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Designer Response to LLFA comments

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RESPONSE TO COMMENTS FROM LLFA DATED 16.05.19

1.0 APPLICANT TO PROVIDE THE SUPPORTING CALCULATIONS FOR THE EXISTING RUNOFF RATES FOR 1 IN 1, 1 IN 30 AND 1 IN 100 YEAR EVENTS AND THE EXISTING PEAK FOUL FLOW.

- Please refer to Table 2 & 3, and Appendix E & F of the revised Drainage Strategy for the pre development runoff rate and the Greenfield runoff rates. Additional Microdrainage Calculation of the attenuation tank and permeable pavement for 1 in 1, 1 in 30 and 1 in 100 years have been included in Appendix I.

2.0 APPLICANT TO UPDATE THE MICRO DRAINAGE CALCULATION SHEET WITH DETAILS OF THE MODEL INPUTS USED FOR THE PERMEABLE PAVING IN LINE WITH THE VALUES INDICATED ON THE DRAINAGE LAYOUT.

- The 150mm membrane depth shown in the MicroDrainage calculation of permeable pavement represents the top of the structure, for instance, the thickness of the paving blocks and laying course above the subbase. By setting the membrane depth, the model ensures the storm water will only be stored in the 550mm subbase as the design intended. The total depth of the structure, which includes the paving blocks, laying course and the subbase, is modelled as 700mm between the cover level (129.33m AOD) and the invert level (128.630m AOD). Therefore, the modelling reflects the values indicated on the drainage layout.

3.0 APPLICANT TO CLEARLY DEMONSTRATE PROPOSED RUNOFF POST DEVELOPMENT AND PERCENTAGE REDUCTION FOR A RANGE OF RETURN PERIODS.

- Please refer to Table 4 of the revised Drainage Strategy report for the proposed runoff and the percentage reduction for 1 in 1, 1 in 30, 1 in 100 and 1 in 100 year plus climate change. Additional Microdrainage calculation

4.0 APPLICANT TO PROVIDE JUSTIFICATION THAT THE LOWEST PRACTICABLE DISCHARGE RATE IS BEING ACHIEVED IN THE DESIGN

- Please refer to section 4.2 of the revised drainage strategy for the justification of the proposed discharge rate. If the surface water runoff from the proposed development is to discharge at greenfield runoff rate, it will require an average attenuation volume of 34m³ (calculated using Microdrainage Quick Storage Estimate). The required tank size will take up a significant area of the garden footprint, and hence discharging at greenfield runoff rate is deemed to be impractical for this single dwelling development. For that reason, the proposed discharge rate is set as 5 l/s to provide a 50% reduction to the discharge rates in accordance with the London Plan. Since the pre-development site discharges freely in the Thames Water network, the proposal will provide betterment to the Thames Water network. In addition, flow controls with low flow rates would increase the risk of blockage and causes flooding to the property.

5.0 APPLICANT TO PROVIDE THE SUPPORTING CALCULATION FOR THE PEAK FOUL FLOW FOR THE PROPOSED DEVELOPMENT.

- Please refer to Appendix J of the revised Drainage Strategy for the peak foul flow rate calculation.