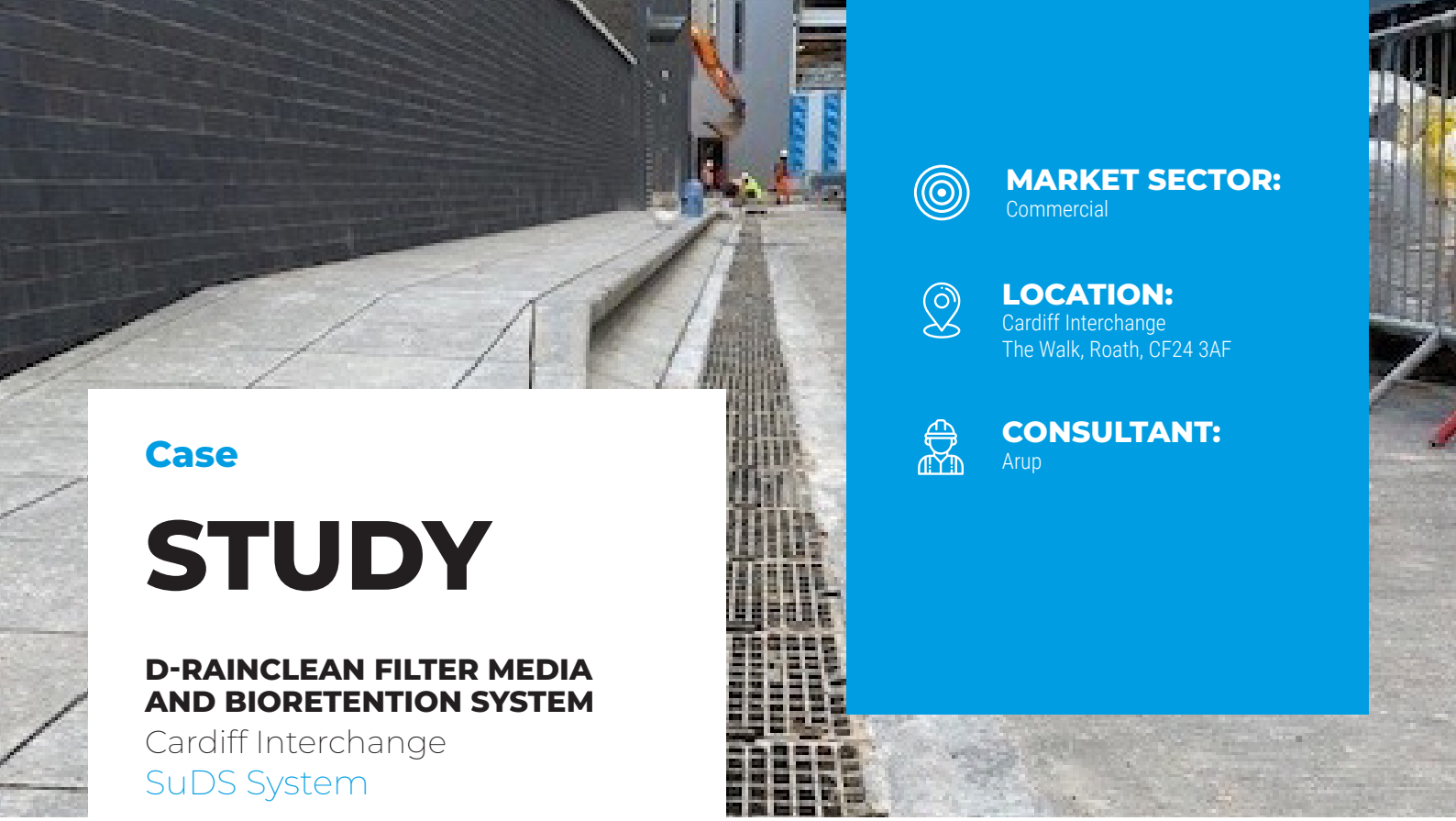

MARKET SECTOR:
Commercial

LOCATION:
Cardiff Interchange
The Walk, Roath, CF24 3AF

CONSULTANT:
Arup

Case

STUDY

D-RAINCLEAN FILTER MEDIA AND BIORETENTION SYSTEM
Cardiff Interchange
SuDS System

The

BACKGROUND

The site comprised of a new bus transport interchange and associated building in the centre of Cardiff. Cardiff's Interchange will be the main bus station for the city with direct links to the adjacent railway station.

Along with much of the surrounding area under development, the surface water catchment has been re-directed from the combined sewer and to the River Taff.

Part of the Cardiff Interchange scheme was subject to Schedule 3 of the Flood and Water Management Act 2010 which requires Sustainable Drainage Approving Body (SABs) to confirm that the proposed surface water drainage proposals is in accordance to the Welsh Governments standards for Sustainable urban Drainage Systems (SuDS).

Our Clients

REQUIREMENTS

A suitable proprietary treatment device to provide resiliency and enhanced water quality benefit to the site.

The site required a robust product that would offer treatment at source, resiliency to the already installed petrol interceptor, to remove pollutants from the surface water run-off in a busy bus terminus area, maintenance was also a contributing factor when deciding on the appropriate design. The solution also needed to have the strength and durability to cope with heavy vehicle usage.

Whilst a nature based solution was not viable due to its location and spatial constraints the SAB requested for added water quality benefits and resiliency on top of the SuDS solutions introduced into the scheme elsewhere. Therefore D-Rainclean was specified as the appropriate solution.

Our
SOLUTION

A full bioretention system incorporating filter media for treatment of highway pollutants in surface water run-off from a busy transport interchange.

This system was submitted as part of a wider SuDS solution for SABs approval to Cardiff Council and was approved based on the added benefit it brought into the scheme.

"In Wales, developments are subject to Schedule 3 of the Flood and Water Management Act 2010 which evokes SuDS Approving Bodies (SABs) to approve surface water drainage strategies on schemes of a certain size.

This legislation pushes developments to comply with WG Statutory Standards for SuDS which defines how surface water runoff needs to be managed, treated and enhance the scheme biodiversity and amenity values.

This legislation was introduced midway through the construction of the Interchange and the SAB seeked for opportunities to improve the drainage strategy beyond what was subject to SAB agreement.

To provide added water quality benefits to the scheme, D-Rainclean bioretention system was opted for to treat surface water runoff generated by the bus apron."

SIÔN SIMPSON-WILLIAMS
Associate
Arup

"I like the fact that the product can be tested for its treatment efficiency over time. The product specification also indicates that maintenance will be infrequent, but easy to access if required. This is essential with such a critical transport hub."

IAN TITHERINGTON
Former Lead Officer (Drainage)
Cardiff Council