

Residential Development, Swanbourne Park, Angmering

Proposed s.38 Highways Agreement

Soakaway Design Parameters

1. Soakaways to be designed in accordance with the following documents
 - 1.1. Arun District Council's Supplementary Requirements for Surface Water Drainage Proposals
 - 1.2. West Sussex County Council's Highway Drain Criteria
 - 1.3. West Sussex County Council set of S278/38 standard details.
 - 1.4. In accordance with Notes on West Sussex County Council Drawing S278/38/12 which states:
 - 1.4.1. Soakaways to be sited clear of the footways and service margins in order to avoid obstructing the route of public utilities.
 - 1.4.2. Locations within verges and other adoptable areas should be chosen, in preference to the carriageway.
 - 1.4.3. Groundwater monitoring may be necessary to establish highest seasonal variation. Where 1m of unsaturated ground below soakaway cannot be achieved, seek advice from WSCC.
2. Soakage Rate to be determined by site testing in the gravel layer, currently assumed to be 5×10^{-6} m/s but must be proven by a fully compliant BRE 365 test.
3. The strata that provides that rate of infiltration is gravel but underlies two layers of sandy clay and clayey sand that have poor infiltration rates. The depth of the upper layers is generalised around 2.5m deep. Because of that variation in depth of strata the design is based on a depth of 500mm depth of gravel layer being available between 2.5 and 3m below ground level that will form the base of the soakaway.
4. There are significant areas of landscaping throughout this development site in which swales can be located. As the depth of native gravel is in the region of 2.5m the swale will be designed as a conveyance channel with isolated areas of the base deepened to penetrate the underlying gravel by 0.5m.
5. The risk of the soakaway degenerating is low because the gravel layer is insoluble unlike other native strata in the area.
6. To meet Arun District Council's standard all soakaways must be 5m away from any habitable buildings. West Sussex County Council will not permit soakaways to be constructed in a footway beneath which utility services are located. Therefore around this proposed development if sufficient space can be identified soakaways can be located outside the normal highway limits where an easement will be required.

7. On this development in order that maintenance work can be carried out without the need to block accesses soakaways will generally need to be located in the verge but the location of proposed trees will need to be considered.
8. West Sussex County Council Design Criteria require soakaways to be less than 3m deep in order to meet the access requirements of Health and Safety Regulations. If this depth is exceeded then the construction design needs to be modified to include an access shaft as detailed in Sewers for Adoption 7th Edition Type1A that includes a length of shaft. The commuted sum is adjusted pro-rata to depth.
9. As the depth of the top of the gravel depends on individual site investigation the approach to be adopted is to excavate the soakaway in the location shown on the drawing locating the base 0.5m into the gravel where the soakaway will be founded. Should this require the construction to be greater than 3m then the upper levels of the soakaway construction will be varied.