inlet and outlet features including any connecting pipe runs.
2. All corresponding detailed calculations/modelling to ensure the scheme caters for all rainfall events up to and including the 1 in 100 year + climate change event.
3. Details of half drain down times of the surface water attenuation.
4. Clarification on the volumes of water to be stored within each SuDS attenuation feature / permeable paving sub-base etc.
5. Detailed engineering drawings, calculations and evidence to secure and safeguard the SuDS features from groundwater.
6. Detailed engineering drawings and evidence of the proposed surface water pump including details of safeguarding and a management and maintenance plan.
7. Detailed management and maintenance plan for the Maplodge Ditch Main River and a timetable for implementing maintenance and the removal of any necessary blockages.
8. Exploration of above ground SuDS, to include the provision of filter strips / filter trenches to support effective and sustainable management and treatment of surface water.
9. Silt traps for the protection of any tanked elements.
10. Demonstrate appropriate SuDS management and treatment and inclusion of above ground features such as permeable paving etc. and reducing the requirement for any underground storage. To include details of products and maintenance.

Reason

To prevent flooding by ensuring the satisfactory storage of and disposal of surface water from the site.

Condition 3

Upon completion of the drainage works for the site and in accordance with the timing / phasing arrangement, a management and maintenance plan for the SuDS features and drainage network must be submitted to and approved in writing by the Local Planning Authority. The scheme shall include:

1. Provision of a complete set of as built drawings for site drainage.
2. Maintenance and operational activities.
3. Arrangements for adoption and any other measures to secure the operation of the scheme throughout its lifetime.

Reason

To prevent flooding by ensuring the satisfactory storage of/disposal of surface water from the site.

Informative to the LPA

We recommend the LPA obtains a maintenance plan that explains and follows the manufacturer's recommendations for maintenance or follows the guidelines explained in the SuDS Manual by Ciria. A maintenance plan should also include an inspection timetable with long term action plans to be carried out to ensure effective operation and to prevent failure. For further guidance on the maintenance of SuDS components, please refer to the SuDS Manual by Ciria.

Please note if the LPA decides to grant planning permission we wish to be notified for our records.

Yours sincerely,

Charlotte Kemp
SuDS and Watercourses Team Leader,
Environmental Resource Planning