

Drone Inspection Report

Structured findings for engineering, maintenance, and asset-management teams.

CLIENT	North Ridge Energy
SITE	Ridgeway Solar & Substation
INSPECTION DATE	08 July 2026
REPORT ID	FS-DR-20260708-017

ASSET HEALTH

18 findings

3 require urgent action

91.6% inspection coverage

94.1% mean model confidence

Report contents

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Inspection overview



Finding register



Annotated defect evidence



Coordinates & asset location



Classification, severity & confidence



Measurements & thermal readings



Maintenance priority



Historical comparison



Visual asset models



Exportable work orders

Inspection overview

Summary of inspected assets, flight activity, imagery volume, coverage, and risk distribution.

MISSION

Ridgeway inspection

Solar farm, substation wall, tower corridor, and wind turbine.

Flight duration **62 min**

Area covered **1.84 km2**

Assets inspected **548**

RGB images **3,402**

Thermal frames **1,184**

Point-cloud points **38.4M**

18

validated findings

3

critical severity

91.6%

inspection coverage

94.1%

mean confidence

Risk distribution



3

Critical

5

High

7

Medium

3

Low

NEXT
Prioritize
F-001 to
F-003

Finding register

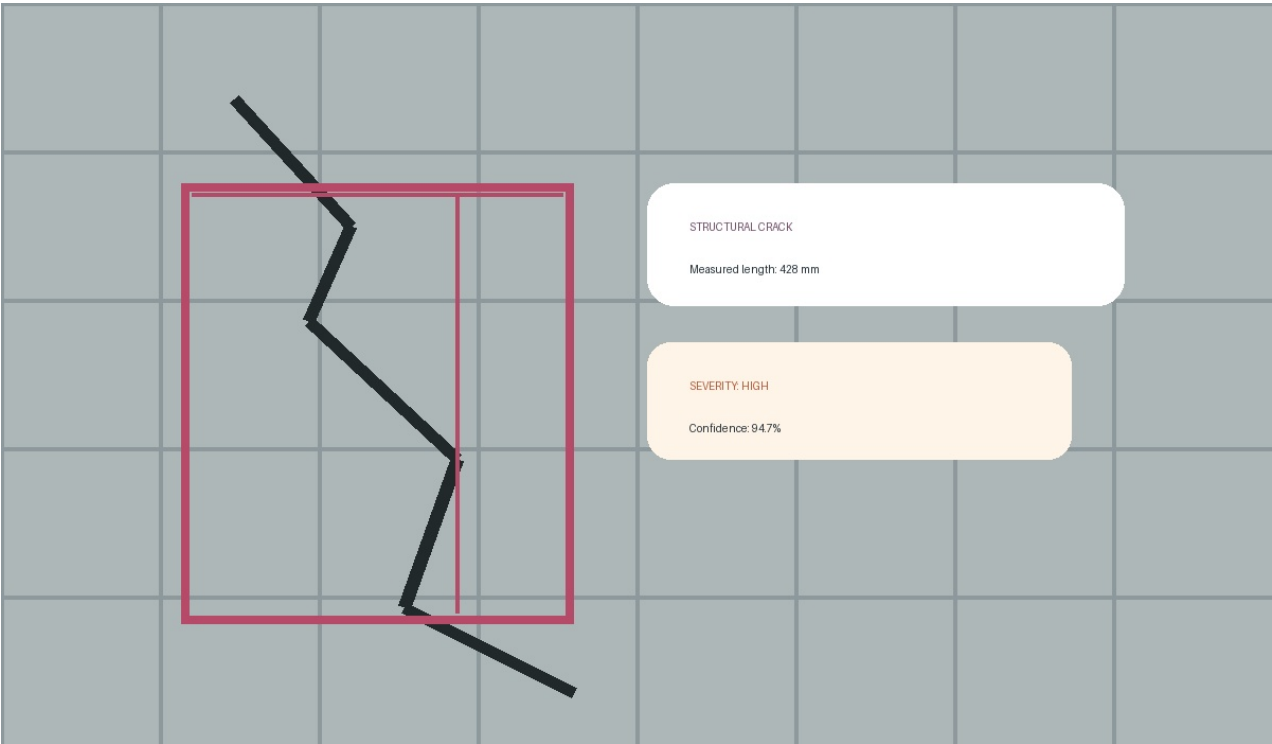
Prioritized list of validated findings with location, severity, confidence, and recommended action.

ID	Finding	Location	Severity	Confidence	Priority	Owner
F-001	Thermal hotspot - inverter terminal	Inverter 14 / Bay 3	CRITICAL	97.1%	Immediate	Electrical lead
F-002	Longitudinal concrete crack	Wall E-14 / 2.4 m	HIGH	94.7%	Engineering	Civil engineer
F-003	Corrosion at support connector	Tower T6 / L3 west	HIGH	92.8%	7 days	Asset owner
F-004	Vegetation clearance risk	Corridor C / span 08	MEDIUM	90.3%	14 days	Site ops
F-005	Panel string anomaly	Array A17 / row 22	MEDIUM	96.4%	Monitor	Solar O&M
F-006	Damaged perimeter fencing	Boundary west / 160 m	LOW	89.8%	30 days	Site ops

REGISTER NOTE Each row links evidence, coordinates, measurements, and work-order status in the full inspection system.

Annotated defect evidence

High-resolution visual evidence with boundaries, labels, measurements, and confidence scores.



FINDING F-002

Longitudinal concrete crack

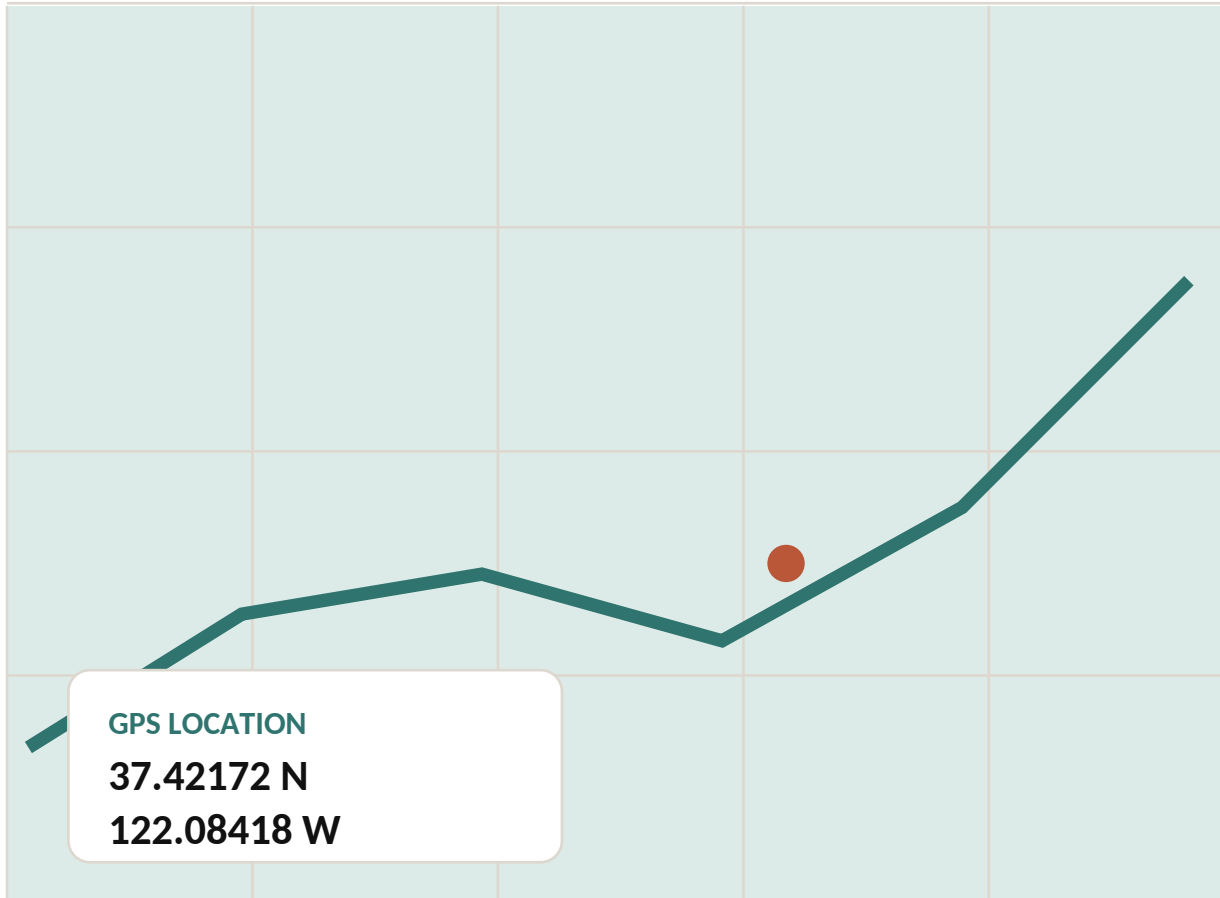
Asset	Substation wall E-14
Defect type	Structural crack
Measured length	428 mm
Estimated width	2.8 mm
Severity	High

STATUS

Validated by inspector

Coordinates & asset-relative location

Pinpoint each finding using GPS, altitude, map references, and operational asset identifiers.



ASSET-RELATIVE

Substation wall / E-14

East elevation • Segment 05

2.4 m above finished grade

Altitude: 31.8 m AMSL

FIELD NAVIGATION

- Open mapped finding
- Navigate to asset segment
- Confirm on-site orientation
- Capture repair evidence

Classification, severity & confidence

AI outputs are paired with configurable severity logic and transparent review thresholds.

DEFECT CLASSIFICATION

Structural crack

Concrete / civil asset

Inspector review recorded

SEVERITY RANKING

HIGH

Progression risk + critical location

Inspector review recorded

MODEL CONFIDENCE

94.7%

Validated for engineering review

Inspector review recorded

CONFIGURABLE SEVERITY LOGIC

Defect size

Asset criticality

Location

Progression

Operating risk

Repair urgency

Measurements & thermal readings

Quantified defect dimensions and calibrated thermal values support prioritization and maintenance planning.

DEFECT MEASUREMENTS

F-002 / Concrete crack

Length 428 mm

Maximum width 2.8 mm

Affected area 1,190 mm²

Elevation 1.6 m AFG

Clearance 164 mm

TREND

+12% length since previous inspection

THERMAL MAP / RADIOMETRIC



MAX

54.7 C

MIN

31.6 C

AVG

37.8 C

AMBIENT

33.1 C

Thermal delta: +16.9 C above surrounding panel string

Maintenance priority

Each validated finding is assigned a clear maintenance path, owner, due date, and next decision.

IMMEDIATE REPAIR	F-001	Isolate inverter terminal and complete electrical safety assessment.	Electrical lead Owner	08 Jul 2026 Due
ENGINEERING REVIEW	F-002	Confirm crack cause, moisture pathway, and repair specification.	Civil engineer Owner	10 Jul 2026 Due
SCHEDULED MAINTENANCE	F-003	Remove corrosion, inspect fasteners, and restore protective coating.	O&M crew Owner	15 Jul 2026 Due
CONTINUED MONITORING	F-005	Repeat thermal scan after load normalization and compare delta T.	Asset analyst Owner	08 Aug 2026 Due

Historical comparison

Repeat inspections show whether defects are new, stable, worsening, recurring, repaired, or no longer visible.

NOT DETECTED**14 Jan 2026**

Baseline inspection

NEW**18 Apr 2026**

312 mm crack

WORSENING**08 Jul 2026**

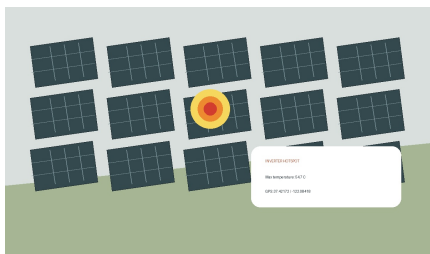
428 mm crack

**CHANGE DETECTED****+116 mm**

Crack length increased 37.2% over 81 days. Severity changed from Medium to High.

Visual asset models

Spatial outputs add inspection context through orthomosaics, thermal maps, point clouds, and digital twins.



ORTHOMOSAIC

Georeferenced site-wide visual context

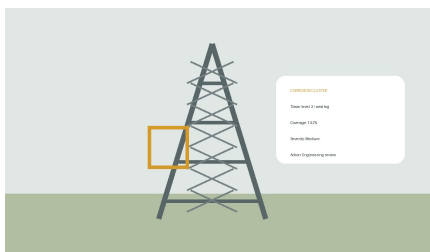
Click finding markers to open evidence and work-order records.



THERMAL MAP

Radiometric anomaly distribution

Click finding markers to open evidence and work-order records.



POINT CLOUD

3D geometry and clearance context

Click finding markers to open evidence and work-order records.



DIGITAL TWIN

Component-based asset review

Click finding markers to open evidence and work-order records.

Exportable work orders

Repair-ready records contain evidence, coordinates, severity, ownership, notes, and recommended completion dates.

WORK ORDER WO-DR-017

IMMEDIATE

Inspect and repair inverter terminal hotspot

Finding ID	Asset	Location
F-001	Inverter 14	Bay 3 / Terminal T9
GPS	Severity	Assigned to
37.42172, -122.08418	Critical	Electrical lead
Target date	Status	Evidence
08 Jul 2026	Open	Thermal + RGB

RECOMMENDED ACTION

De-energize affected circuit, inspect terminal torque and conductor condition, replace damaged components, document repair, and complete verification scan under stable load.

Report notes & legend

How to interpret severity, confidence, measurements, and maintenance requirements.

CRITICAL

Immediate safety or operational risk. Isolate or repair without delay.

HIGH

Engineering review or corrective action required within a defined window.

MEDIUM

Schedule maintenance or additional inspection based on operating context.

LOW

Continue monitoring or include in routine maintenance planning.