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Maria Boots <maria.boots@canterbury.gov.uk>

RE: Response To Application Number 17/01706/SOD at The Royal Oak Public House And Land, Sweechgate, Broad Oak, Sturry

Paul Lavender <paul@tridax.co.uk> 11 August 2017 at 08:54
To: SUDS@kent.gov.uk
Cc: Steve Carr <steve@tridax.co.uk>, Maria Boots <maria.boots@canterbury.gov.uk>

For the attention of Bronwyn Buntine

Dear Bronwyn

I have been forwarded your comments in relation to the discharge of conditions for the above and respond as follows;

a) The revised strategy is to install a surface water network for the development and discharge to an attenuation pond with 2No outfalls to conventional PCC ringed soakaways as shown on drawing EMC-2017-068-05 Rev01 attached.

b) We originally anticipated that the soakaways would be deep-bored considering the geological maps indicated the site to underlain by London Clay, and we instructed via the Client a bore-hole to be installed by Strata Investigations as per the attached bore-hole log. However, during installation the drillers discovered a seam of terrace gravels between 2.4m-4.3m that provided better soakage rates than the lower Oldhaven Sands at 27m deep. Attached is a copy of drillers constant head permeability test results that achieved a constant 20litres/minute for 1hr through the 3m of 200mmØ slotted liner. This equates to a permeability rate of 0.64m/hr ($1.2m^3/0.2\pi x3m$) used in the supporting MicroDrainage Calculations.

c) From the detail shown on drawing EMC-2017-068-10 Rev02 attached it can be seen that the soakaways are located within the terrace gravels and as modelled in the supporting MicroDrainage Simulation results attached. I am not sure how familiar you are with Windes but when a network discharges to a filtration solution you need to model a 'dummy' pipe run from the filtration structure/end of the network and 'block' the pipe with a pump control set at 0l/s and these need to be ignored as are purely for modelling purposes.

d) The attached calculations have been updated to use the MS5-60 rainfall rate of 26.25 and the climate change allowance reduced to 20% as per the revised KCC SUDS guidance. Attached is also the 40% sensitivity simulation results that indicate that the attenuation pond can adequately cope although you will note that there is just under $5m^3$ of flooding at the head of the network that would re-enter the system further down-stream without leaving the site.

We trust the above and attached address your comments and enable you to recommend discharge of the drainage condition.

Regards