

Gatwick Airport Pier 4

Refurbishment of Composite Panel Roof



BACKGROUND

This high profile project at Gatwick Airport included the refurbishment of approximately 5,400m² of existing profiled composite panel roofing, along with the renovation of box section gutters and rainwater outlets.

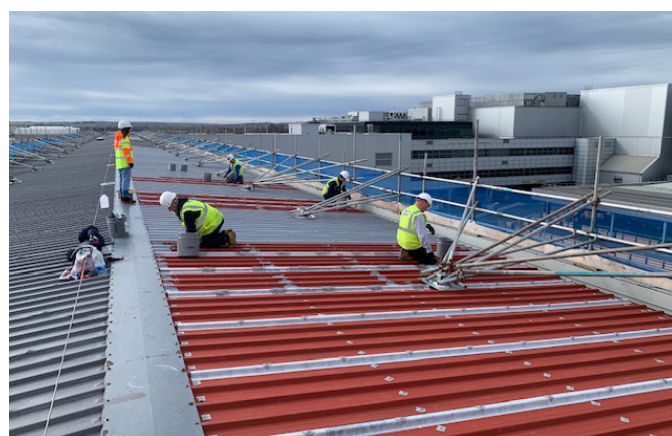
The project was very challenging from a logistical perspective due to the high risk nature of the location. The proximity of the roof to the airfield, aircraft stands and airside roadways meant that works had to be meticulously planned and controlled to ensure minimal impact to aircraft operations and associated airside service operators.

At the outset, safety scaffolding and guard rail was erected to provide phased safe access to the works site. The scaffold guard rail installation was broken down into a planned day-by-day install rate, giving exact timings and locations for the install due to the impact upon the aircraft stands and the associated stand entry guidance systems.

Aircraft stands would typically be closed for a 4-hour period whilst each section of the day's works were completed. Further safety steps were then taken, including the manual marshalling of aircraft, full airside operator community notifications and streetwork controlled airside roads closures.

Throughout the project, all works were strictly controlled under airside works permit, airport works authorisation, airside works scheduling approval and Terminal Management authorisations.

CLIENT	Gatwick Airport
SECTOR	Aviation / Commercial
LOCATION	Crawley, West Sussex
SOLUTION	Cold Applied Liquid Roofing



THE WORKS

INSPIRE

In total this was a 12 month project, with a 6 month pre-planning period to include intrusive survey works and design. Works were completed in May 2023.

Headline elements of the works are summarised below & attached, along with some key facts and figures:

- Refurbishment of the existing profiled composite panel roof using cold applied liquid waterproofing.
- Refurbishment of the existing box section gutters and siphonic rainwater outlets using an EPDM Unifold gutter liner system to include new eaves and gutter wall flashings.
- Replacement of the existing siphonic outlet bowls with a uniquely fabricated outlet bowl system.
- The safety scaffolding on this project included 832m of guard rail along with 2 x 17m access towers giving phased safe access to the works site.
- The liquid waterproofing included the taping of more than 30,000 fixing heads, 4,400 linear metres of lap joint seals, 264 daily briefings, 24 aircraft stand closures and 264 site clearance permit completions.
- The gutter works included 832 linear metres of Unifold gutter install including 60 outlets and overflows. In addition there were 1,664 linear metres of flashings installed along with 6,400 profiled filler blocks.

THE RESULT

The scaffold guard rail was a fully designed system with a unique tie in plate configuration to enable the guard rail to be positioned upon the external curved bull nose capping. The design was structurally certified and installed under temporary works coordination.

A significant risk throughout this project was the possibility of loose materials or debris being released at roof level and finding its way onto the airfield, with potentially catastrophic impact to aircraft. To eliminate this risk, the design of the scaffold guard rail system allowed for a single skin of debris netting to be installed with fixed toe boards and securing sole plates.

Furthermore, to ensure that any loose material / debris was cleared, a separate permit system was implemented whereby the whole site was checked at the end of each working period to ensure compliance and this was certified by the site management team.

To maximise safety and ensure effective project management, a daily site briefing was given by Inspire's Senior Site Supervisor, reiterating and reinforcing the critical elements of the works. This included a summary of daily hazards, lessons learnt from the previous day's works and daily capture of issues experienced so these could be suitably dealt with.

At Inspire we are proud to have a team of experts with the knowledge and skills to deliver exceptional results in such challenging and fast-paced environments. Thanks to exceptional workmanship and a clear focus on health and safety, this project was successfully completed to a very high standard and to the total satisfaction of the client.

