ACO Water Management



Dons drainage is pitch-perfect

stadiummk benefits from versatility of ACO channel drainage.



Developers of *stadium***mk**, home to Milton Keynes Dons FC, have been able to take advantage of ACO Water Management's versatile range of channel drainage systems to create a fully integrated, high performance drainage network covering a host of diverse applications across the complex. Managing run-off from the pitch, the hotel entrance and the stadium car park – together with its fitness centre and fast-food outlets – different products have been selected to suit the specific environments encountered in each location.

The challenge facing the main contractor, specialist stadium developers Buckingham Group Contracting Ltd, in realising the design for the drainage infrastructure was achieving consistency in both performance and finish. "As the project was completed in stages, we needed to be absolutely sure that as each phase was brought on line it could be done so seamlessly without any apparent difference in appearance or any reduction in overall performance," says Neal Garside, Head Buyer at Buckingham Group Contracting Ltd.

Project:

MK Dons, Stadiummk, Milton Keynes.

Objective:

Selection of a range of high performance surface water management products to ensure consistent quality and appearance across a complex, multi stage stadium development.

Brief:

- 1. Source all drainage products for each construction phase from a single supplier.
- 2. Ensure optimum removal of run-off from each surface water environment.
- Installed appearance must be consistent and reflect the high quality finished appearance of the stadium and its satellite buildings.

Solution:

The established, long-term relationship between ACO Water Management and the main contractor gave the assurance that all products specified would deliver the best value-engineered solution for each application and would be manufactured to the high consistent level demanded by the stadium owners. "Sourcing the varied products needed from a single supplier was the key. By ensuring consistent high quality across every component, and with the reassurance of the detailed hydraulic calculations presented by ACO's Design Services team, we were confident that the system would meet the demanding specification."

Around the pitch perimeter 450 metres of ACO MultiDrain[™] M100D fitted with a heelguard composite grating have been installed. "The drainage environment around a football pitch is particularly demanding: not only does the system have to efficiently manage the run-off from a large catchment, but it also has to blend in with its surroundings and, critically, avoid any possible impact on the players, staff and supporters who move around the touchline," says Neal Garside.

The innovative design of ACO's MultiDrain[™] MD channels gives them the highest strength to weight ratio of any product in its class. Capable of withstanding loads from Class A through to Load Class D, the lightweight MultiDrain[™] MD not only increases the number of applications that can be covered by a single system, but it is also the first in this category to be available with a sloping invert.

A further 600 metres of ACO MultiDrain ™ M100D have been installed across the stadium carpark –an area that includes the visually sensitive and busy entrance to the stadium's hotel. To ensure the rapid removal of all surface water from the hotel's vehicle set-down the channel runs are linked to an additional 50 metre run of ACO's award winning combined kerb/ drainage system, ACO KerbDrain[®].

Adjacent to the main stadium, the complex's fitness centre is served by a separate car park where 200 metres of ACO ParkDrain® have been installed. Open to the public seven days a week, the centre attracts consistently high levels of vehicle and pedestrian traffic, a loading profile that is suited to ParkDrain® which has a high strength mono-cast design that prevents any covers being lifted or damaged by vehicle or foot traffic.

A combination of ACO ParkDrain® and ACO KerbDrain® has been used to create the drainage system around the complex's two drive-through fast food outlets. Although designed primarily for high volumes of vehicle traffic, the system has had to accommodate pedestrians as each outlet is linked to the stadium via a series of paths and walkways. Level crossings have been incorporated within the KerbDrain runs with the installation of special drop assemblies and perforated flush centre stones. These allow unbroken channel runs to be created with no loss of inlets and no loss of hydraulic capacity.



All surface water is removed from the pitch perimeter – a vital area to keep free of standing water – by a continuous run of ACO MultiDrain M100D.



Runs of ACO ParkDrain have been installed across the busy customer car park at the fitness centre adjacent to the stadium.



The visually sensitive main entrance to the stadium and its hospitality areas is complimented by ACO MultiDrain M100D.

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