



## Securing £1.9M in CIF funding for Corfe Hills roof and drainage projects, Garland UK utilised 3 diverse waterproofing systems across the new-build and refurbishment schemes.

Established in 1976, Corfe Hills School in Dorset welcomes over 800 secondary and sixth form students through their gates each year. Since achieving Academy status in 2011, Corfe Hills have been looking ahead, keen to develop a schedule of works for building improvements that support the school's growth and ultimately safeguard the building's future.

Over time, the existing roofs across the site had experienced continuous water ingress issues that needed to be addressed. Multiple roof penetrations from the roof lights were leaking water; the existing waterproofing system and the overlaid bituminous membrane were failing in places resulting in splits and blistering, and the metal roof had rusted beyond repair. With rain seeping directly into the classrooms below, action had to be taken to ensure the site was remedied to a safe and comfortable learning environment for students and staff.

Garland Technical Manager, **Paul Boole**, was instructed by building surveying firm **Kendall Kingscott** to support Corfe Hills approaching CIF bid for the critical roof refurbishment works. An essential part of the brief was to ensure that the buildings were not only fully waterproofed but to upgrade the overall thermal efficiency, alongside securing a robust 20-year guarantee.

In support of the CIF bid, Paul carried out a thorough investigation of the school's roof assets for Kendall Kingscott, producing core sampling data, detailed condition surveys and U-Value calculations to outline a clear specification for the works required.

### Quick Facts

Project  
**Corfe Hills School**

Location  
**Dorset**

Garland System  
**StressPly Flex  
R-MER CLAD  
Dura-Coat**

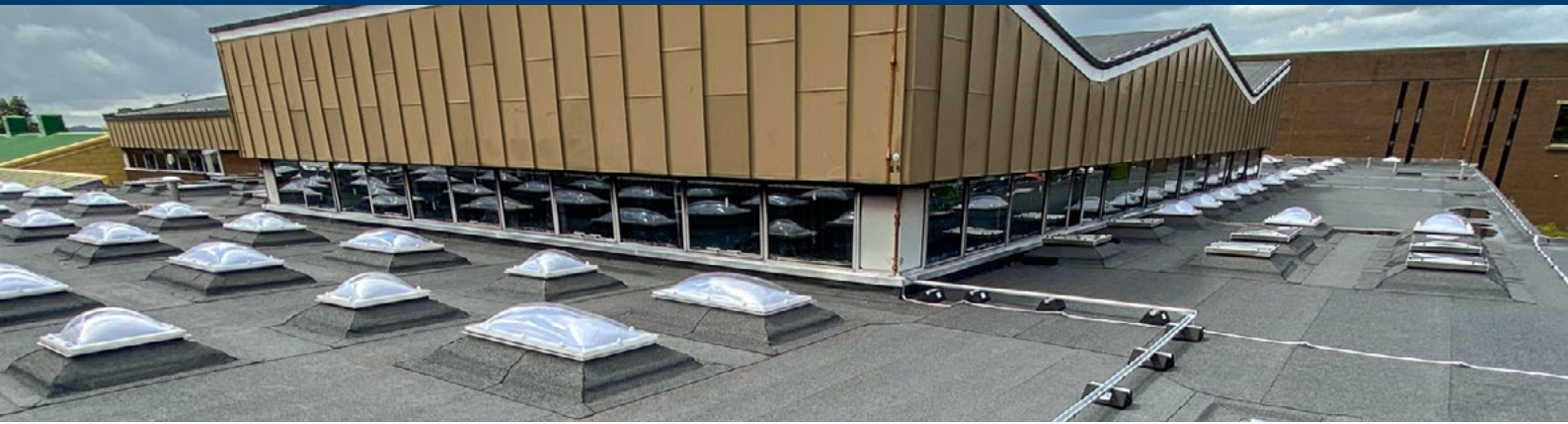
Sector  
**Education**

CIF Funding Secured  
**£1.9M**

Garland Technical Manager  
**Paul Boole**

Approved Contractor  
**Gable Projects**





## Challenge

The successful CIF application secured £1.9M in funding for Corfe Hills roof and drainage projects. Working closely with the clients, Garland UK was ready to supply and oversee the multiple roof system installations with our Approved Contractors, **Gable Projects**.

It was essential for all works to be carried out with minimal disruption to the student activity across the site. With many of the classroom ceilings being damaged by the continuous water ingress, logistical planning of works was required with multiple programmes in place to ensure that only some sections of the roof were being worked on at any one time.

In addition to the roofing refurbishment project, a new-build element was also required to create an enclosed space from an existing rear courtyard. The challenge was to ensure that the roofing details fed into each other seamlessly, with one side of the original roof being a membrane system and the other side metal, a new deck with a tapered warm roof system would be required to successfully bridge and waterproof the space between the two.

With a diverse set of requirements from new-build to refurbishment in one project, Garland UK ensured that a breadth of waterproofing systems was fully utilised to meet the challenge, from modified bituminous membranes, metal profiles and cold-applied liquid coating systems.

## Solution

Specifying a mix of **StressPly Flex**, **R-MER CLAD** and **Dura-Coat**, the client was able to benefit from greater design choice, allowing versatility in the final specification and the best opportunity to provide the right system for Corfe Hills.

Across multiple buildings and classroom blocks, the roof was made up from a metal deck and asphalt, with a single layer of membrane that had been used as a remedial overlay 20 years ago. Avoiding the need to strip the roof and generate vast quantities of waste to landfill, it was possible for the Approved Contractor, Gable Projects, to overlay the roof with Garland's high-performance modified bituminous membrane, StressPly Flex, in most instances. This also included the replacement of close to 300 roof light units supplied by **Whitesales Ltd**. Again careful planning was required to ensure the units were installed with minimal disruption to the classrooms beneath.

A rear block with an existing metal over clad was replaced with trapezoidal roofing and wall profile R-MER CLAD, removing a large amount of perimeter gutter courses, changing them from internal to external guttering. An R-MER CLAD reverse profile was also used on a wall section, to help solve an existing water tracking issue through the abutment wall where an extension had previously been built.

Cold applied liquid coating, Dura-Coat, was the perfect system to ensure watertight coverage in the hard to reach areas and awkward details. The Dura-Coat system installation was finished with a mineral granule, to continue the uniform aesthetic across the roof.



Existing waterproofing system and the overlaid bituminous membrane were failing in places





## Outcome

Paul Boole and his technical assistant James Hiscock attentively monitored the project over an 8 month period, carrying out weekly site visits to supervise the progress and quality of the 7,000 sqm installation.

In constant communication with the client Kendall Kingscott, Paul & James provided regular progress reports via Garland's RAMP system, ensuring the roof works ran in conjunction with the separate M&E consultant managed M&E and drainage works with minimal disruption to the schools daily operation.

The roof system refurbishment saw a drastic improvement to the school building's thermal efficiency, with the new U-Vale calculations achieving a 0.18 rating. By reducing the heat loss through the roof, Corfe Hills School can now maintain a comfortable temperature for students and staff, whilst reducing both energy costs and overall emissions.

The new build roof in the courtyard has modernised the use of the space for the student's, creating an additional space to sit, congregate during breaks and move between classrooms unaffected by weather conditions.

Corfe Hills School were provided with Garland UK's leading **Single Point Guarantee**, offering 20 years of coverage, accepting the full liability for the design, material and quality of the installation workmanship for all 3 waterproofing systems.



Final R-MER CLAD and StressPly Flex installation

“ The technical advice and support from Garland UK played an essential part in securing the best waterproofing outcome on this project, utilising 3 very different systems has meant that there were no restrictions to the roof's design and we can offer our clients a trusted single-point guarantee that safeguards their building's future...

Jeremy Wood  
Kendall Kingscott



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