



From: Sarah Burrow <Sarah.Burrow@arun.gov.uk>
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To: Raymond Cole <Raymond.Cole@arun.gov.uk>
Cc: Planning.Responses <Planning.Responses@arun.gov.uk>
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Engineers Comments Regarding Surface Water Drainage

The hierarchy for sustainable drainage must be followed with infiltration fully investigated. Winter infiltration testing and winter groundwater monitoring must be undertaken, it is advised that the applicant discusses the extent of this monitoring with us at the earliest opportunity. Infiltration tests must be carried out in accordance with BRE365, CIRIA R156 or a similar approved method and cater for the 1 in 10 year storm between the invert of the entry pipe to the soakaway, and the base of the structure. It must also have provision to ensure that there is capacity in the system to contain below ground level the 1 in 100 year event plus 40% on stored volumes, as an allowance for climate change. Adequate freeboard must be provided between the base of the soakaway structure and the highest recorded annual groundwater level identified in that location.

If on-site infiltration is not possible, drainage via a restricted discharge to a suitable local watercourse may be acceptable. Any discharge should be restricted to 1 year greenfield run-off rates, with a minimum rate of 2l/s.

We suggest that, at the earliest stage, the developer gives due consideration to the appropriate location and design of surface water drainage features to achieve necessary capacity, water quality (via the SuDS management/treatment train), as well as ease of on-going maintenance. Surface water drainage features should also be designed in a manner that positively affects the amenity of the site. We would like to remind the developer that, open features, such as swales, basins and ponds, when designed correctly, can satisfy all the above aspirations in addition to; being easier to maintain, having longer lifespans and offering ecological advantages over subterranean features such as "plastic crate systems".

It should also be noted that attenuation features should not be counted within useable public open space provision.

Adequate treatment of surface water must be ensured prior to discharge.

Supplementary guidance notes regarding surface water drainage are located here <https://www.arun.gov.uk/surfacewater> on Arun District Councils website. A surface water drainage checklist is available here <https://www.arun.gov.uk/drainagechecklist> on Arun District Councils website, this should be submitted with a Discharge of Conditions Application.

Kind Regards,

Sarah Burrow
Engineering Assistant