

CASE STUDY AUSTRALIA WEST MUSGRAVE AIRPORT

PROJECT KEY FACTS

Airport: West Musgrave Airport

Location: Australia

Application: Mining Airstrip

Runway: 2 500 m

Solution: Solar Aerodrome Lighting

Buyer: BHP Group

Year of Installation: 2024



OVERVIEW

West Musgrave Airport, operated by BHP Group, serves one of Australia's most remote mining sites. The nearest city, Kalgoorlie, is approximately 900 kilometers (560 miles) away. The airport faced the challenge of installing reliable airfield lighting to enhance safety and operations. Given the airport's remote location and the difficulties associated with maintaining traditional cabled lighting systems, the Company sought an innovative solution.

CHALLENGE

Extreme Temperatures and Weather

The intense daytime heat, with average summer temperatures ranging from 30°C to 49°C (86°F to 120°F), combined with frequent sandstorms and thunderstorms, required an aerodrome lighting system that was both durable and low-maintenance.

Remote Location

The airport's isolation meant that conventional wired systems were impractical due to the difficulties and high costs associated with installation, maintenance and repairs.

Given these challenges, a reliable, sustainable, and easy-to-install solution was imperative for the continued safe operation of West Musgrave Airport.

SOLUTION

S4GA's Solar Aerodrome Lighting System has been found as the perfect fit for West Musgrave Airport, addressing the unique challenges of its remote and harsh environment.

It operates reliably **365-day a year** using solar energy, reducing costs and eliminating grid dependency. The system is **durable**, can withstand extreme temperatures and harsh weather, and can be **rapidly installed** for fast restoration of airport operations. Additionally, it requires **minimal maintenance** and complies with Australian CASA regulations, as well as international aviation standards.

Powered by a 24 VDC system, S4GA's solution aligns with Australia's preference for 24 VDC power due to its enhanced electrical safety. This low-voltage option is exceptionally safe to handle, minimizing the risk of injury in case of mishandling. All installation work was carried out by **Aerodrome Management Services (AMS)**.

By choosing S4GA, West Musgrave Airport not only enhanced its operational safety but also demonstrated the effectiveness of solar-powered solutions in the most demanding conditions.



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S4GA PRODUCTS



SOLAR RUNWAY
EDGE LIGHT



SOLAR RUNWAY
THRESHOLD END
LIGHT



SOLAR TURNING
PAD LIGHT



SOLAR TAXIWAY
EDGE LIGHT



SOLAR ENGINE
MICRO



LED PAPI LIGHT



UR-1 WIRELESS
CONTROLLER



UR-7 PAALC
CONTROLLER



ALCMS CONTROL
& MONITORING
SYSTEM



UR-201 CONTROL
& MONITORING
UNIT



UR-101 HANDHELD
CONTROLLER

APPLICATION PHOTOS

