

CASE STUDY

20 Inspections in a Day – by



**Renewable
Field Services**

ABOUT US

Perceptual Robotics is a UK based technology company, focused on drone automation and AI services in the field of Wind Turbine Blade Management. Our services cover from field inspection to data processing and repair management.

Our Dhalion system has inspected and processed thousands of turbines worldwide.

OVERVIEW

This case study highlights how Renewable Field Services leveraged automation to overcome inspection inefficiencies and weather-related downtime.

Through adopting Dhalion, Renewable Field Services has been able to carry out faster, more reliable, and weather-resilient inspections, setting a **record of 20 high quality inspections in a day (July '25) in Scotland**.

FIGURES

- **400+** inspections completed in 2024
- **20 Vestas inspections in a single day**, setting a new productivity record
- **Low/no wind days** transformed into viable inspection opportunities
- Significant **reduction in downtime** and increased seasonal productivity

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ABOUT THEM

Renewable Field Services is a blade specialist contractor offering inspection, repair, and maintenance services to wind turbine operators across multiple regions. Their experienced team delivers a full turnkey solution, including Authorised and Competent Technicians, helping asset owners maximise energy output and minimise downtime.

Challenges



Weather dependency: before Dhalion **Low- or no-wind days** were marked as “weather delay days,” reducing available inspection windows.



Operational interruptions: before Dhalion, flight path errors and lidar glitches caused inefficiencies and rework.



Scaling difficulties: Delivering more inspections without compromising quality was a challenge before implementation.



SPECIAL API

Perceptual Robotics also delivered a custom API integration, **enabling seamless transfer of inspection data** directly into Renewable Field Services' internal system: **windmanager.io**.

This eliminated manual data handling, reduced errors, and ensured faster, data-driven decision-making.

RESULTS

"The ability to now inspect on low/no wind days due to not requiring the rotor to be positioned has significantly reduced our down time. This has therefore increased our seasonal productivity." — **Renewable Field Services**

Inspections
400+

Record
20
in a day



ALL SEASONS

"Image quality has been excellent throughout the blade season (for us this has included spring, summer, autumn & winter)." — **Renewable Field Services**

The fact that Dhalion can inspect with no wind or winds up to 12 m/s and from 0°C to 35°C makes it possible to extend the inspection season.

01

Dot Aquisition
April 2024

02

Training
1 day training in Bristol

03

Inspections
400 inspections delivered in 8 months with one unit and one pilot

04

Record breaking
In July 2025 their pilot did 20 inspectins in a day (full wind farm)



Field Solution

Dhalion Dot system
Drone: DJI Matrice 350
Camera: Zenmuse P1



Data Processing

AI Damage Detection
AI Classification
Client Blade Experts
API to internal platform

FINAL STEP

By combining reliable autonomous technology, smart integration, and responsive collaboration, Renewable Field Services has transformed its inspection operations, delivering more inspections in less time, under a wider range of conditions, and with consistently excellent results.