Council Solar Farm Inspections

80 Minutes

taken to inspect over 5000 solar panels, traditionally takes days.

AT A GLANCE

DETAILS

Organisation: Durham County Council
Operator: Heliguy
Location: Durham, UK
Industry: Renewable Energy
Activity Type: Solar Panel Inspection

HIGHLIGHTS

- Over 5000 solar panels inspected
- 80 minute operation
- The council can now track performance and predict maintainance needs.

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ISSUE

Inspecting solar farms is a **time-intensive** and resource-heavy task. Traditionally, inspections at Durham County Council's Morrison Busty depot involved staff manually **scanning over 5,000 solar panels with handheld thermal scanners**, taking several days to complete. This method was inefficient, prone to **human error**, and did not provide real-time data. Additionally, certain areas of the 23-acre solar farm were **difficult to access**, limiting the ability to conduct frequent inspections.

SOLUTION

Durham County Council adopted an innovative drone-in-a-box solution to enhance inspection efficiency. Utilising a thermal drone, the council conducted a **rapid aerial survey of the entire solar farm in just 80 minutes**—a fraction of the time previously required. The drone was launched from a DJI Dock 2, an autonomous station capable of sending the drone airborne on demand. The high-resolution thermal imaging capabilities of the drone **allowed operators to detect invisible defects,** such as disconnected lines or faulty panels, that could compromise the efficiency of the solar array. By integrating the drone data into a Smart City AI management system, **the council can now track performance, predict maintenance needs, and optimise energy output**.

BENEFITS

Time
Reduced inspection duration from **multiple days** to just **80 minutes**.

Enhanced Safety
– Removed the need for staff to navigate hazardous areas, improving workplace safety.

Cost efficiency
Enables more frequent inspections, leading to faster response times for repairs and increased operational efficiency.

According to Heliguy