

Mill Road Depot Surface Water Drainage

Site levels and topography:

The site generally falls towards Hooper Street with levels around 15.0m A.O.D. adjacent to Hooper Street and levels of around 16.4m A.O.D in the south east corner and 15.8m A.O.D. outside of the gatehouse.

Discharge locations:

The current surface water drainage discharge in two locations, in Hooper Street in Mill Road. The surface water sewer in Hooper Street is 1.3m deep and the surface water sewer in Mill Road is 1.1m deep. These are both very shallow and will mean that any drainage will have to be as high as possible to allow discharge under gavity.

Discharge rates:

The total allowable discharge rate for the site is 5 l/s. i.e. 2.5 l/s for both north and south discharge locations.

Storage requirements:

For a 1 in 100 year event plus 30% for climate change, an initial estimate suggests that approximately 1800 cubic metres of storage is required. Ideally this would be located as close to the discharge locations as is reasonably practicable and split into two, with 900 cubic meters in both the south and north. A plan area of 1000 square meters should be assumed in both locations for master planning purposes.

Storage features:

Above ground multi-functional storage would be the first choice, together with a combination of sustainable drainage source control features such as rain gardens, permeable paving, swales, rills, green/brown roofs etc. The more source control employed means less underground storage will be required. On plot storage could provide around 5-10 cubic meters of storage per property if a parking space is provided.

Infiltration:

Infiltration is the preferred method of surface water disposal and should be explored through detailed site investigations during the design development of the site; however soil types and the potential presence of contamination will possibly limit its use.

Mill Road Foul Drainage

Foul drainage has similar discharge locations, both at the south and north of the site.

The manhole to the south has a depth of 2.73m and 2.15m towards the north. A split between north and south would be appropriate and although it is likely that capacity would be available in both of these, a pre-development enquiry should be made to Anglian Water to determine capacities and allowable discharge rates.