

RAF Saxa Vord

Roofing, Cladding, & Specialist Coatings



PROJECT DETAILS

CLIENT Mitie UK

PROJECT RRH Saxa Vord (Buildings 200, 222, 239 & 241)

LOCATION Unst, Shetland Islands

RTM Mitie – Restricted Procedure

CONTRACT NEC3

VALUE £1,446,738

ROLE Direct Contractor

END DATE September 2023

DURATION 14 weeks

PROJECT SUMMARY

HISTORY

Remote Radar Head (RRH) Saxa Vord, aka RAF Saxa Vord, is a fully operational Royal Air Force radar station located on the island of Unst, the most northern of the Shetland Islands in Scotland. It is a challenging, remote, wind-swept, unique island location accessed by a once-daily ferry service often disrupted by poor weather and high seas.

Mitie UK is a leading UK Infrastructure and Maintenance Company with facilities management responsibilities for RAF Saxa Vord via the UK Defence Infrastructure Organisation Framework. As an established supplier on the UK DIO Framework, McConnell was appointed by Mitie for Roofing & Cladding Works to Buildings 200, 222, 239 & 241 where existing structures were a mixture of brick, blockwork and concrete frames with render, metal cladding and concrete finishes to walls and a mixture of metal roof sheeting and felt roofs.

WORKS COMMENCE

Given the remote location, unpredictable weather, high wind speeds, low temperatures, extended drying times, reliance on a once-daily ferry service, unreliable internet connections, lack of accommodation etc, the importance of pre-construction planning, resource, material, labour and plant scheduling were all elevated and escalated in the project risk assessment.

Elements that might have been considered as “routine” on a mainland site were all “critical path” items on an offshore site. We therefore approached the contract proactively and adapted our logistics planning, works programme, safe operating procedures, material and resource scheduling accordingly.

The works were delivered by directly employed, skilled roofing and cladding operatives, supervised by our site management team, working on fortnightly rotation,

living near the site in temporary accommodation pods erected to support the project by McConnell.

Weather forecasting and wind measuring were all critical components where mandatory site rules dictated a complete evacuation of the site where prevailing wind speeds were likely to reach or exceed 55 MPH. The site was also restricted and evacuated during frequent, planned RAF and NATO Operations as well as ad-hoc military exercises.

Deliveries to this unique site location meant interconnecting ferry journeys from Aberdeen to Shetland to Yell then to Unst where the size of the boat was reduced on each leg of the journey, and we were always competing with construction traffic for the Saxa Vord Space Station which had priority over all other commercial traffic.

In addition to our logistics planning, our success equally relied upon our responsive communications and local standby arrangements where we were able to mobilise at short notice and react quickly to breaks in the weather, ferry cancellations, timetable changes, unforeseen delivery slots, temporary site closures, downtime at the Space Station etc.

The project was a test of our planning, agility, resilience and capability which we passed with flying colours.

Did you know?

RAF Saxa Vord is further north than Saint Petersburg, Russia, and on the same latitude as Anchorage, Alaska. Named after Saxa Vord, the highest hill on Unst at 935 ft (285 m) it holds the unofficial British record for wind speed, which in 1992 was recorded at 197 mph (317 km/h) shortly before the measuring equipment was blown away!

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SCOPE OF WORKS

- ▶ Internal / external dilapidation surveys
- ▶ Refurbishment and asbestos surveys
- ▶ Establishment of temporary living quarters
- ▶ Temporary access scaffolds and protective netting
- ▶ Roof dountakings, concrete beam removals and other masonry repairs
- ▶ Removal of existing metal roof sheets and replacement purlins (temporary sheet over)
- ▶ Kingspan KS1000RW roof sheet system, gutters and rooflights installations
- ▶ Redundant existing façade demolitions
- ▶ Existing metal wall cladding removals
- ▶ Kingspan KS100RW wall cladding, soffit panels and flashing installations
- ▶ Vapour control layer, paratherm insulation and protan SE 1.6mm polyester reinforced waterproof membrane installations
- ▶ Mechanical and electrical upgrades and installations
- ▶ New lightning protection systems
- ▶ New timbers and door replacements
- ▶ Metal doors and window replacements
- ▶ Jet wash and bio anti fungicidal wash to façade
- ▶ Sandex masonry paint applications to façade
- ▶ Testing and commissioning new and retained mechanical and electrical service

CRITICAL SUCCESS FACTOR

- ▶ Overcoming logistical, operational, and commercial, constraints and challenges associated with a remote offshore location
- ▶ Critically informed logistic planning and construction programmes
- ▶ Previous experience working on operational RAF Bases
- ▶ Gaining licences to occupy and import modular temporary accommodation pods
- ▶ An over-arching master-planning approach to the works, the associated site constraints, and the unique operating environment
- ▶ Weather monitoring, condition forecasting and wind measuring
- ▶ Deployment of directly employed highly experienced roofing & cladding teams who were experts in Kingspan Insulated Panels and Protan SE Roof Membrane installations, working on a rotational basis
- ▶ The in-house Structural Engineer was critical to ensuring the design was correct and enabling a successful and timely logistics process
- ▶ Our organisational adaptability and resilience enabled us to successfully deliver a complex project in one of the UK's remotest locations
- ▶ BPSS Security vetted operatives