



**Tier Consult Ltd**

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Our Ref : T1999/PJB/EJJ

24 February 2022

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

Dear Claire

**MAPLE CROSS  
TRDC APPLICATION REF : 21/0573/FUL  
APPEAL REF. APP/P1940/W/21/328935**

We write on behalf of the Appellant in response to the Environment Agency's letter dated 15 February 2022 to respond seriatim to the points raised.

Firstly, in regard to the condition being removed, that is not the intention; it is the wording regarding the monitoring at the nature reserve that should be removed. We consider that the existing monitoring boreholes on the south of the Appellant's site can be used as sentinel boreholes to give adequate protection to groundwater levels in the nature reserve.

It would appear that the Environment Agency has not reviewed the most recent submitted Hydrogeological Impact Assessment (December 2021) relating to the Maple Lodge nature reserve following 11 months monitoring of the groundwater incorporating the southern boundary of the site, where the nature reserve resides. This was submitted to the Council on 17<sup>th</sup> December 2021 copying the Environment Agency and Affinity Water. The conclusion of this report and summarised within our email to the Environment Agency, dated 17 December 2021, outlines why further monitoring of the nature reserve is not required. We reiterate the summary of the report below :-

- Calculations show that any impacts to groundwater levels due to piling will not be measurable beyond 10 m of the piled zone
- Groundwater in the River Terrace deposits, does not flow towards the Maple Lodge nature reserve in the summer months, when lake levels are lowest, so impacts would not be observed in the lakes during this most sensitive time
- The average flow through the volume of ground to be piled is less than 1% of the total inflow to the lake, indicating that risks are in any case negligible
- Natural lake levels vary by 7-8mm on a daily basis/ 200mm on a seasonal basis
- The maximum change in water level around the piling zone is within this range noted



- The natural variability of groundwater and lake levels is substantially higher than any change resulting from piling at the site, hence no impact is likely to be observed from the development activity

The Environment Agency's letter notes that the decision as to whether to keep or remove the condition should be made once the Council has received its independent hydrology report. However, the provision of this report should not preclude the Environment Agency from reviewing and providing a response to the submitted updated Hydrogeological Impact Assessment in its role as a Statutory Consultee in relation to the application/appeal.

On this basis, we seek the Environment Agency's response to the updated report and agreement of the following revised condition wording removing the necessity to monitor the groundwater levels to the nature reserve as set out below.

"No development should take place until a monitoring and maintenance plan in respect of groundwater levels across the site ~~and the Maple Lodge nature reserve~~ including a timetable of monitoring and submission of reports to the Local Planning Authority, has been submitted to and approved in writing by the Local Planning Authority.

Reports as specified in the approved plan, including details of any necessary contingency action arising from the monitoring, shall be submitted to and approved in writing by the Local Planning Authority. Any necessary contingency measures shall be carried out in accordance with the details in the approved reports.

Reasons: This condition will ensure that the development does not cause undue detriment to groundwater levels upon which the Maple Lodge nature reserve relies in line with paragraph 174 of the National Planning Policy Framework and to meet the requirements of Policy CP1 of the Core Strategy (adopted October 2011) and Policies DM8 and DM9 of the Development Management Policies LDD (adopted July 2013)."

### **Ground Water Monitoring**

The applicant has been monitoring groundwater levels since 03 December 2020, and monitoring is ongoing at 15 minute intervals in 9 boreholes. Monitoring has been carried out meticulously over the year across all four seasons, with a short break in monitoring from 1 February 2021 to 23 March 2021. The results up until November 2021 are contained within the report, which has enabled us to reach the conclusion in respect of groundwater levels. Please note that this data has been shared with Affinity Water who approved the well installation methodology and monitoring approach, in advance of the monitoring regime.

We accept the provision to monitor groundwater levels and water quality during and after the development works, as our Client has committed such with Affinity Water in relation to source protection.

Finally, we are satisfied that the groundwater sampling follows current guidelines as the methodology was approved by Affinity Water prior to implementation.



In light of the above, we kindly request the Environment Agency review the updated report issued to the Local Planning Authority on 17 December 2021 (copied to the Environment Agency) and consider the proposed revised condition wording and confirm that the monitoring undertaken to date is appropriate. For the avoidance of doubt, we attach said copy of the report.

Thank you for considering this additional information in support of the aforementioned application; however, should you have any queries or require further information, please do not hesitate to contact the undersigned.

Yours sincerely

A handwritten signature in black ink, appearing to read "P. Barlow". The signature is written in a cursive style with a large, sweeping initial "P".

**Philip J. Barlow**

Director  
BEng CEng MIStructE

(encs)