

# ABERCROMBIE HOUSE



## BAUDER BUILDING BOARD

Project:	Abercrombie House
Location:	East Kilbride
Building Owner:	Department for International Development (DfID)
Roof Area:	2,150 m <sup>2</sup>
Specifier:	Fletcher Joseph Associates
Roofing Contractor:	Miller Roofing Ltd



After



Before

## APPLIED PRODUCTS

The Bauder Total Green Roof System was installed as a warm roof configuration over the existing asphalt and incorporated highly efficient 100mm PIR insulation.

The XF301 integrated sedum blanket used the Bauder SDF Mat drainage component to lift the vegetation clear of any water gathering from prolonged rainfall which would otherwise immerse the roots and cause the plants to decline.

The roofs on the offices for the Department for International Development (DfID) were failing, damaging the fabric of the building, as well as exhibiting insufficient thermal performance.

The overlaid solution, installed in 2010, incorporated Bauder's sedum blanket, making the project the largest green roof replacement to date in Scotland.

The combination of the added PIR insulation and the additional thermal and environmental benefits of the green roof have led to a carbon reduction of 18 tonnes in the first year, and savings of between 3-10% in heating costs.

*"As Project Managers for the Department for International Development (DfID) Roof Replacement project, we are pleased to confirm that the project was delivered on time and on budget; surpassing all quality expectations whilst incorporating many significant environmental benefits. The project team from Bauder and Miller Roofing were very professional and a pleasure to work with. I would have no hesitation in recommending them to any future clients who were considering a green roof system."*

Mark Bruce, Senior Project Manager, **Turner & Townsend Project Management**



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Abercrombie House features in the Annual Report on Government Departments' Progress against 2015 Targets in 2011-12 under HM Government's 'The Greening Government Commitments'

The Greening Government Commitments (GGCs) are the UK Government's commitments for delivering sustainable operations and procurement for the current parliament (to 2014/15 from a 2009-10 baseline). The GGCs are firm commitments which cover more of the Government's estate and operations, and present a more streamlined set of targets for departments to meet and the public to scrutinise.

## Greenhouse Gas Emissions - The target

In 2010, central Government offices were set a target to cut their greenhouse gas emissions by 10%. The Greening Government Commitments widened the carbon reduction target to include all Central Government Departments, their Executive Agencies and Executive Non-Departmental Public Bodies (NDPBs), and non-Ministerial Departments in England. The target applies to emissions from all buildings unless specifically exempted.

## DfID – Green roof at Abercrombie House

Leaks which damaged the fabric of the building were the spur for investigating the most sustainable, durable and economical new roof at DfID's Abercrombie House office in East Kilbride. The resulting sedum roof, installed in 2010, is the largest green roof replacement to date in Scotland. The existing asphalt waterproof layer was kept in order to minimise building waste, with a new built-up roof system installed on top. It provides excellent thermal insulation, which led to a carbon reduction

of 18 tonnes in the first year, and savings of between three and 10% in heating costs. It is expected to last for 40 years – where a conventional roof would need replacing after 25 years – and no repair costs are anticipated for at least 25 years.

The green roof also offers extra protection to the roof membrane from frost, UV degradation and erosion, which could potentially double the lifespan of the roof membrane, thus reducing long term costs further. The roof's capacity to cope with rainfall means a reduction in surface water run-off, which reduces the risk of flash floods and impact on local drainage systems. Other benefits include increased sound insulation; improved air quality and habitat provision for local biodiversity.

Combined with changes to plant operation times, the green roof has resulted in a 20% reduction in gas usage since 2009.

The report can be downloaded from the DEFRA website <http://www.defra.gov.uk/publications/files/pb13846-greening-government-commitments.pdf>



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