

31686 – SSL Hambledon Road, Waterloooville
Proposed Drainage Overview & Maintenance Schedule.

Design parameters:

The basis of the surface water drainage design follows the Flood Risk Assessment prepared by Mayer Brown in July 2009, with variances to allow for revised site plans and limitations on surface water connection invert levels.

The surface water for the store and car park will discharge into Hambledon Road into the same Southern Water manhole that it has historically used.

The main SSL site itself will drain partly via gravity and partly from a pumped discharge due to the invert level of the receiving manhole chamber; the flow will be controlled using hydrobrake chambers to the gravity flows and the pump rate itself from the pumping chamber.

The flows of the development are as follows, and have been forwarded to Southern Water for their approval, see PDF document ??????. The flow strategy has been amended to reduce the original allowance for the Sainsbury's store in order to mitigate the effect of the additional highway flows.

The flows from each entity are as follows:

Store & Car Park = 214l/s.

Additional highway = 40l/s

Petrol Filling Station = 35l/s.

Total = 289l/s – this is a betterment over the existing situation in which the total flow is 376l/s.

The surface water system on site is designed to offer capacity to all surface water resulting from a 1 in 100 year rainfall event, with an additional allowance made for a 30% increase in rainfall from Climate Change.

The flows are restricted by virtue of the pump rate being set at a specific level along with hydrobrakes for the gravity fed discharges. Any surface water volumes required to be attenuated are stored within underground geocellular attenuation tanks. Appropriate hydrocarbon interceptors are utilised along with deep sump gulley's and silt traps in the positive drainage system to prevent water quality being affected downstream of the site.

The system will be installed in the early stages of construction and will become active prior to the store opening to ensure that construction related waste does not find its way into the downstream system. The final discharge will be subject to the Section 106 approval from Southern Water.

Ownership:

All site drains will remain under the ownership of Sainsbury's Supermarkets Ltd, and as such will remain their responsibility.

Future Maintenance:

Oil separators/Interceptors are to be checked initially on a 6 month interval schedule and emptied as and when required. If, upon regular inspection it is deemed that inspections are not required to be undertaken as regularly then the schedule can be reasonably reviewed without exceeding manufacturer's recommendations.

Drainage channels, gulleys & inbuilt/separate silt traps to be regularly inspected, starting with 3 month intervals and emptied every 12 months.

Attenuation tanks are to be CCTV inspected, and jetted if required to keep them clear of silt/blockages, typically every 12-18 months, and maintained as per the manufacturer's specification.

Surface water control manholes to be have silt traps and mesh penstocks inspected on 3 month intervals extending as and when required but not to exceed 12 months.

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