

Your Complete Roofing Solution

Environmentally Focussed | Responsibly Sourced | Ethically Driven



Macmillan Academy, Middlesbrough

Macmillan Academy Adds Another Green Initiative.

Set up as a City Technology College in 1989, Macmillan Academy strive to improve the economic prospects and social opportunities for the 1600 pupils who attend. Registered as an Eco-school over 15 years ago, Macmillan Academy are committed to reducing carbon emissions and waste. Their aim to develop an awareness of the issues around sustainability is a key value at the very heart of the academy's mission statement.

Located in inner city Middlesbrough, the Academy is one of two sites monitoring air quality across the area. Working in conjunction with Middlesbrough council, automatic monitors measure pollutants associated with road traffic activities and the site was selected due to its proximity to the intersection of the A66 and A19.

As the government looks to tighten its commitment to reaching net zero carbon by 2050 – and local authorities declare climate emergencies, Macmillan Academy approached Faithful & Gould consultants to help secure funding via the CIF on behalf of Endeavour Academies Trust. The brief included procurement and project management of the build to help deliver a sustainable solution to future proof Macmillan Academy's buildings and support their green initiatives.

Client Brief

As part of the application for funding, Faithful & Gould needed to evidence the condition need for the roofs' replacement and demonstrate value for money, in line with The Department of Education's minimum standard of quality and warranty requirements.

The Alumasc technical team conducted several site visits to assess the full extent of the project. A full survey was carried out and core samples were presented to the client. The investigation resulted in a comprehensive report that recommended a full refurbishment using Alumasc's Derbigum Olivine roofing system. The report concluded using this system would meet and exceed the requirements of the clients brief.

A Sustainable Solution

Sustainability and value were at the heart of this project. By recommending the Derbigum Olivine system, first and foremost CO₂ emissions associated with the academy's location would be dramatically reduced. Secondly due to its underlays and insulation, energy efficiency would be increased reducing energy costs, and finally Derbigum Olivine would exceed The Department of Education's minimum quality and warranty standards. The proposal would provide maximum long term performance and a low maintenance solution going forward.

Alumasc's innovative roofing system comprises of a CO₂ neutralising APP/TPO plastomer modified, composite reinforced bituminous waterproofing membrane, underlays, insulation boards, with air and vapour control layers.

The system is surfaced with a naturally occurring mineral upper layer that initiates a chemical reaction with CO₂ from rainwater, irreversibly neutralising the pollutant on contact.

This chemical reaction converts to silicon dioxide (sand) and magnesium carbonate, two elements harmless to the environment. When rainwater rolls off the roof and reaches the drains, it's totally carbon free. The system demonstrates innovation in construction industry science at its finest!

Its proven performance means that 1m² of olivine has the capacity to capture approximately 1.75kg of CO₂. In addition to Derbigum Olivine's CO₂ neutralising capabilities the Alumasc underlays and insulation boards deliver impressive energy savings. It was estimated that the new Alumasc roofing system would deliver a 26% reduction of annual gas consumption for the Academy.

Derbigum Olivine complete with its BBA certification, is a fully warranted system that requires minimal routine maintenance with a life expectancy of up to 50 years. The olivine grains decrease in size with each reaction, however the grains are large enough to last 30 years before having completely reacted. In addition, membranes on this innovative roofing system are 100% recyclable.

Challenges

Matty Hyson Alumasc Regional Manager North and Midlands commented "Updating this huge 3,500m² site without disruption was a challenge. Mid programme the scope of works were altered to mitigate time and costs. Our team supported the changes, attending the site at short notice. By conducting a significant amount of core analysis, we were able to confirm the changes were appropriate and ensure they were delivered on time."

Collaboration for a Green Future

As part of the Alumasc Roofing service we offer transparent quality checking and timely site reporting. We are always on-site to assist clients before, during and after the installation. All projects come with their challenges but a roofing supplier's ability and willingness to tackle them in collaboration with the client and contractor is of key importance to Alumasc Roofing.

Sarah Foster Faithful & Gould Senior Surveyor – "Alumasc's service is exemplary. They support at all stages of the project from survey/conception through to post completion/warranty works. They are always looking to improve their service and never try 'the hard sell' – their service and product speaks for itself, no need to convince. Their team is always available to assist no matter how short the notice, with some clearly highly experienced team members in the industry."

Chris Boff Everlast Director "This is another key education project completed with Alumasc. Again Alumasc and our delivery team have worked together to ensure the client has received a quality installation to maintain their building assets for long term sustainable future."

Manufactured in accordance with ISO 9001:2015 and ISO 14001:2015, Alumasc offers a comprehensive range of options. Installed exclusively by Registered Contractors and underpinned by Alumasc's extensive project support service and warranties.

