

Mono® NOV has helped United Utilities Operational Services solve the problem of unscreened storm discharge at its sewage treatment works at Little Mill, near Pontypool, which it runs on behalf of Dwr Cymru Welsh Water.

The installation of a Mono Stormscreen unit now allows the incoming raw sewage to be thoroughly screened at storm level, ensuring large solids are retained in the main flow to treatment and that the stormwater discharge from inlet meets consent requirements.

The Stormscreen is designed to provide a self-cleaning, self-powered alternative to existing mesh screens for handling storm overflows. Ideal for this type of variable flow application, the unit at Little Mill is mounted on a channel overflow weir and has a capacity up to 172 l/sec. Although the Stormscreen normally acts as a flow-powered unit, the Little Mill sewage treatment works experiences unusually variable flow rates and so requested that a drive motor be added to provide additional power during times of particularly low flow.

The Stormscreen features a 400mm diameter, 1-metre long stainless steel mesh drum that incorporates a brush wheel, fitted with adjustable brushes. As the water flows through the unit, the mesh removes any solids above 6mm in two dimensions, the brush wheel ejecting solids back into the main flow for further treatment or disposal. An integrated scumboard extends into the main flow and deflects large floating solids away from the screen, thus increasing its self-cleaning ability.

The standard Stormscreen mesh conforms to discharge consent and AMP 3 guidelines, in line with the Environment Agency's strict requirements, and provides a maximum flow capacity of 810 l/sec per 2m length, depending on solids content.

The Stormscreen typically requires only the power of the storm flow to operate, and this allows it to offer minimal maintenance requirements and zero power costs. A modular construction means that the Stormscreen is adaptable to existing civil works, with options on diameters and lengths to suit differing weir configurations. The Little Mill installation features an optional monitoring system that incorporates status reports and event logging capabilities. This can be telemetry linked so that instant status is sent if the machine starts, stops, or encounters blockages which may prevent efficient operation. There is also an option for either manual start up, or automatic start up via a remote level detection system.

All mechanical and electrical installation work including the testing and commissioning phases of the Little Mill project was handled by Mono.

Screen Type: 1 off SC1B10064

Product: Raw Sewage

Capacity: 172 litres/sec



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