

Our Ref: 069468/LLFA/01

20th October 2020

Dear Matthew Burns

The Heights School, Reading – Drainage Strategy

Following comments received from the SuDS Officer at Reading Borough Council, Curtins have provided this response to enable formal sign off of the proposed Drainage Strategy report (THPS-CUR-00-XX-RP-C-0002) for the proposed Heights School, Reading.

SuDS Officer Comment:

I would only be able to sign off the drainage strategy once a detailed assessment has been provided to confirm that the proposed run off rate is better or at the very least no worse than existing. This must therefore be included within the SuDs Strategy

Curtins Response:

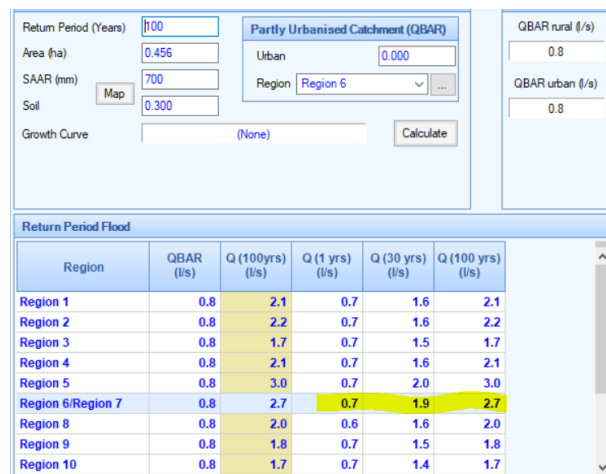
The total drained area for the site is 0.456ha, as included in the MicroDrainage model, the results of which are contained in the strategy report. From analysis of these results, the discharge rates from the site for varying return periods are;

Return Period	Discharge Rate (l/s)
1 year	0.5
30 years	0.6
100 years (+40% CC)	0.6

Table 1: Proposed Discharge Rate Summary

The above table is a summary of the combined discharge rates from three deep bore soakaways and a geo-cellular soakaway.

The existing site is a totally impermeable area and therefore the existing run-off is to be calculated from the greenfield run-off rate. An extract from MicroDrainage is given below showing this. As can be seen from the highlighted cells, the pre-development run-off rate is less than the post development.



The screenshot shows the MicroDrainage software interface. The top section contains input fields for Return Period (Years) set to 100, Area (ha) set to 0.456, SAAR (mm) set to 700, Soil set to 0.300, and Growth Curve set to (None). The Partly Urbanised Catchment (QBAR) section shows Urban set to 0.000 and Region set to Region 6. The bottom section displays a table titled 'Return Period Flood' with columns for Region, QBAR (l/s), Q (100yrs) (l/s), Q (1 yrs) (l/s), Q (30 yrs) (l/s), and Q (100 yrs) (l/s). The table lists data for 10 regions, with Region 6/Region 7 highlighted in yellow.

Region	QBAR (l/s)	Q (100yrs) (l/s)	Q (1 yrs) (l/s)	Q (30 yrs) (l/s)	Q (100 yrs) (l/s)
Region 1	0.8	2.1	0.7	1.6	2.1
Region 2	0.8	2.2	0.7	1.6	2.2
Region 3	0.8	1.7	0.7	1.5	1.7
Region 4	0.8	2.1	0.7	1.6	2.1
Region 5	0.8	3.0	0.7	2.0	3.0
Region 6/Region 7	0.8	2.7	0.7	1.9	2.7
Region 8	0.8	2.0	0.6	1.6	2.0
Region 9	0.8	1.8	0.7	1.5	1.8
Region 10	0.8	1.7	0.7	1.4	1.7



The strategy is therefore seen to be an improvement on the existing scenario

Yours faithfully

Michael Smith
Principal Civil Engineer
For and on behalf of
Curtins Consulting Ltd

