



Thermal Imaging Specialists

# Lightning Audit

*Servicing Australia wide.*

<b>CLIENT:</b>	<b>EXAMPLE REPORT</b>
<b>SITE ADDRESS:</b>	<b>SITE NAME</b>
	<b>ADDRESS</b>
<b>DATE COMPLETED:</b>	<b>DD MM YYYY</b>
<b>REPORT PREPARED FOR:</b>	<b>CONTACT PERSON</b>
<b>ELECTRICIAN:</b>	<b>SHAUN CHALWELL – Electrician No. 135903</b>
<b>TEST EQUIPMENT:</b>	<b>FLUKE 1674FC MULTIMETER – #6644012</b>
	Calibration Due 08/01/2027

## EXECUTIVE SUMMARY

### 1. LIGHTNING AUDIT METHODOLOGY

Thermal Scanners conducts lightning protection system inspections in accordance with the inspection and maintenance principles of **AS/NZS 1768 Lightning Protection**, assessing the condition, continuity, and integrity of installed lightning protection and surge diversion systems. The inspection provides an audit of the lightning protection system as found on-site and evaluates:

- **Physical condition of system components**
- **Electrical continuity to the building earthing system**
- **Evidence of deterioration or defects**
- **Presence and condition of surge protection systems**
- **Bonding of conductive building elements**

This inspection assesses the current installed system only and does not constitute verification of system design, protection level, or adequacy for the structure.

All testing is performed by qualified electrical technicians using calibrated test instruments, including FLUKE 1674 Multifunction Testers, ensuring accuracy, traceability, and compliance with industry best practices.

### 2. ASSET REGISTER & REPORTING

The audit report includes:

- A detailed asset register of inspected lightning protection system components.
- Recorded resistance (ohms) measurements demonstrating continuity to a known reference earth.
- Observations and identified defects.
- Photographic evidence documenting system condition.

Photographs included at the end of the report, document the **as-found condition** of the lightning protection system at the time of inspection.

### 3. INSPECTION SCOPE

The lightning protection inspection includes the following activities.

#### 3.1. Visual Inspection of Lightning Protection System

- Physical inspection of accessible lightning protection components including air termination systems, roof conductors, down conductors, and earth connections.
- Roof-level inspection where safe access is available.
- Assessment of mechanical integrity, corrosion, damage, loose connections, and installation condition.
- Verification of bonding between lightning protection components and building structure.
- Inspection of accessible earthing connections associated with the lightning protection system.
- Inspection of earth pits and associated infrastructure where access is available.

### 3.2. Earth Continuity & Resistance Testing

- Electrical continuity testing of lightning protection system components.
- Measurement and recording of resistance values (ohms) between lightning protection components and a known reference earth.
- Testing is typically conducted using the closest switchboard earth reference, representing a conservative (worst-case) continuity path through the building earthing system.

### 3.3. Bonding of Incoming Conductive Services

- Inspection of conductive or metal-clad services entering the building from roof level.
- Includes HVAC systems, structural metalwork, and other bonded elements where applicable.
- Verification of bonding integrity where accessible.

### 3.4. Main Switchboard & Surge Protection Inspection

- Examination of the Main Switchboard (MSB).
- Verification of the presence of surge diversion or surge protection devices where installed.
- Visual inspection of surge protection equipment condition.

## 4. INSPECTION LIMITATIONS

### 4.1. System Audit Only — Design Verification Excluded

This inspection is an audit of the installed lightning protection system and does not assess:

- Original system design or engineering adequacy
- Lightning protection level or coverage design
- Risk assessment or system performance modelling
- Compliance of system design with building requirements

Verification of system design requires detailed engineering assessment and is outside the scope of this inspection.

### 4.2. Reference Earth Testing Method

Continuity testing is performed using the building's accessible earthing system as the reference point. Testing does not include temporary trailing conductors or direct measurement leads from roof components to earth electrodes.

### 4.3. Access Limitations

The inspection is limited to safely accessible areas at the time of attendance. Any inaccessible components or areas are identified within the report where applicable.

## 5. DISCLAIMER

This report has been prepared by **Thermal Scanners Pty Ltd** in accordance with the terms and conditions as detailed in the quotation, and agreed to by both parties upon offer and acceptance of an order for services as per that quotation.

The test results shown herein are accurate at the time the test was affected. However, no responsibility can be accepted for variations in readings or liability for loss or damage whether consequential or otherwise and whether tort or in contract due to thermal exceptions that were either not indicated by the test taken or occurred at a subsequent time.

To the extent that it can be shown the test results were not accurate at the time of testing, this company's liability shall be strictly restricted to re-performance of the test and supply of new test results. Should you have any queries regarding this report or require additional copies please contact **Thermal Scanners Pty Ltd** via email: [admin@thermalscanners.com.au](mailto:admin@thermalscanners.com.au).

Finally, Thermal Scanners would like to thank you for the opportunity to carry out the Lightning Audit of your site.

We look forward to building a successful working relationship now and in the future.



**Tayla Wells**

General Manager - Thermal Scanners  
Level 1 Thermographer – AINDT No.7219



**Thermal Scanners**  
Thermal Imaging Specialists



## Lightning Audit Information

Please note, the following:

- There was no specific lightning rods or strap system in place on the buildings, however air conditioning ducts and metal objects on roof were earthed
- One air conditioning duct was found to have resistance above 10 OHMS which is the maximum allowed under AS 1768. It is recommended to investigate and enact repairs.
- The Main Switchboard had a Surge Diverter present and was operational at the time of inspection.

<b>Client:</b>	Example Report	<b>Address:</b>	Address Street, Suburb
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Level/Area	Location	Asset	Earth Reference	Measurement (Ω)	Test Date	Next Test Due	Comments
1 Sage Street - Building A	X	X	X	X	19/02/2026	Feb-2027	No Metal Objects to Test Traveling from Roof to Inside Building
1 Sage Street - Building B	X	X	X	X	19/02/2026	Feb-2027	No Metal Objects to Test Traveling from Roof to Inside Building
3 Monopoly Drive - Building A	Roof	Exhaust From Hot Water Plant	Pump Control (Hot Water Plant Room)	1	19/02/2026	Feb-2027	Rust was identified on the Metal Equipment
3 Monopoly Drive - Building A	Roof	Hot Water System	Pump Control (Hot Water Plant Room)	1	19/02/2026	Feb-2027	Rust was identified on the Metal Equipment
3 Monopoly Drive - Building A	Roof	Air Conditioning Duct in Cage	Pump Control (Hot Water Plant Room)	4	19/02/2026	Feb-2027	Rust was identified on the Metal Equipment
3 Monopoly Drive - Building A	Roof	Air Conditioning Duct in Cage	Pump Control (Hot Water Plant Room)	5	19/02/2026	Feb-2027	Rust was identified on the Metal Equipment
3 Monopoly Drive - Building B	X	X	X	X	19/02/2026	Feb-2027	No Metal Objects to Test Traveling from Roof to Inside Building
7 Sydney Way - Building A	X	X	X	X	19/02/2026	Feb-2027	No Metal Objects to Test Traveling from Roof to Inside Building
7 Sydney Way - Building C	Roof RHS From Plant Room	Air Conditioning Duct	Isolator On Duct	1	19/02/2026	Feb-2027	Rust was identified on the Metal Equipment
7 Sydney Way - Building C	Roof RHS from Plant Room	Air Conditioning Duct	Isolator on Duct	176	19/02/2026	Feb-2027	FAIL above 10 OHMS
7 Sydney Way - Building C	Roof Directly LHS from Plant Room	Air Conditioning Duct	Isolator on Duct	1	19/02/2026	Feb-2027	Rust was identified on the Metal Equipment

Level/Area	Location	Asset	Earth Reference	Measurement (Ω)	Test Date	Next Test Due	Comments
7 Sydney Way - Building C	Roof Middle Air Conditioning Duct	Air Conditioning Duct	Isolator on Duct	5	19/02/2026	Feb-2027	Rust was identified on the Metal Equipment
7 Sydney Way - Building C	Roof furthest Air Conditioning Duct	Air Conditioning Duct	Isolator on Duct	1	19/02/2026	Feb-2027	Rust was identified on the Metal Equipment
7 Sydney Way - Building C	Roof Plant Room	Gas Exhaust Pipes Leaving Plant Room	Grundfos Pump Control (Plant Room)	1	19/02/2026	Feb-2027	Rust was identified on the Metal Equipment

**Lightning Protection System Photo(s)**

<b>Location:</b>	3 Monopoly Drive - Building A - Roof
<b>Asset:</b>	Hot Water System
<b>Comment:</b>	Evidence of Rust
	

<b>Location:</b>	7 Sydney Way - Building C - Roof RHS from Plant Room
<b>Asset:</b>	Air Conditioning Duct
<b>Comment:</b>	Resistance was measured to be above 10 OHMS. It is recommended to investigate and install new strapping to decrease resistance to below 10 OHMS.
	