

RAF Lossiemouth

Runway 23 Approach Bar repair

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RAF Lossiemouth Turnkey Solution

Runway 23 Approach Bar Repair

Project Key Facts

Client Name | RAF Lossiemouth
Location | Lossiemouth, Scotland, United Kingdom

Dates | Oct 2025

Project Overview

RAF Lossiemouth required remedial works to the Runway 23 approach bar after deterioration was identified in the existing support structure. Located on Lossiemouth beach and fully exposed to severe coastal weather conditions, the installation had experienced prolonged exposure to wind, salt spray, and moisture. Over time, these environmental factors caused significant degradation of the original timber support beam carrying seven approach lights, creating a reliability concern for an important part of the Airfield Ground Lighting (AGL) system.

ATG Airports was appointed to deliver a durable repair solution that would restore the structural integrity of the approach bar while improving resilience against future environmental exposure. The objective was to strengthen the installation using modern materials and engineering practices while maintaining operational continuity and minimising disruption to both airfield activity and the surrounding public area.

Inspection works confirmed extensive weathering of the timber beam and associated approach poles. The condition of the structure meant that continued use without intervention would likely lead to increased maintenance requirements and potential operational risk. Rather than carrying out a like-for-like repair, a more robust engineering solution was developed to extend the asset's service life while maintaining the existing lighting equipment.

The repair solution involved removing the deteriorated timber beam and installing a steel support beam designed specifically to withstand the harsh marine environment. Steel was selected to provide improved durability, structural stability, and resistance to corrosion compared with the original timber construction. To ensure full structural compatibility and long-term reliability, the existing approach poles were also replaced as part of the repair works. The existing approach luminaires were retained, reinstalled, and recommissioned once the new support structure was in place.

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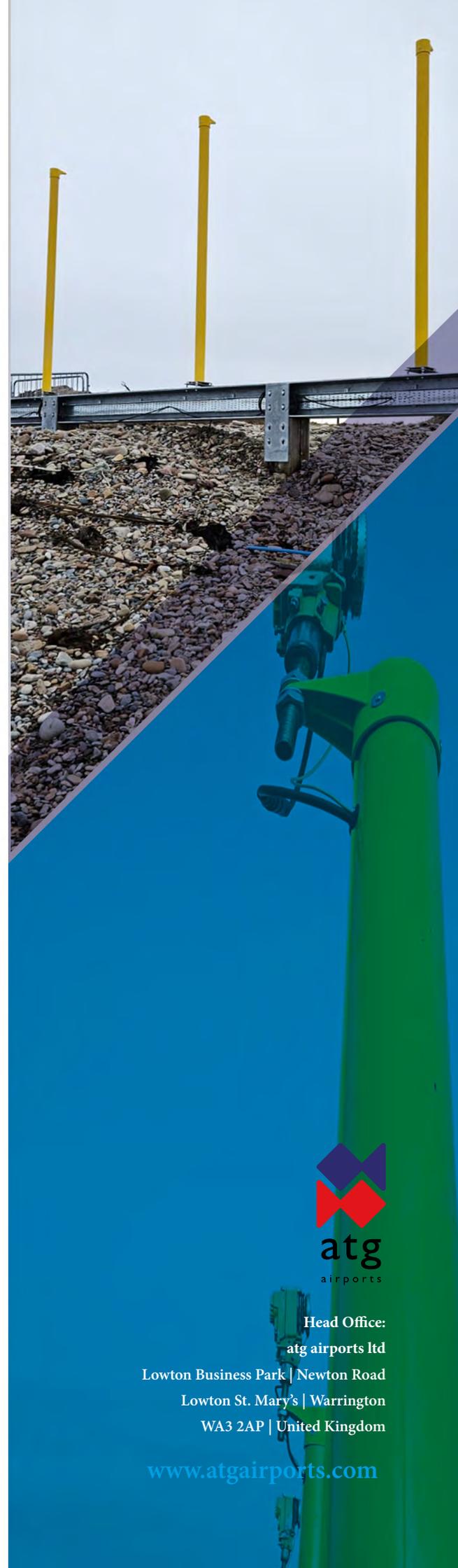
Because the approach bar is located within a publicly accessible coastal area, the works required careful planning and strict safety controls. The project began with the establishment of a secure exclusion zone, including clearly barriered work areas to protect the public. Vegetation and shrubbery surrounding the approach bar and adjacent AGL pits were cleared to allow safe access to transformers and secondary cabling.

The existing approach poles and luminaires were carefully removed to allow the safe dismantling of the life-expired timber beam. Following removal, the new steel beam was installed and securely fixed in position. Replacement approach poles were then installed, after which the existing approach lights were refitted, aligned, tested, and fully commissioned. Electrical testing confirmed improved circuit performance following completion of the works.

The entire programme was completed within one week, demonstrating efficient planning and delivery in a challenging environment. Close coordination with airfield stakeholders ensured disruption to operations was kept to an absolute minimum throughout the repair and commissioning phases. Maintaining operational continuity while delivering a permanent structural improvement was a key success factor for the project.

The completed repair has significantly improved the resilience of the Runway 23 approach lighting installation. Replacing the deteriorated timber beam with a steel support structure provides a long-term solution better suited to the coastal environment, reducing future maintenance requirements and improving reliability. The project also delivered enhanced electrical performance and restored confidence in the structural integrity of the installation.

This repair project demonstrates how targeted infrastructure intervention can extend asset life and improve operational reliability without the need for full system replacement. By combining practical engineering design with safe and controlled site delivery, the Runway 23 approach bar at RAF Lossiemouth has been successfully restored to provide dependable performance in one of the UK's most demanding operating environments.



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