



PROJECT DETAILS

CLIENT Amey UK

PROJECT New Roof & Refurbishment Works Hangars L22 & L31

LOCATION RAF Lossiemouth, Muirton Road, Lossiemouth, IV31 6SD

START DATE 8 February 2021

DURATION 26 Weeks

END DATE 3 August 2021

VALUE £1,997,866

RTM Defence Infrastructure Organisation Framework – Amey UK

CONTRACT NEC 3 with Z Clauses

ROLE Specialist Subcontractor

PROJECT SUMMARY

RAF Lossiemouth in Moray, north-east Scotland is one of two RAF Quick Reaction Alert (QRA) stations which protect UK airspace. Four Typhoon combat aircraft squadrons, one Poseidon MRA1 squadron, and an RAF regiment operate from the base which is maintained on high alert in order to scramble and intercept unidentified aircraft approaching UK airspace. The base also supports worldwide operations and hosts numerous national and international exercises.

Amey UK is a leading UK Services Infrastructure and Engineering Company with responsibility for facilities management at RAF Lossiemouth via the UK Defence Infrastructure Organisation Framework. McConnell were directly appointed by Amey UK to carry out specialist Roofing, Structural Repairs and Specialist Coatings to two operational, parabolic (symmetrically curved) aircraft hangars.

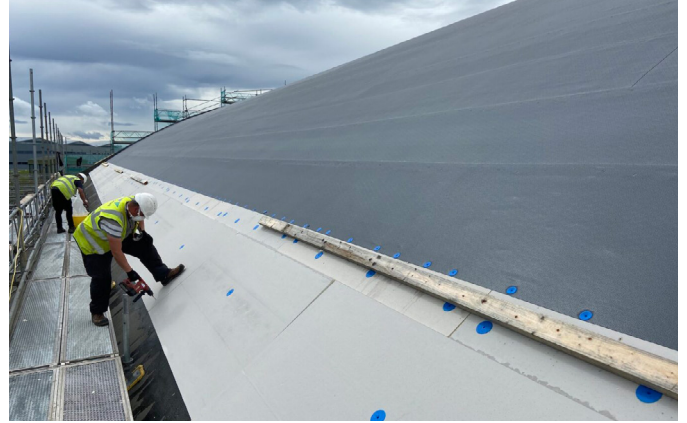
Given the complexity of delivering works on an operational RAF base, operating 24/7/365 on high alert, we completed a bespoke risk assessment and extended the scope of our SHEQ Management Plans, Construction Phase Plans, Risk Assessments, Method Statements, Safe Operating Procedures, Site Management Plans and Emergency Procedures to ensure that we (i) complied with Ministry of Defence (MOD) Mandatory Requirements and (ii) mitigated the impact of MOD Mandatory Requirements on our construction activities and (iii) handed over the work with zero snagging or defects as any return to make good was deemed a further security risk.

Working in close collaboration with Amey UK, our specialist suppliers, the station's head of security and the (armed) regiment guarding the base, the specialist roofing, structural and coating works were delivered to the highest standards, on budget, on programme, with zero Riddors, Snagging or Defects and crucially, zero construction impact on Royal Air Force operations.

SCOPE OF WORKS

- ▶ Erection of complex, structural, load-bearing scaffold to each parabolic (symmetrically curved) aircraft hangar
- ▶ Erection of access scaffold at each gable end, elevation and flat roof extension
- ▶ Chemical clean of existing roof finishes
- ▶ Installation of 5500m² of Moy Materials Protan SE system to the parabolic hangar roofs comprising Vapour Control Layer; Mechanically Fixed Insulation Boards and Protan SE 1.6mm polyester reinforced single ply membrane; new insulation to upstands
- ▶ Specified roof u-value of 0.18W/m²K
- ▶ Waterproof coatings to hangar drainage channels
- ▶ Floor slab infills at base of parabolic hangars
- ▶ Shot blasting of existing steelwork
- ▶ Steelwork repairs to hangar doors
- ▶ Specialist paint coatings to hangar door steelwork
- ▶ Concrete repairs and new render installations at hangar gables
- ▶ 51 Squadron RAF Regiment emblem painted on hangar L31

RAF Lossiemouth Hangars L22 & L31



CRITICAL SUCCESS FACTORS

- ▶ Our SHEQ Management Policies & Procedures; Company Certifications & Accreditations; Approved Installer Credentials; Insurance, Liability & Warranty Provisions; and our suite of Governance, Operational, Commercial, Financial and Ethical policies, processes and procedures were all critical to our compliance and acceleration through a very stringent MOD and AMEY UK onboarding process.
- ▶ Following the onboarding and appointment process, we immediately followed up with our appointment of a Scaffolding Specialist; a Mechanical & Electrical Engineer; an Asbestos Consultant and a Mastic Specialist who we immediately guided through the stringent security vetting process in tandem with our specialist roofing and coatings operatives, so that, we were ready to start the project as soon as security clearance had been agreed.
- ▶ Prior to works commencing we attended a MOD Site Induction where the Head of Security set out mandatory site rules regarding traffic routes; circulation routes; traffic protocols; taxi runway protocols; mandatory take-off and landing operating procedures; site security controls and site prohibitions; all of which informed our extensive Safe Operating Procedures and Traffic Management Plans.
- ▶ We collaborated sensitively and positively with the client's Mechanical, Civil and Structural Engineers on the design and specification of structural scaffolds for each of the Parabolic Aircraft Hangars.
- ▶ We added our own approved Structural Engineer and Roof Designer to the design team. They modelled the existing structure and checked the proposed loads and calculations for the temporary access structure, the existing roof substrate and the new roof installations, all of which, informed the final design.
- ▶ We developed and operated a site specific Foreign Object Debris (FOD) Risk Assessment and Method Statement in strict compliance with mandatory airfield rules as airborne debris can be catastrophic in jet engines. Zero (FOD) incidents/non-conformances were recorded during the course of the works.
- ▶ Working with our approved specialist roof designer, we were able to salvage and remediate the roof substrate which reduced cost and programme time while reducing further the risk of Foreign Object Debris and airborne contamination.
- ▶ We specified and fitted a market-leading Protan SE Roof comprising mechanically fixed vapour barriers, insulation boards, and outer membranes constructed from softened PVC and polyester yarn reinforcement and stabilizers that enable the membrane to withstand high and low temperatures.
- ▶ Delivered at the height of the Covid 19 Pandemic, each phase was delivered in full compliance with our Covid 19 Safe Operating Procedures and the Health Protection (Coronavirus) Regulations (Scotland) 2020.