

Site adjacent to No4 North Bersted Street. Bognor Regis.
Planning Consent No BE/87/15/DOC
Surface Water Calculations

Further to our previous discussions and Thomas Callaway's request for further information in connection with the surface water disposal from the site I can report as below.

We have carried out percolation tests on the oversized open void (crate) soakaway already installed at the rear of the property which is 1.05mx1mx2.55m with its top level at lowest invert of drains into the soakaway at c500mm below ground level. The average time taken for water to fall from 750mm depth in the soakaway (75%) to 250mm depth (25%) was 24 hours (1440 Minutes) This calculates as a Percolation Rate (f) of 2.54x10 to the -6 which is about as to be expected for the clay/ loam substrate on the site.

There is no evidence of a high water table on the site and water table was not experienced when excavating to the base of the soakaway or foundations for construction so far.

This project has a roof area drained to soakaways of 50.82M2 and paved areas of 51M2 giving a total of 101.82m2. The levels on site are designed with a highpoint at the site boundary so that rainwater is retained on site and directed to the soakaways and not allowed to discharge onto the highway.

From the rainfall intensity frequency graph (IDF) at
<https://thecriticalflow.wordpress.com/2010/09/06/intensity-duration-frequency-for-london/>

I note that the most intense storm predicted to occur once in 100 years has a peak rainfall intensity of 100mm per hour for 15 minutes. This extremely unlikely event would generate 2.5M3 of water which could be stored on site in the oversized soakaway (Volume 2.67M3) until it percolates away. In a more prolonged "100 year storm" the additional volume of the supply pipes would provide additional capacity and then overflow would allow the water to discharge into the soft areas remaining on the site, particular the soft landscaped back garden area of 90M2 where it will soak into the ground as it does in that garden area now.

I hope that you will agree that we have made all reasonable efforts possible on a single plot to deal with the extreme storm rainwater flow. The option of storage lagoons, as would be possible on a large housing site, are clearly not available to us.

MW
2015