



Dura-Coat cold applied liquid waterproofing system supports the sustainability aspirations for a new-build innovation hub at Manchester Science Park

Base is a £21m, 850m² new build office building located in the heart of Manchester Science Park. Designed as a tech hub for Industry 4.0, computer engineering and light manufacturing businesses, Base includes several sustainability measures, including A-rated EPC, operating at Net Zero carbon across communal areas and generating its energy with PV solar power.

For the new-build project, Garland UK Technical Manager, Dan Crowley, was instructed by Colm Donaghy, Project Manager at Bruntwood SciTech, as the designated roofing specialist to specify a waterproofing system that would protect the innovation hub for the future.

From the early concept design stages, Dan Crowley worked in close collaboration with Bridge Architects to develop the roof design to ensure it was clear from the outset how the building would perform when fully operational and meet the high sustainability aspirations for the project.

Quick Facts

Project Base SciTech

Location Manchester

Garland System Dura-Coat / Dura-Walk

Sector

Commercial

Garland Technical Manager Daniel Crowley

Approved Contractor Caddick Construction



Challenge

The Base project sought to achieve an EPC A rating and include 704m² of PV solar power to enable a hybrid heating and cooling system.

The ideal roofing system chosen for the project had to be compatible with a solar PV installation. In addition, the roof system would need to meet the waterproofing demands of the building, including the complex plant equipment that was stationed across the roof areas.

The design would also need to incorporate high-traffic areas and walkways across the roof to ensure efficient maintenance access was available once the building was operational.

During Dan's weekly site inspections to monitor the project progress, a deflection was observed within the pre-cast concrete deck. Although structurally sound, the specification was developed to ensure that no flat spots or back falls were created in the finished waterproofing system due to deflection within the deck.

Solution

A warm roof build-up with a tapered insulation design was specified not only to meet but to exceed the thermal performance requirements of a new build office. The tapered insulation design also negated any risk of any flat spots or back falls.

Working with Approved Contractor, Caddick Construction, the roof build-up started with a vapour control layer fully bonded to the concrete deck before laying PIR insulation and applying a fully bonded carrier layer using Torch Flex Evolution





carrier. For the finishing layer, Dura-Coat, a cold-applied liquid waterproofing system, was installed to provide a smooth and modern aesthetic. Colm Donaghy adds, "It was important for us to reduce the need for hot works during the project, and the cold-applied liquid waterproofing Dura-Coat system was the ideal solution to achieve that".

A ballasted frame was installed on top of the Dura-Coat system to support the solar PV panels. This mitigated the need for any additional penetrations to the roof system to be made and did not compromise the overall waterproofing integrity of the building.

The rooftop walkways, particularly around the serviceable areas of the rooftop plant, were created using Dura-Walk. Designed for high-traffic areas, Dura-Walk's innovative PUMA technology includes excellent crack-bridging properties to create a highly versatile and hard-wearing finish for use during future building maintenance works.



Outcome

Daniel Crowley visited the project weekly to assess the installation quality and provide visual progress reports to the client. Using Garland's RAMP (Roof Asset Management programme), Bruntwood SciTech, Bridge Architects, Caddick Construction, and other relevant parties could review the documented progress of works and ensure the project was on schedule and budget at every stage.

Colm Donaghy was delighted with the technical support provided throughout the project, "right from the concept stage, we were assisted with costs during the design and had support in getting the structure right. Dan was involved from the beginning to provide his roofing expertise, helping our Quantity Surveyors achieve cost certainty on the project."

On project completion, Dan Crowley rigorously assessed the Base building roof project before supplying Bruntwood SciTech with Garland's market-leading 20 year Single-Point Guarantee. Donaghy adds, "It's a security blanket, knowing that if there is ever an issue, we only have one person to go to get it sorted."

The Base building project successfully achieved an EPC A rating and provides flexible office space and meeting rooms for fast growth science and tech businesses within Manchester Science Park; one of the UK's most established specialist innovation clusters.



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