

WEDNESBURY DISTRIBUTION CENTRE

Water Management



Project:
Wednesbury Distribution Centre

Contractors:
TSL (Main Contractor) Advance
Construction Scotland (sub-contractor)

Engineer:
MJMC (Client Engineer), PEP
(Contractors Engineer)

Marshalls Products used:
Mini Beany, Drexus XL

Background

As part of continuing infrastructure improvements in the UK, a new 450,000sq ft distribution centre has been developed in Wednesbury in the West Midlands.

The building measures the equivalent of six professional football pitches and was designed and constructed to meet the BREEAM benchmark of 'excellent' due to high energy and water efficiency, low impact on the environment, and its comfort and accessibility for the building's occupants.

Approach

The engineer, MJMC had a requirement to design and specify a robust, high capacity and high loading drainage system which could withstand a high volume of water; therefore, mitigating any flood risk. Due to the nature of the site, heavy

vehicle overrun would also be commonplace, so it was essential that a strong and robust product was specified.

The client asked MJMC to duplicate the spec of the Northfleet Distribution Centre where Marshalls products were installed. Once TSL & Advance Construction were awarded the contract, the intention was to value engineer the scheme to ultimately drive out cost. The client would only agree to this if the contractors completed the value engineered redesign themselves, and got technical approval of the design from MJMC on behalf of the client.

The Decathlon system used in the Northfleet project was value engineered to Drexus XL which was approved by the client as it more than met the maintenance performance required and enabled a more cost effective install in terms of speed. As PEP and the contractors were tight on time to get

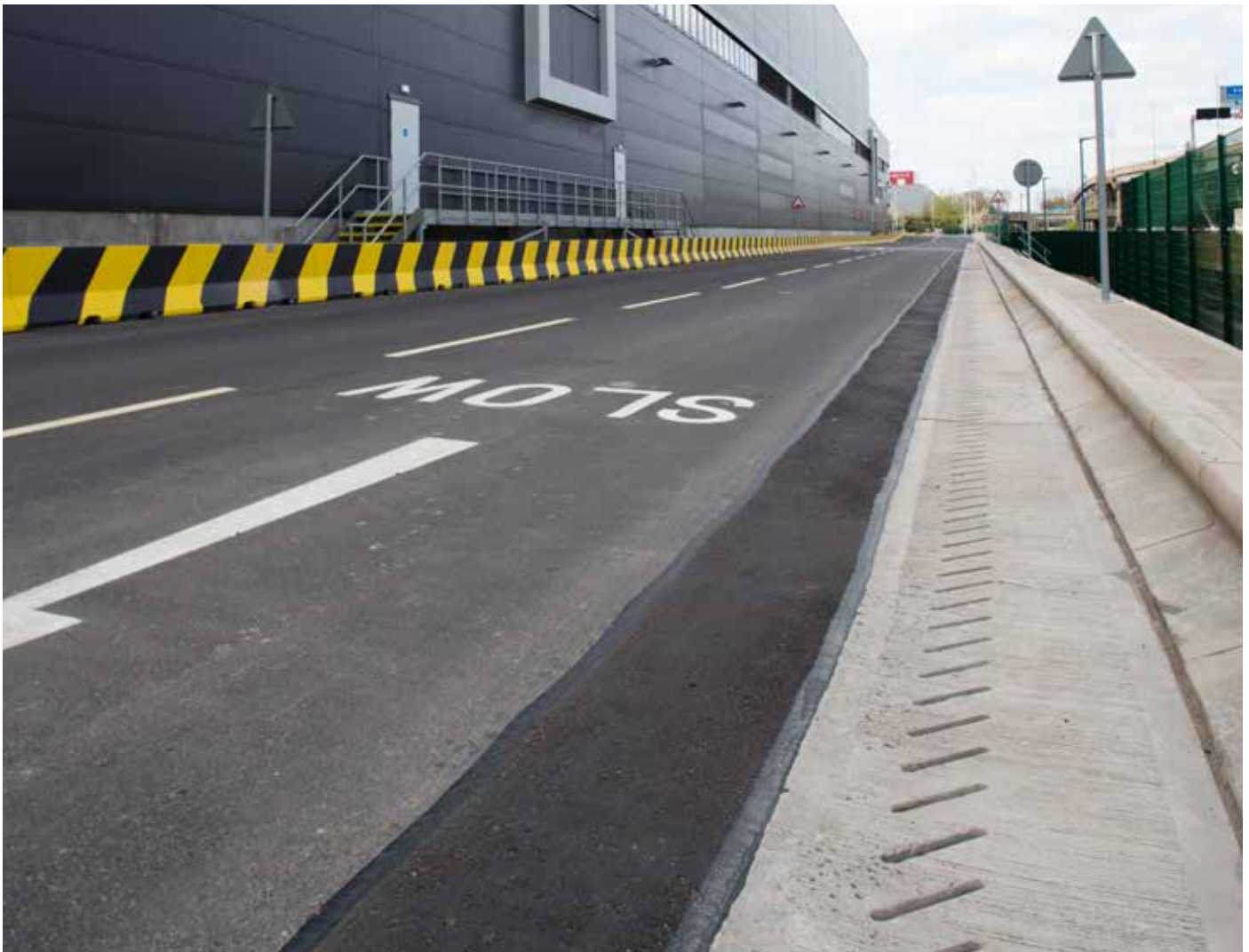
the specification value engineered and approved so site construction could commence, they utilised Marshalls' free design service to help get the design completed quickly.

Drexus XL has many benefits, such as a unique slot orientation which increases its interception of runoff when compared with traditional longitudinal slots. In installations such as a large distribution centres, this high capacity system is designed to drain significant catchment areas during extreme rainfall events.

Drexus XL also provides 38% more slot inlet area than an equivalent straight slot assuming the same width of slot. On the 440m of Drexus XL used on this project, this would equate to 615m of inlet slot; this extra 175m of slot provides both interception and ongoing maintenance benefits for the client.

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Outcome

Part way through the construction phases a grated system was installed, but was instructed to be uplifted and replaced with Marshalls Drexus XL as the client wanted to use the same system throughout the scheme due to its ease of maintenance and high performance.

As this rectification meant a delay on the job, it was important that the contractor received the extra Drexus XL units ASAP so they could commence with works. Marshalls was able to provide a next day delivery service of the required product, but the contractor insisted on collection from our manufacturing facility which we were able to coordinate and accommodate.

Throughout the contract Marshalls had one representative that dealt with all departments across Advance Construction making communication quicker and more effective to assist and help with the scheme. On completion, Marshalls products have helped to create a highly efficient and robust water management system which is not only capable of withstanding the high volume of surface water, but also the heavy vehicle overrun on site for many years to come.