

11, 500m² composite panels meeting the current regulatory U-value requirement of 0.25W/m²K was installed on the existing roof cladding. The building houses a facility which manufactures components for the aviation industry. The project was completed within 30 weeks without disruption to production.

ROOF OVER-CLADDING OF INDUSTRIAL SHED USING COMPOSITE PANELS IN AYSHIRE, SCOTLAND



Before renovation of roof
roof



Steel rails support craned on top of



Existing roof over cladded with Composite Panels



After renovation roof

The project is one of the numerous refurbishment projects successfully completed by Curtis Moore. The work involved the installation of 11,500m² of over-roofing of an existing roof cladding on a building in Ayrshire, Scotland using composite panels.

The building houses a manufacturing facility which produces aircraft components for the aviation industry. The project duration was thirty weeks during which, the internal operations continued below without disruption.

The client realised that the repeated on-going maintenance of the existing roof cladding is no

longer a cost effective option, and the old and tired roof cladding must be replaced. However, the client was concerned about the possible disruption, inconvenience and loss of revenue associated with complete strip and replacement of the roof.

As a result, the contractor recommended over-cladding of the existing roof using composite panels. Over-cladding of existing roofs and walls using either steel composite panel or build-up is a very successful method of hassle - free roof replacement.

Sustainability Benefits:

- No disruption of internal operation as existing roof sheeting is retained in place
- No loss of revenue due to non-closure of building
- Aesthetically enhances the appearance and prolongs life of the building
- Improve users' comfort and internal air condition
- Upgrade thermal performance of building by adding insulation between old and new roofs
- Lower heating demand and cooling load thereby lowering CO₂ emissions

Project Team:

Client:

Architects:

Project Manager: Curtis Moore

Contractor: Curtis Moore



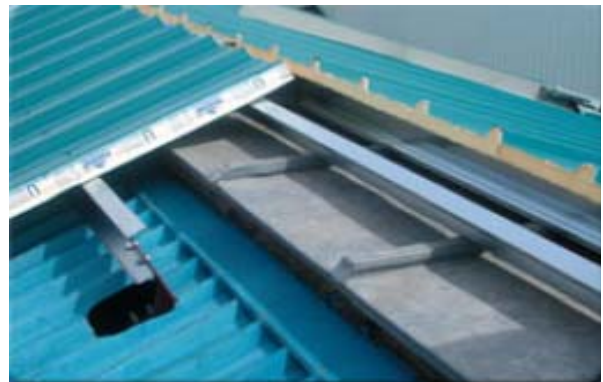
Stock of new purlins stack on the existing roof



Hole cut through the roof and new cleat connected



New purlins connected to the cleat



Installation of new composite panel on new purlins

Construction Details:

80mm thick Composite panels with PUR insulation and U-Value of 0.25 W/m²K was used to over-clad the existing roof cladding.

Under normal circumstances, an over-roofing system would utilise the existing roof purlins to carry the zed support rails. On this project, the existing purlin spacings were inadequate to carry the composite panel.

A scheme was designed which involved the installation of new cleats and roll formed purlins. The cleats were secured to the existing

roof rafters. Holes were cut through the existing single skin cladding to expose the rafter so that the cleats could be fitted to the rafter.

To enable continuous production with the building, it was imperative that no debris or objects fell through the cut holes and on to the shop floor below. Catchment hammocks were manufactured which slid under the rafter and provided protection during the cleat installation process. These hammocks were subsequently removed, and profiled patches were fixed over the holes.