

Case study

Hoylake Park and Ride, Wirral



Key facts

Key vendors: Wirral Borough Council

Site: Wirral Borough Council

Sector:

Client: Wirral Borough Council

Contractor: Bethall Construction Ltd

Brief

As part of a package of measures to help capitalise on the influx of visitors expected during the Open Golf Championship, Wirral Borough Council has invested in a raft of transport improvements, including a new 137-space car park, on 6,000 m2 of land adjacent to Hoylake train station in Wirral.

In line with sustainable development principles, Wirral Borough Council specified a Sustainable Drainage (SUDS) System to minimise the impact of the 4,500 m2 site on the natural water environment.

Solution

Following the identification of potential flooding issues as a result of the development, the client's engineers took the decision to implement the innovative Sustainable Drainage System. Traditional drainage practice moves rainwater as rapidly as possible from the point at which it has fallen to a discharge point - the local drainage network. However, in this particular area, investigations showed that it could increase a risk of flooding in the local area after medium rainfall. Wirral Borough Council therefore enlisted specialist expertise to help design a system to minimise this risk.

Following detailed investigations, Charcon designed a solution specific to the requirements of the site.

Due to the relatively good permeability of the soil and restrictions on discharging water into the existing drainage system, Charcon developed a system which would replicate the natural infiltration of surface water into the water course.

This required the level of the car park to be elevated to increase the capacity for controlled drainage, using Aggregate Industries' open granular subbase to delay the speed with which rainwater enters the watercourse. Charcon Infilta block paving was selected to surface the parking areas, specially designed to combine the aesthetic appearance, strength and performance of Charcon's established block paving ranges with the added environmental benefits of sustainable drainage.

In addition to reducing flooding risk, Charcon's solution has delivered additional benefits including minimal visual impact, reduced pollution and waste water, improved biological diversity and consistent soil moisture levels.

- Infilta block paving is highly durable and is permeable when combined with gravel for jointing. It can easily be lifted for access to services and reinstated without leaving the usual repair scars. The colour mix options make subtle shade differences between each block possible.
- Infilta is suitable for all pedestrian areas, and areas with vehicular overrun, subject to the correct design procedures being followed*.
- The SUDS system with open granular sub-base is the traditional method used as a water storage solution and can be adopted for both attenuation and infiltration systems.

***For further design, installation, and maintenance information, refer to Charcon**



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- Charcon



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