



WALLTITE®

The airtight insulation solution

Grillagh Water House, Northern Ireland Best Practice Case Study



As featured on
Channel 4's Grand Designs



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Project data

The project: Grillagh Water House –
County Derry, N Ireland
Client: Patrick Bradley
Architect: Patrick Bradley
Spray Foam Contractor: Alpha Insulation
Scope of project: New build house created from steel-walled shipping containers
Year Completed: 2014
Products used: WALLTITE CL100 spray foam insulation

Project description

Grillagh Water house is a unique project: an amazingly beautiful design icon nestling in the rural Irish countryside and created out of reclaimed shipping containers. A project so unusual and dramatic that it was featured on Channel 4's Grand Designs.

The aim of architect Patrick Bradley was to create a practical and functional home for himself that is also visually dramatic - a sculpture in the landscape - while working to an extremely tight budget.

To create the three bedroom structure Patrick decided to use four shipping containers placed at right angles with a dramatic cantilevered design to make the most of the exquisite setting.

Challenges

Conscious of the rural setting, it was no surprise that part of Patrick's ambition for the building was that it should achieve the highest possible levels of energy efficiency.

As the external walls started life as steel shipping containers, providing effective insulation was the main challenge. The architect needed to find an insulation material that could be applied directly to the entire surface area of the steel structure. An immediate concern was to eliminate the possibility of condensation forming between the insulation and the wall – particularly challenging because of the corrugated shape of the steel structure.

The solution

WALLTITE was applied to the entire interior surface of the walls. WALLTITE is a spray applied foam insulation system that provides a seamless airtight solution. Because it is sprayed in liquid form, which expands into foam on

contact, it can be applied to any irregularly shaped surface – in this case following the contours of the corrugated steel.

WALLTITE was the only practical way to provide insulation to the corrugated metal walls without causing a condensation issue.

In this instance WALLTITE was sprayed to a depth of 125mm to give a U-value of 0.2W/m²K.

Specifier quotes

Described by Grand Designs presenter Kevin McCloud as both “paranormal goo” and “the right solution”, WALLTITE provided the only practical option.

For owner and architect Patrick Bradley the conversion of the metal boxes into a living space started with the insulation.

WALLTITE was applied over all the walls and the ceiling and described by Patrick as “100% - or maybe slightly more for this application. It's really worth installing the right insulation as it will save energy for the life of the building.”

Applicator

WALLTITE is only supplied via approved Foam Master contractors who have received the technical training and back-up from BASF to provide the highest standards of installation. In this case, the contractor was Country-Tyrone based Alpha Insulation.

The Grand Designs programme filmed the application of WALLTITE and Alpha Insulation MD Gary Johnston has been overwhelmed by the response to the programme.

“I have had calls from as far away as Australia asking how the system works – people don't know about spray foam insulation, but this project really shows how it can be used.”



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