



Haslemere Rugby Club were looking for a long-term waterproofing system that would also incorporate their environmental targets, to improve thermal efficiency and generate their own supply of renewable energy.

For over 70 years, Haslemere Community Rugby Club has been the heart of the local area, catering to all age groups to play rugby in local leagues and friendly matches. The multi-use facility had become a great community asset, serving many people and clubs from formal sporting activities to informal use as an open space for events.

The existing 400m² composite panel roof at the Rugby Club pavilion had come to the end of its natural life and was no longer providing adequate waterproofing, where the kitchen and bar areas were severely affected by numerous leaks causing disruption to the everyday running of the Club.

The Local Authority instructed Garland UK Technical Manager Daniel Sandell to upgrade the existing roof to a long-term waterproofing system that would incorporate their key environmental targets to increase the building's insulation levels and generate their own renewable energy supply.

Quick Facts

Project
Haslemere Rugby Club

Location
Haslemere

Garland System
R-MER CLAD
Solarise PV System

Sector
Local Authority

Garland Technical Manager
Daniel Sandell

Approved Contractor
Gable Roofing



Challenge

A thorough roof survey was carried out by Daniel Sandell to assess the roof's overall condition, Condensation Risk Analysis (CRA) and U-Value performance. The existing metal roofs condensation analysis showed a U-Value rating of $0.42 \text{ W/m}^2\text{K}$, which meant the building was not performing to standard as per the Building Regulations Part L. The new roof specification would need to incorporate a thermal upgrade to ensure the building could significantly restrict air leakage to prevent heat loss, reducing its energy bills and lowering the overall carbon emissions.

Solar PV Yield Analysis and output modelling were conducted to review the projected performance and electricity generation a Solarise PV panel system could provide. Despite the east-facing orientation, the Club would still benefit from a Solarise installation due to the variety of bespoke frames, mounts and fixings available to pivot the PV panels and achieve optimum electricity generation targets.

With an installation of 36 Solarise PV panels, set at a 12-degree inclination and East orientation, Daniel advised that a Solarise system would be able to generate 21.5% of the building's annual electricity consumption, a significant contribution to reducing energy bills and lowering the operational carbon emissions of the site.

To mitigate as much waste to landfill as possible during the refurbishment project, the specification would also need to reduce the amount of waste that was created. It was a key requirement to integrate a waterproofing system that could incorporate recycled materials and, ideally, have the opportunity to be re-used or recycled when the new system comes to the end of its natural life.

Solution

Daniel specified Garland's R-MER CLAD metal roof system, a lightweight and hardy trapezoidal roofing and wall system that would perfectly suit the Club's requirements. R-MER CLAD is made from recycled materials and is 100% recyclable when it comes to the end of its natural life, making it the ideal choice to reduce the building's overall embodied carbon.

Utilising R-MER CLAD to encapsulate the existing roof structure ensured minimal disruption to the Club's daily activities, mitigating unnecessary landfill waste and providing a twin-skin insulated build-up to improve the building's overall thermal efficiency.

A low-maintenance Solarise PV panel system would then be installed on top of the R-MER CLAD installation to provide a renewable energy source for the Club, reducing the building's energy costs, lower the operational carbon emissions and providing the opportunity to receive financial payback in the future.



Water ingress was apparent throughout the building. Additionally, due to poorly performing insulation the building was proving costly to keep warm during the cold winter months.



Garland UK Approved Contractor, Gable Roofing, set to work on the installation incorporating a new Vapour Control Layer (VCL), followed by a galvanised steel Garland Bar & Bracket system with a bracket height of 260mm. Mineral insulation was then added to bring the roof system up to current Building Regulations, followed by Garland's R-MER CLAD 0.7 gauge plastisol coated steel sheets. For the final details, R-MER Fix Stainless Steel Fixings with colour-matched caps and appropriate washer sizes and colour-matched Flashings were installed.

To avoid any penetrations in the new R-MER CLAD sheet being made to fix the Solarise system, Daniel specified that a custom bracket system was affixed directly onto the crowns of the R-MER CLAD roof sheet, alongside EPDM washers to ensure that the roof's waterproofing function was not compromised.

Outcome

The Solarise system has ensured the Club will avoid 6.4 tonnes of CO₂ emissions annually, with an annual yield of 952 kWh. Through the Smart Export Guarantee (SEG) and annual electricity savings from the Solarise installation, Haslemere Rugby Club will generate an accrued cash flow of close to £220,000 over a 25-year period. Following the successful installation, the Club will see a fast return on their investment in just 4 years.

The R-MER CLAD system saw the U-Values of the building increase to 0.11 W/m²K to meet Part L regulations, significantly improving the building's thermal efficiency and further reducing the building's energy costs.

Daniel's assistant Tony Upfold visited the site twice weekly throughout the works to monitor the quality of the installation, sharing feedback reports to all stakeholders via Garland's online platform, RAMP.

On completion, Daniel supplied Haslemere Rugby Club with Garland's industry-leading 20 year Single-Point Guarantee for the R-MER CLAD system and 10 year Single-Point Guarantee for the Solarise system, which also guarantees the performance and linear output for up to 25 years. The Single-Point Guarantee accepts the entire liability for both systems' design, material and installation.

The project was finished on time and on budget, and the client was very satisfied with the end result. The Local Authority, engineer for the project, says, **"the Solarise system has meant that the Rugby Club can benefit from significantly lower energy costs whilst still receiving a fast return on our investment."** he adds, **"By reducing the overall carbon emissions for the building with Garland's support, we are ever closer to achieving our organisation's environmental targets."**



Twin skin R-MER CLAD installation allowing for insulation within the void.



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