

**Land off Stanthorne Grove
Site 6, Felpham
Bognor Regis
West Sussex**

**Development Foul & Surface Water
Statement**

SS/18:0439/5782/B
27th Sept 2018

This statement outlines the foul & surface water drainage design for the above development. Hampshire Homes is seeking outline planning permission for the construction of 18 No. residential dwellings with associated infrastructure on land off Stanthorne Grove, Site 6, Felpham in West Sussex.

Foul Water:

The foul water flows from the property will drain via gravity through the private house drainage before outfalling to the newly adoptable manholes and sewer located within the adjacent Site 6 development. The outfall point for the development with sufficient capacity is manhole (FWMH F5.14) directly opposite the development.

The foul drainage outfalls to the adjacent development via gravity with all flow discharging to a terminal pumping station which then pumps to Ford WWTW.

The capacity of the downstream foul network has been assessed and confirmed that no upgrading works are required. Therefore the proposed development has a 'no detriment' impact on the existing foul system within the existing Site 6 development or the sewers within Felpham and does not create an increase in foul flooding.

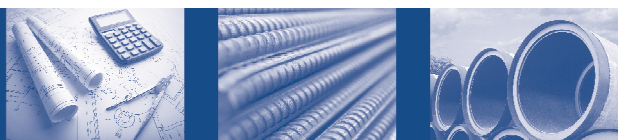
Surface Water:

The existing site has a limited fall/gradient across the site and has no positive drainage system; runoff from the site will initially drain through the surface, once waterlogged runoff will discharge to the adjacent watercourse.

Information published by the British Geological Society (BGS) indicates the underlying geology at the site as various chalk formations, with superficial river terrace deposits: sand, silt and clay.

Detailed site ground investigations found that the sub strata was unsuitable for infiltration techniques to drain the surface water therefore the site runoff will be dealt with via SUDs techniques with a restricted discharge to the adjacent watercourse.

An assessment of the Greenfield runoff based on the soil types found gives a QBar discharge rate of 2.8 l/sec. Based on this the outline drainage strategy provides one point of outfall with all flows being restricted to 2.8 l/s for all storm events up to and including the 1 in 100 year + 40% climate change as agreed with Arun District Council.



The surface water flows from each property will drain via gravity through the private house drainage before out-falling to a new storm drain located within the development road network. The storm water drains to a cellular attenuation tank along the north eastern boundary before outfalling at a controlled rate to the watercourse.

The following SUDs techniques are proposed for the development site and form part of the drainage treatment train.

- Sealed permeable paving / permeable sub base to drives and parking areas
- Piped storm drains
- Cellular attenuation

Roof Runoff:-

Roof runoff will be collected by a conventional system of guttering and downpipes where it will be discharged to a main storm sewer or to a permeable paving stone sub base within the drive or parking courts, which would then connect to the main storm drain.

Water Butts are to be provided per plot where feasible on a rainwater downpipe to collect roof runoff for re-use.

Private Drives & Parking Courts:-

All private drives and parking courts will either drain via a traditional gully & piped system or via a permeable block paving stone sub base prior to outfalling to the main storm drain.

Cellular attenuation crates:-

Runoff from the piped drainage will be attenuated within these tanks to prior to discharging to the adjacent ditch.

The final surface water runoff from the development area will be strictly controlled via Sustainable Drainage Systems (SuDS). The surface water will discharge at a maximum of 2.8 l/s for all storm events and be designed to manage the 1 in 100 year return storm plus an extra allowance of 40% for the potential predicted increase in peak rainfall up to 2115.

The designed foul and surface water drainage systems proposed for this site are the most suitable, sustainable and robust solutions for the lifetime of the development, while considering the engineering constraints of the site, Environment Agency guidance, and additional government legislation such as the Flood and Water Management Act 2010 (Defra) and The National Planning Policy Framework (NPPF & PPG).

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