

Specialists in the cultivation,
supply, installation and
maintenance of green roofs



Blackdown Green Roofs Case Studies

*For a sustainable and
ever growing future...*

- Extensive Systems
- Biodiverse Systems
- Intensive Systems
- Pre-cultivated Carpet
- Plug-Plant Suppliers

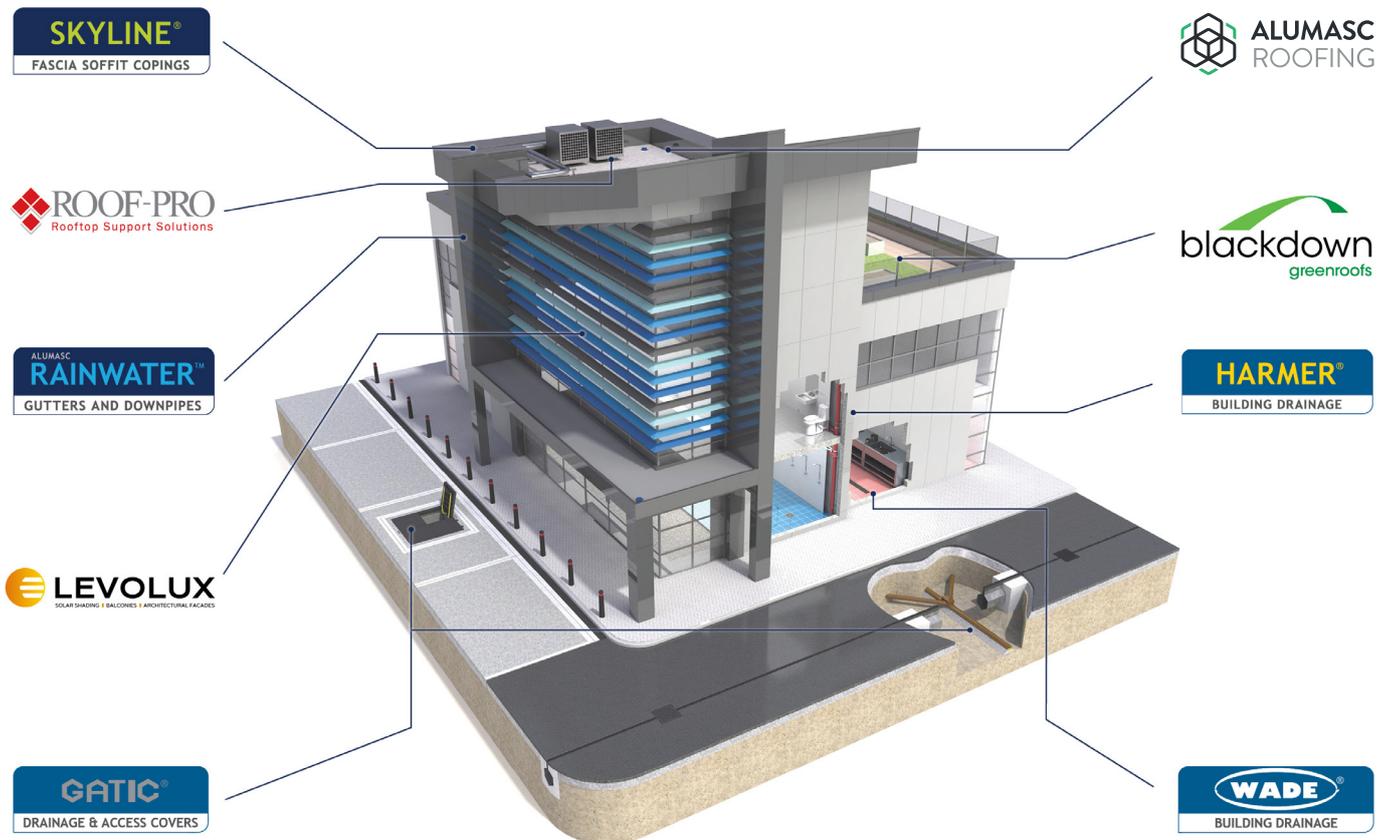
INTRODUCTION



Alumasc Group Turnover for the year ended 30 June 2018 was £98m

The majority of the group's business is in the area of sustainable building products, which enable customers to manage energy and water use in the built environment. We believe that growth rates in these sectors, through the construction cycle, will exceed UK industry averages.

All Alumasc Group businesses have strong UK market positions within their individual market niches and several are market leaders. Alumasc Group sustains this strong strategic positioning by offering customers quality products, service and trust. For certain brands, Alumasc Group is seeking to leverage UK successes into international markets, with particular focus in North America and parts of the Middle East and Far East.



Alumasc Group fosters an entrepreneurial, achievement orientated culture whereby businesses are encouraged to innovate and respond quickly to local market needs within a cohesive and strategic management framework. Businesses also benefit from the group's financial strength and access to capital.

Case Studies of Blackdown Green Roof Projects from all over the United Kingdom

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Chester Bus Station

Blackdown are proud to have completed the green roof at the Chester Bus Interchange site which is a £10 million 'key enabling' project and part of the wider £300m Chester Northgate Redevelopment.

The bus interchange is capable of handling 156 bus movements per hour and opened in 2017. Blackdown worked alongside Lakesmere, who installed the Kalzip roof and Graham Construction the main contractor.

The project has a 3,434m² sedum NatureMat roof with a varied pitch from 0-35 degrees installed over a Kalzip standing seam roof.

Blackdown would like to thank both Graham Construction and Lakesmere for the positive and close working partnership throughout the duration of this exciting project.





The £4.5 million Moondance Sports Hall will provide a new space for the students of the college to work together to improve their health, fitness and wellbeing.

This project utilised 1,500m² of Hydrotech Hot Melt Waterproofing and Blackdown Green Roof NatureMat. NatureMat is a vegetated mat consisting of a biodegradable base layer, a specially formulated substrate layer and a 90% mature plant cover comprising of 6 core species (predominantly Sedums) along with 13 randomly sown species. All grown to maturity in Blackdowns's own fields in Somerset.

A roofing system was needed that would provide students with an environmentally beneficial solution that would help improve their lives. NatureMat provides that solution by helping clean the air from surrounding pollution and contributing to the required acoustic and thermal properties needed for this project.

Another benefit of this system is that the location in Glamorgan receives high levels of rainfall, therefore a system was needed that could absorb high levels of rainwater and deal with it effectively – Blackdown NatureMat is highly efficient in absorbing rainwater and along with Hydrotech Hot Melt Waterproofing having Zero Product Failures in over 50 years this system will provide the sports hall with a long, reliable and efficient Flat Roof solution for the long term.

Atlantic Sports
College,
Glamorgan

University of Greenwich, London

Officially opened in December 2014, the £78m new-build development is based in Stockwell Street within Maritime Greenwich on the UNESCO World Heritage Site. The project also included a new library, and features a series of terraced roofs, comprising 14 interlinked teaching gardens, forming the largest multifunctional roof space in London.

To facilitate this pioneering green roof design, a total of 3,407m² of Blackdown Green Roofing System from Alumasc was specified by architects, Heneghan Peng, and Landscape Architects Allen Scott, and installed by Blackdown.

The new building had to be 'demonstrably sustainable' in the sense that both it, and its facilities, minimise their environmental impact and use of resources. The Blackdown green roof system creates a living laboratory where the sustainability of new ideas in landscape and architecture can be tested, and innovations developed and applied.

Glenn O'Brien, Architect at Heneghan Peng, commented:

"Our design proposals had to reflect the location's status as a UNESCO World Heritage site while remaining sensitive to the neighbouring buildings, particularly the residences to the rear of the site. Incorporating the interlinked landscaped roofs allowed us a creative approach in dealing with these challenges.



“The green roof system underpins all of the landscaping on the roofs. We see it as the base infrastructure that allows for either soft or hard landscaping permutations. This proved very useful as the design progressed with different planting options, and we were secure in the University of Greenwich knowledge that the green roof system would be able to accommodate them. The zero-fall system also allowed us to achieve very large spans and roof areas with minimum difficulty.

“There is naturally a great deal of excitement about the future of research at the University of Greenwich and these roofs are already helping students and staff to extend their understanding of environmental infrastructure and of landscaped and green spaces across increasingly urbanised areas.”

The 14 interlinked terraces have already been received a BREEAM Innovation award due to their educational and research aims. Blackdown green roofs from Alumasc are constructed from a range of components that replicate the natural growing environment for plants, without requiring the same depth and weight of construction.

Green roofs absorb CO₂, improve a building’s thermal performance, increase rainwater retention thereby reducing storm water run-off, and reduce the life-cycle costs of a roof by protecting it from climatic changes, UV light and mechanical damage.



Kew Bridge, London

The latest St James Homes project Kew Bridge is a celebration of all that makes riverside living rewarding. Close to the heart of fashionable, historic Kew, it combines an idyllic location with stunning architecture and a wealth of facilities.

The Hydrotech Hot Melt System is the preferred waterproofing system of St James Homes and has been utilised along with Derbigum Bituminous Membranes to provide waterproofing solutions for the various roof areas and terraces for this latest London Development.

The use of the Alumasc Blue Roof Storm Water Management Systems within the two soft and hard landscaped podium areas provides an ideal ecological solution to meet the project requirements. The soft landscape areas will be incorporating an intensive green roof build up system supplied by Blackdown Green Roofs in order to maintain NHBC standards of 'single source'.





All calculations for the Blue Roof were provided by the Alumasc Roofing Technical Department to ensure the appropriate drainage attenuation levels are achieved. Alumasc prepared a comprehensive specification covering insulated inverted roof areas, green roof areas incorporating an intensive growing medium build up and our unique Blue Roof system to attenuate stormwater beneath the hard landscaped podium areas.

This project will be supported by the unique Alumasc Promise Warranty, further information regarding the Alumasc Promise Warranty can be found at www.alumascroofing.co.uk/hyrotech.

Material Store, London

The four 'warehouse' blocks of Material Store rise above a podium and surround an oasis of private patios and a large communal garden space.

The roofs of all four blocks are landscaped as communal gardens. The extended articulated parapet to the tallest block creates an outdoor room and emphasizes the building's position as the tallest element of the masterplan.

The 189 build-to-rent homes enjoy generous shared facilities. These include play areas, picnic tables, compost bins, open planted roof top spaces & allotment and commercial uses which are intended for sharing with the wider community.

Blackdown Greenroof provided a wide variety of finishes from pedestal mounted paving and decking, bespoke intensive planters, benches, garden and boundary partition planters, bespoke metal work (gates), artificial lawns, children's recreational play areas, wildflower, sedum and bio-diverse extensive greenroofs and planted 3D sculpted lawn areas to name but a few finishes.





The inclusion of a podium play area was of particular interest as the play and recreational equipment included within the design; large pebble seats, stroking bears, large 3D resin play models and active play equipment required a wide range of fixing and mounting solutions that were not initially designed for a podium deck with a hotmelt waterproofing membrane.

Drawing on our decades of experience this meant we could work & collaborate with the fabricator, designated landscape architect, architect and main contractor to ensure that the final fixing design worked for all parties and provided a long term, simple and effective solution without delaying the installation program on what was a congested and busy site.

The SSE Hydro, Glasgow

The SSE Hydro is a £125million entertainment and sporting venue, which, since its opening in late 2013, has already achieved “Most stylish Entertainment Venue” at the 2013 Scottish Style Awards and the ‘Architectural Excellence Award (Public Building)’ at the Scottish Property Awards.

The Blackdown Intensive Green Roof system was specified by architects Foster and Partners, who were looking for a sustainable solution to complement the strong design features of the building’s main entrance. The system comprised of 37,000 Lonicera Nitida ‘Maygreen’ shrubs, planted to form a thick, hardy green mat over the low level ‘skirt’ above the entrance of the arena.





Paul Otway, Head of Contracts at Blackdown Green Roofs, explains:

“Due to the fluctuation of pitches in the roof, from between 8 and 52 degrees we had to work closely with our supply partners to devise an innovative solution for the delivery and application of 1,020m² of substrate that was to be used on the roofs. Our successful methodology meant that the amount of manual handling of materials was kept to a minimum and the installation was completed within the time scales agreed.

Blackdown also supplied an automatic irrigation system to ensure that the planting is permanently fed and watered with minimal manpower requirements.

WWII Bunker, Monmouthshire

Tucked away in the rolling hillsides of Monmouthshire is The Decoy Bunker. The original bunker was built in 1941 and was designed as a special decoy target for German bombers. The secluded bunker has now been fully restored using Alumasc's Derbigum Waterproofing and Blackdown's Green Roof Systems and is now a unique holiday home.

As part of the design the bunker needed to blend directly into the hillside therefore a highly durable waterproofing system that could provide full protection from the water travelling down from the surrounding landscape was needed.

A green roof waterproofing solution that would provide the maximum blending effect was also required to give it the desired 'camouflage' effect by using the existing soil and grass from the surrounding landscape. Blackdown Greenroof Drainage Layers, Intensive Substrate and Washed Pebble Ballast was installed to finish the green roof.





With Derbigum being a system that holds 40 year durability certification with the BBA (British Board of Agrément) – a Derbigum Black Anti-Root Built-Up System was the ideal solution. The Derbigum system sits below the green roof and provides a highly reliable waterproofing solution and maximum peace of mind for the future. Alumasc's Registered Contractors Span Roofing carried out the installation with great results.

North West Cambridge

Alumasc Roofing Systems were specified throughout various roof areas by a joint venture with Mole and Wilkinson Eyre Architects on Lot 1 and 3 as well as Stanton Williams on Lot 2.

A variety of Alumasc's waterproofing systems have been installed including the Alumasc single source Derbigum Warm Roof System and Hydrotech Inverted BluRoof Drainage System as well as Hydrotech Hot Melt Waterproofing finished with Blackdown Green Roof systems. Alumasc's BluRoof system reduces and controls the peak rate of stormwater discharge from roof areas.

Detention of storm water up to a prescribed maximum hydraulic head occurs, with subsequent discharge controlled over an elongated time period. Alumasc Registered Contractor Voland Roofing installed over 15,000m² covering numerous roof areas on Lot 2 for Wates Construction.





Mr Ren Pesci Director of Voland Roofing quoted:

“Alumasc Roofing Systems provide a first class waterproofing and green roof system, add to that their single source BluRoof solution which has ensured a large scale project has been delivered seamlessly”

Further roofing works on Lots 1 and 3 with Sage Roofing and BAM as well as Lot 2 with Voland Roofing and Wates will be complete by Summer 2017.

Banbridge Community Care and Treatment Centre

The prestigious new Banbridge Community Treatment & Care Centre (CT&CC) in County Down, Northern Ireland, has an effective long-term waterproofing solution, after 2,500m² of Alumasc's Hydrotech waterproofing systems, covered by Alumasc's Intensive Blackdown green roof and Derbigum, was installed on the roofs, balconies and terraces.

Run by the Southern Health & Social Care Trust, Banbridge CT&CC in County Down, Northern Ireland, is part of the new £16million Banbridge Health & Care Centre, and combines a range of health services: from adult day care and community outpatient departments, to therapy services for children, young people and mental health patients.

Registered local Alumasc installer Jameson Roofing Services was appointed to install 1,000m² of Alumasc Derbigum, with an extended warranty of 40 years, and 1,500m² of Alumasc Hydrotech waterproofing, which has an extended warranty of 50 years.





After the concrete deck had been primed with bitumen, a layer of Eurorooft vapour barrier was applied then covered with 120mm Alumasc BGT Rigid Polyisocyanurate Insulation and adhered with Eurorooft PU Insulation adhesive to achieve a target u-value of an average 0.20W/m²K, before Mastergold underlay and finally the Derbigum Cap Sheet.

Jameson Roofing also installed the Hydrotech Hot Melt waterproofing system, which comprised a Hydrotech MM6125 membrane incorporating a Hydrogard 40 protection sheet, onto which an intensive Alumasc Blackdown Intensive Green Roof was installed.

The Alumasc website provides comprehensive information regarding all Alumasc's Roofing Products:

- Product & Safety Datasheets
- NBS specifications
- CAD downloads
- Online Calculators
- Technical Datasheets
- BBA/ETA Certificates
- CPD Seminars



An aerial photograph of a modern, multi-story brick building. The building features a flat roof with various mechanical units and a glass-enclosed balcony on the lower level. The surrounding area includes lush green trees, a paved walkway, and a silver SUV parked on a road. The image is framed by green triangular shapes in the top right and bottom right corners.

A seamless solution backed up by unparalleled technical support and extensive, single point warranties.

If you require any further technical information please visit
www.alumascroofing.com



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