

	Below Ground Drainage Design Criteria	
	Pringuer-James Consulting Engineers (Structural & Civil Engineers) Overseas House, Elm Grove, London SW19 4HE Tel: 020 8940 4159 Email: mail@PJCE.com	
Project: Bridge House, Uxbridge	Project No. L2466	
Date: 15 th February 2021		

L2466 Bridge House

BELOW GROUND DRAINAGE DESIGN CRITERIA

Foul water drainage

The system has been designed in accordance with Building Regulations and BSEN 752, to transfer effluent from the building by gravity to the sewer via a pumping station, which includes duplicate pumps to provide operational safety.

The pipework has been sized and laid at a gradient to convey the flow rates and achieve self-cleansing velocity.

Rodding points and inspection chambers have been incorporated to enable the system to be inspected and remove any blockages. The access to the inspection chambers is impeded by in the provision of restricted access reducer in each chamber.

Surface water

Rainwater from the roof and paved areas discharges to the River Colne via a network of pipework and inspection chambers and filters to the below ground attenuation crates, which have been sized to accommodate the rain fall based on a 1 in 100-year return period plus 40% for climate change. The calculations are appended.

The surface water enters the attenuation system via a filter and discharges into the river Colne via a flow control device at 2.0 l/s.

To comply with meet the London plan Suds hierarchy.

Within the crates we have incorporated several Biomat crates and a geotextile to intercept and disperse any emulsified oils.

Maintenance

The surface water system including the attenuation crates must be regularly inspected and cleaned, annually and after severe storms to ensure functional operation. At the frequencies noted and after a severe storm.

Inspection chambers should be inspected annually, remove debris if necessary.

Drainage channels should be inspected annually.

The filter at the inlet to the crates should be inspected annually and after a severe storm, sedimentation rates should be calculated with regular removal.

Maintenance	Inspection Period
The crates and membrane should be inspected for sediment build-up which should be removed if necessary	5 years
Inspection to check performance, condition of the system and to identify any faults.	6 months



