

Drainage Strategy
for Retail Development
at Penydarren, Merthyr Tydfil

Surface Water Underground Drainage

The ground infiltration tests carried out as part of the geotechnical site investigation gave results of effectively zero in the ground underlying the site. This figure indicates that SUDS infiltration techniques (such as permeable paving and soakaways) for the disposal of surface water will not be feasible for the proposed development.

Therefore, it is proposed to provide attenuation storage (designed for the 1 in 100 year +30% climate change storm event) and discharge the surface run-off to the culverted watercourse that runs through the site, at the brownfield Qbar rate of run-off, with 30% betterment.

Attenuation storage will be provided by permeable paving construction and/or cellular storage.

The use of permeable paving also satisfies water quality requirements by the inherent treatment of hydrocarbons and the filtering of silt.

SAB approval will be obtained for the surface water system.

The on-site surface water system serving the single retail property is proposed to remain in the ownership of and be maintained by the developer/landowner.

Foul Water Underground Drainage

The Welsh Water sewer plan for the area shows that the surrounding area is served by a separate foul water sewer system connected to local combined sewers.

The foul sewers serving the new development will be taken off-site to the local foul/combined sewer system.

It is proposed that the off-site foul sewers will be adopted by Welsh Water under a Section 104 agreement and connected to the local foul sewer system following a Section 106 approval from Welsh Water.

The new on-site foul sewers will be designed to current regulations and standards. These foul sewers will remain in the ownership of and be maintained by the developer/landowner.

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