



JS Davidson

Aerial Roof Condition Assessment

Industrial Facility Roof Inspection Report



Figure 1. Aerial overview of the JS Davidson Bourne site roof areas.

Client: JS Davidson

Site: Bourne

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Operator: Greg Czyzewski

Inspection Type: Roof Monitoring Programme

Report Status: Visual Condition Assessment

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1. Executive Summary

Vista Fly was instructed to undertake a drone-based aerial roof inspection of the JS Davidson Bourne facility. The purpose of the inspection was to provide a preliminary visual assessment of the roof coverings, drainage features, roof junctions, plant deck areas, flashings, perimeter details and associated roof-mounted components.

The inspection was structured around four defined roof zones. Zone 1 and Zone 2 comprise the principal corrugated roof areas. Zone 3 includes the loading bay / joint flashing interface and adjacent corrugated roof covering. Zone 4 comprises the plant deck area containing mechanical plant, access stairs, rooflights, pipework and associated service infrastructure.

The inspection identified several visible maintenance concerns, including:

- Widespread moss, lichen and organic debris on corrugated roof sheets.
- Significant debris accumulation within roof sheet valleys.
- Vegetation growth at roof-to-wall junctions, drainage channels and plant deck edges.
- Blocked or restricted drainage paths, particularly at abutments and plant deck areas.
- Standing water / ponding on the flat plant deck.
- Localised corrosion to pipework, steel supports, handrails, fixings and roof-mounted service components.
- Weathering and staining to rooflights, cladding bases, cappings and flashings.
- Loose redundant pipes, metalwork and service cables on the plant deck.
- General ageing of profiled fibre-cement or similar corrugated roof coverings.

From the aerial observations captured, no widespread structural displacement of the main roof sheets was identified. However, the extent of organic growth, drainage restriction and plant deck contamination indicates that planned maintenance is required. The priority actions should be cleaning drainage paths, removing vegetation, inspecting roof sheet condition at close range, treating corrosion, and removing loose redundant materials from the plant deck.



Figure 2. Oblique aerial view of the main warehouse roof.

2. Instruction, Purpose and Scope

The inspection was undertaken to provide a structured aerial visual assessment of the roof areas at the JS Davidson Bourne site.

The purpose of the inspection was to:

- Establish a repeatable drone inspection methodology using zone and grid referencing.
- Identify visible roof defects and maintenance concerns.
- Review the condition of roof coverings, flashings, cappings, drainage channels and plant areas.
- Highlight areas where further close-range inspection may be required.
- Provide image-based observations for future roof monitoring.

The inspection included:

- Aerial overview imagery.
- Zone-based grid mapping.
- Detailed roof surface imagery.
- Close-range inspection of roof edges, abutments, joint flashings and plant deck areas.
- Review of visible drainage issues, biological growth, corrosion and loose components.

No intrusive inspection, sampling, moisture testing, internal inspection, physical access survey or structural assessment was undertaken.



Figure 3. Aerial view of the JS Davidson facility illustrating the extent of the roof areas included in the inspection.

3. Property Description

The inspected property comprises an industrial facility with multiple connected roof sections. The principal roof areas appear to be finished with profiled corrugated fibre-cement or similar industrial roof sheeting.

The site includes:

- Large pitched / profiled corrugated roof areas.
- Perimeter metal cappings and roof edge flashings.
- Roof-to-wall junctions and abutment details.
- Loading bay / joint flashing areas.
- Service pipework and roof-mounted support steelwork.
- A flat plant deck containing mechanical plant, condensers, rooflights, stair access, handrails and service infrastructure.

The roof system includes a mix of older roof coverings and plant-related details. The visual condition varies across the site, with larger uninterrupted roof fields showing general ageing, while junctions, edges, plant areas and drainage interfaces show a higher concentration of defects.



Figure 4. Oblique aerial view of the roof structure at the JS Davidson facility.

4. Inspection Methodology

The inspection was carried out using a DJI Mavic 4 Pro drone platform.

The roof was divided into four inspection zones:

- **Zone 1:** Main roof area part 1.
- **Zone 2:** Main roof area part 2.
- **Zone 3:** Loading bay / joint flashing area.
- **Zone 4:** Plant area.



Figure 5. Zones map

A grid referencing system was applied to each zone to allow defects to be located using Zone + Grid coordinates. The inspection used structured aerial passes and targeted detail imagery to capture roof condition evidence.

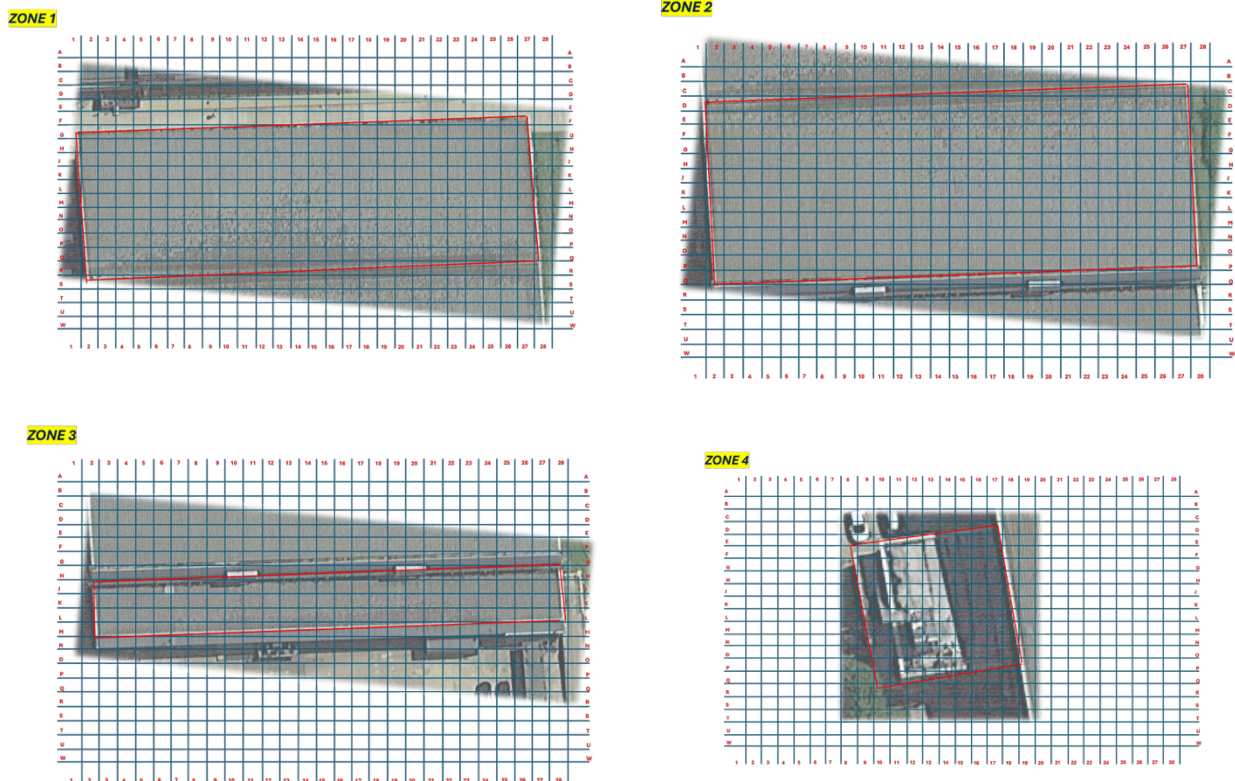


Figure 6. Zone Grid Reference maps used during the aerial inspection

5. Inspection Limitations

This report is based solely on visible aerial imagery captured during the drone inspection.

The report does not constitute:

- A full technical roof survey.
- A structural assessment.
- An asbestos survey.
- A waterproofing integrity test.
- A drainage capacity assessment.
- An intrusive roof inspection.
- A physical roof access inspection.

The roof coverings appear consistent with corrugated fibre-cement or similar profiled industrial sheeting, but the material type has not been confirmed by sampling or laboratory testing.

Concealed defects may exist beneath roof sheets, flashings, cappings, waterproofing membranes, plant bases or service penetrations. Internal water ingress, hidden corrosion, fixing deterioration or structural defects cannot be confirmed from aerial imagery alone.

The observations should therefore be considered preliminary visual findings. Where defects have been identified, close-range inspection by a competent roofing contractor, building surveyor, structural engineer or relevant specialist is recommended.

6. Overall Roof Condition Overview

The roof remains visually operational at a macro level, with no obvious widespread collapse, large-scale sheet displacement or major roof plane distortion visible from the drone imagery.

However, the inspection identified widespread maintenance-related deterioration. The most significant issues relate to biological growth, drainage restriction, corrosion, plant deck contamination and roof detail vulnerability.

The corrugated roof coverings show long-term weathering, staining and biological colonisation. Moss and debris are present within many roof sheet valleys. This condition can retain moisture against the roof covering and may accelerate deterioration over time.

The plant area shows more concentrated maintenance issues, including standing water, moss growth, loose pipework, redundant materials, corroded service components and staining around plant equipment.

Overall, the site would benefit from a targeted maintenance programme prioritising:

1. Drainage clearance.
2. Vegetation removal.
3. Corrosion treatment.
4. Removal of loose redundant items.
5. Close inspection of roof sheets, flashings and cappings.
6. Review of plant deck waterproofing and drainage falls.



Figure 7. General Aerial Overview showing whole site.

7. Zone-by-Zone Assessment

Zone 1 – Main Roof Area Part 1

Zone 1 comprises a large, corrugated roof area with perimeter capping and roof edge details.

The roof sheets appear generally aligned, with a regular fixing pattern visible across the profiled roof covering. No obvious large-scale sheet displacement was visible from the imagery reviewed.

Observed characteristics include:

- General weathering of corrugated roof sheets.
- Lichen growth and surface staining.
- Organic debris accumulation in roof sheet valleys.
- Localised moss growth.
- Weathering and biological contamination to perimeter cappings.
- Evidence of drainage restriction at selected edge details.
- General discolouration consistent with long-term exposure.

Professional interpretation:

Zone 1 appears visually stable in terms of broad roof sheet alignment. However, the amount of biological growth and debris present across the roof surface indicates that routine maintenance is required. Attention should be given to drainage paths, gutters, roof edges and valley areas where moss and debris are retaining moisture.

Recommended action:

- Clear moss and debris from roof sheet valleys.
- Inspect drainage outlets and gutters.
- Clean and inspect perimeter cappings.
- Check roof sheet laps and fixings at close range.
- Monitor areas of heavier staining for possible moisture retention.



Figure 8. Corrugated roof sheet condition / Drainage issue

Zone 2 – Main Roof Area Part 2

Zone 2 comprises another principal corrugated roof area and includes roof edge interfaces, cappings, junction details and areas adjacent to service pipework.

Observed characteristics include:

- Weathered corrugated roof sheets.
- Moss, lichen and organic debris within roof sheet valleys.
- Vegetation growth at roof-to-wall and roof edge interfaces.
- Biological contamination to cappings and cladding bases.
- Localised staining consistent with water runoff.
- Corrosion to fixings, brackets, service pipework and associated metal elements.
- Restricted drainage areas at the junction between roof coverings and vertical cladding.
- Surface contamination and weathering around service interfaces.

Professional interpretation:

Zone 2 shows a higher concentration of maintenance-related issues than a clean uninterrupted roof field. The junction between the corrugated roof covering, cladding base and associated drainage channel appears particularly vulnerable due to moss, sediment and vegetation growth. These conditions are likely to reduce drainage efficiency and may increase the risk of water retention at roof details.

Recommended action:

- Clear vegetation and sediment from abutment gutters and drainage channels.
- Inspect roof-to-wall flashing interfaces.
- Check capping fixings and edge details.
- Treat localised corrosion to brackets, pipework and fixings.
- Remove debris from roof sheet valleys.
- Inspect areas beneath service pipework where access may be restricted.



Figure 9. Biological growth

Zone 3 – Loading bay / Joint Flashing Area

Zone 3 includes the loading bay roof area and the joint flashing interface with Zone 2. This zone contains roof-to-wall junctions, pipework, steel support elements, access structures and corrugated roof sheets beneath service runs.

Observed characteristics include:

- Significant vegetation growth at the joint flashing / abutment area.
- Moss and organic debris along the roof-to-wall interface.
- Restricted drainage beneath cladding overhangs.
- Debris accumulation behind and beneath service pipework.
- Corrosion staining on cylindrical ducting and pipework.
- Corroded brackets, support steelwork, bolts and fixings.
- Damaged or missing pipe insulation in localised areas.
- Loose service wires or cables visible on roof surfaces.
- General ageing and staining of corrugated roof sheets.
- Moss and debris within corrugation valleys.
- Localised cracking or surface deterioration visible to selected corrugated sheets, requiring close-range confirmation.

Professional interpretation:

Zone 3 is a priority maintenance area because it contains several interacting risk factors: roof junctions, service pipework, support steelwork, restricted access areas and vegetation growth. The roof-to-wall interface appears to be collecting debris and moisture, which may accelerate corrosion and deterioration of adjacent materials.

Recommended action:

- Remove all vegetation and organic debris from the joint flashing area.
- Inspect the abutment flashing and drainage channel at close range.
- Clean beneath pipework and access steelwork.
- Treat corrosion to service supports and metalwork.
- Repair or replace damaged pipe insulation.
- Remove loose cables or redundant wiring from the roof surface.
- Carry out close inspection of corrugated sheets where surface cracking is visible.



Figure 10. Corroded / Exposed pipework



Figure 11. Vegetation Growth

Zone 4 – Plant Area

Zone 4 comprises the flat plant deck and associated mechanical plant, rooflights, access stairs, handrails, condenser units, pipework and service infrastructure.

Observed characteristics include:

- Standing water / ponding to several areas of the flat deck.
- Dark staining and surface contamination.
- Moss growth along parapet edges, around stair landings and near plant bases.
- Vegetation growth at deck edges and around service equipment.
- Loose redundant pipe sections and metal items stored on the roof surface.
- Coiled cables and redundant service materials present on the deck.
- Rusting to pipework, brackets, handrail elements, fixings and plant support components.
- Weathering and staining to rooflight / barrel-vaulted translucent covers.
- Staining around plant bases and service penetrations.
- Localised surface deterioration of the flat roof waterproofing.
- Ponding and moss accumulation around access stair areas.

Professional interpretation:

Zone 4 is the highest-priority maintenance area identified during the inspection. The concentration of standing water, vegetation, redundant materials, corrosion and plant equipment increases the risk of blocked drainage, localised water ingress, slip/trip hazards and progressive deterioration of deck waterproofing.

The presence of loose pipes, cables and redundant service components should be addressed as part of roof housekeeping. The standing water suggests that drainage falls, outlets or surface levels should be reviewed.

Recommended action:

- Remove loose redundant pipes, cables and scrap materials from the plant deck.
- Clear moss and vegetation from deck edges, plant bases and stair areas.
- Investigate drainage falls and outlets causing standing water.
- Clean contaminated deck surfaces.
- Inspect plant bases, rooflights and service penetrations.
- Treat corrosion to handrails, pipework, brackets and fixings.
- Undertake close-range waterproofing inspection to identify splits, cracks or failed laps.



Figure 12. Water ponding



Figure 13. Biological Growth / Loose pipework

8. Principal Defect Observations

Defect 01 – Widespread Biological Growth and Organic Debris to Corrugated Roof Sheets

Location: Zones 1, 2 and 3 – widespread across main corrugated roof areas

Priority: Medium

Risk Category: Moisture retention / material deterioration / drainage restriction

Moss, lichen and organic debris were observed across the corrugated roof sheets. The debris is concentrated within roof sheet valleys and along sheet laps.

The growth appears consistent with long-term environmental exposure and damp retention. While this does not confirm immediate roof failure, organic material can retain moisture against the roof covering and may contribute to progressive surface deterioration.

Potential consequences include:

- Increased moisture retention.
- Restricted drainage along roof sheet profiles.
- Accelerated weathering of sheet surfaces.
- Increased likelihood of blocked gutters and outlets.
- Concealment of cracks, damaged laps or fixing defects.

Recommended action:

Clear loose moss and organic debris using an appropriate non-damaging method. Inspect the roof sheets after cleaning to identify any concealed cracks, delamination, damaged fixings or lap defects.



Figure 14. Widespread organic debris retained within corrugated roof sheet valleys.

Defect 02 – Blocked / Restricted Drainage Channels at Roof Edges and Abutments.

Location: Zones 1, 2 and 3 – roof edges, abutments and joint flashing areas

Priority: High

Risk Category: Drainage failure / water ingress / corrosion

Several roof edge and abutment areas show moss, sediment, vegetation and standing debris. These are particularly visible where corrugated roof sheets meet vertical cladding or service zones.

Restricted drainage can allow water to remain at roof junctions for extended periods. This increases the risk of water ingress and corrosion to adjacent metal components.

Potential consequences include:

- Standing water accumulation.
- Overflow or bypassing of intended drainage paths.
- Corrosion of cappings, flashings and support steelwork.
- Water tracking beneath roof sheets or cladding.
- Localised roof edge deterioration.

Recommended action:

Clear all drainage channels, abutment gutters and edge details. Check outlet locations, falls and water discharge routes. Inspect flashings and capping joints once the area is clear.



Figure 15. Restricted drainage channel with moss, sediment and vegetation at the roof-to-wall junction.

Defect 03 – Vegetation Growth at Joint Flashing / Roof-to-Wall Interfaces.

Location: Zone 3 joint flashing with Zone 2; also selected Zone 2 roof edge interfaces

Priority: High

Risk Category: Drainage restriction / moisture retention / detailing failure

Substantial moss, grass and small vegetation growth were observed along the joint flashing and roof-to-wall interface. Vegetation is present behind cladding bases and beneath service pipework.

This indicates persistent moisture retention and accumulated sediment. The growth may be obstructing water flow and could be concealing deterioration of the flashing detail.

Potential consequences include:

- Blocked water discharge path.
- Moisture retained against flashings and roof sheets.
- Accelerated corrosion of adjacent metalwork.
- Increased risk of water ingress at the roof-to-wall junction.
- Root growth disturbing laps or sealant details.

Recommended action:

Remove vegetation and sediment from the junction. Inspect the flashing line, cladding base, gutter channel and any lap joints. Repair or reseal defective areas as required.



Figure 16. Established vegetation growth at the joint flashing and cladding base interface.

Defect 04 – Corrosion to Roof-Mounted Pipework, Supports and Fixings

Location: Zones 2, 3 and 4

Priority: Medium to High

Risk Category: Component deterioration / safety / future failure

Corrosion was observed to service pipework, brackets, bolts, support steelwork, grating fixings and plant-related metal components. In several areas, staining from rusted components is visible on adjacent surfaces.

The corrosion appears localised but widespread across exposed metal elements. This is typical of long-term external exposure, particularly where water is retained or drainage is restricted.

Potential consequences include:

- Progressive weakening of brackets or supports.
- Failure of fixings.
- Staining and deterioration of adjacent roof surfaces.
- Increased maintenance cost if corrosion is not treated.
- Possible risk from loose or weakened roof-mounted components.

Recommended action:

Carry out close-range inspection of corroded supports, brackets and fixings. Clean, treat and repaint corroded metalwork where serviceable. Replace heavily corroded components.



Figure 17. Corroded pipe support / service detail with deteriorated metal components.

Defect 05 – Loose / Redundant Service Materials and Debris on Plant Deck**Location:** Zone 4 Plant Area**Priority:** High**Risk Category:** Trip hazard / drainage obstruction / roof surface damage

Loose redundant pipe sections, metal parts and coiled service cables were observed on the plant deck. Several items appear to be resting directly on the roof surface.

Loose materials can damage waterproofing, obstruct drainage, create trip hazards and become displaced during high winds.

Potential consequences include:

- Puncture or abrasion damage to roof waterproofing.
- Blocked drainage routes.
- Trip hazards for maintenance personnel.
- Wind movement of loose components.
- Difficulty inspecting roof surfaces beneath debris.

Recommended action:

Remove all redundant materials and loose debris from the plant deck. Review whether any retained materials are required. Store necessary items off the roof surface or remove them from site.



Figure 18 Loose redundant pipe sections and materials stored on the plant deck.

Defect 06 – Standing Water / Ponding to Flat Plant Deck

Location: Zone 4 Plant Area

Priority: High

Risk Category: Waterproofing deterioration / drainage failure / slip hazard

Standing water and ponding were observed on the flat plant deck, particularly near access routes, stair landings and plant equipment areas.

Ponding indicates restricted drainage, insufficient falls, blocked outlets or surface settlement. Standing water can accelerate membrane deterioration and increase slip risk.

Potential consequences include:

- Accelerated deterioration of waterproofing.
- Increased risk of water ingress.
- Biological growth and surface contamination.
- Slippery access conditions.
- Additional loading on local deck areas.

Recommended action:

Clear drainage outlets and channels. Undertake a close-range deck survey to confirm falls, outlet condition and membrane integrity. Repair local low spots or defective waterproofing as required



Figure 19. Standing water and moss accumulation around the access stair and lower plant deck area.

Defect 07 – Vegetation Growth and Moss Accumulation to Plant Deck Edges

Location: Zone 4 Plant Area – perimeter edges, stair landing areas and plant bases

Priority: Medium to High

Risk Category: Drainage restriction / moisture retention / membrane damage

Vegetation and moss growth were visible along parapet edges, handrail bases, stair areas and plant bases. Some vegetation appears established in sediment deposits.

This indicates that dirt and moisture are being retained on the deck surface. Growth at edges and plant bases can conceal defects and restrict water movement.

Potential consequences include:

- Blocked drainage paths.
- Root disturbance to surface finishes or laps.
- Concealment of membrane defects.
- Increased surface moisture retention.
- Progressive deterioration around plant bases.

Recommended action:

Remove vegetation and sediment. Inspect waterproofing, upstands, plant bases and handrail penetrations after clearance. Improve maintenance cleaning frequency.



Figure 20. Vegetation and moss growth along plant deck edges and drainage areas.

Defect 08 – Weathered / Stained Rooflights and Adjacent Drainage Areas

Location: Zone 4 Plant Area

Priority: Medium

Risk Category: Material ageing / drainage restriction / water ingress

The barrel-vaulted translucent rooflight units show surface staining, weathering and dirt accumulation around their bases. Moss and debris are present nearby.

Rooflights and their upstands are common water ingress risk points. Debris around rooflight bases may restrict drainage and hold moisture against the waterproofing.

Potential consequences include:

- Deterioration of rooflight seals.
- Water retention around upstands.
- Reduced daylight transmission.
- Potential leakage at fixing or upstand interfaces.

Recommended action:

Clean rooflight surfaces and surrounding drainage areas. Inspect seals, fixings, upstands and waterproofing laps at close range.



Figure 21. Weathered barrel rooflights with staining and moss/debris accumulation around adjacent junctions.

Defect 09 – Weathering and Biological Contamination to Perimeter Cappings

Location: Zones 1, 2 and selected Zone 4 perimeter areas

Priority: Medium

Risk Category: Capping deterioration / fixing deterioration / water ingress

Perimeter cappings show surface contamination, lichen growth and weathering. Some areas show staining at joints and fixings.

Cappings protect exposed roof edges and wall head details. If fixings, joints or overlaps deteriorate, water may enter the roof edge construction or track into cladding interfaces.

Potential consequences include:

- Progressive deterioration of capping joints.
- Water ingress at wall head details.
- Corrosion to fixings.
- Wind vulnerability if fixings loosen.
- Staining to wall cladding below.

Recommended action:

Clean cappings, inspect fixings and check laps/joints. Replace missing or corroded fixings and reseal defective joints where required.



Figure 22. Biological growth, lichen and staining to perimeter capping.

Defect 10 – Localised Corrugated Roof Sheet Surface Deterioration / Cracking Requiring Confirmation

Location: Zones 2 and 3 – selected corrugated roof sheets

Priority: Medium

Risk Category: Roof sheet deterioration / possible water ingress

Several corrugated roof sheets show surface weathering, staining and localised line features that may indicate cracking or surface deterioration. These require confirmation by close inspection because aerial imagery alone cannot determine depth, structural significance or material condition.

Potential consequences include:

- Localised water ingress if cracks penetrate the sheet.
- Progressive deterioration at laps and fixings.
- Fragility of roof sheets.
- Concealed defects beneath moss and debris.

Recommended action:

After cleaning, undertake close-range inspection of suspect sheet areas.



Figure 23. Localised roof sheet surface deterioration

9. Condition Drivers and Technical Themes

9.1 Age and Environmental Exposure

The roof coverings and associated components show long-term exposure to weathering. Surface staining, lichen, moss and debris are visible across multiple roof zones.

This level of environmental exposure is consistent with ageing industrial roof systems. While not necessarily indicative of immediate failure, the observed condition suggests that planned maintenance is required to prevent further deterioration.

9.2 Drainage Performance

Drainage performance is one of the main concerns identified during the inspection. Several roof areas show signs of restricted water movement, including standing water, moss growth, debris accumulation and vegetation.

The most vulnerable drainage locations are:

- Roof sheet valleys.
- Abutment gutters.
- Roof-to-wall junctions.
- Plant deck outlets.
- Rooflight bases.
- Perimeter cappings and edge details.

Maintaining clear drainage is critical to the long-term performance of the roof system.



Figure 24. Dense vegetation around service penetrations indicating long-term moisture and sediment retention.

9.3 Roof Detail Vulnerability

The highest-risk defects occur at details rather than across open roof fields. These include abutments, penetrations, plant bases, rooflights, cappings, support brackets, service runs and drainage interfaces.

These areas are more vulnerable because they are exposed to water concentration, thermal movement, fixings, interfaces between different materials and debris retention.

9.4 Plant Deck Housekeeping and Maintenance

The plant deck contains loose redundant materials, cables, pipes and debris. This increases maintenance risk and may obstruct drainage or damage waterproofing.

The plant area should be treated as a priority housekeeping and roof maintenance area.

9.5 Corrosion Risk

Corrosion is present across pipework, brackets, supports, grating fixings and roof-mounted components. This is likely to progress where water is retained or coatings have failed. Corroded elements should be assessed for serviceability and treated or replaced as required.



Figure 25. Loose cables, redundant materials and staining around plant equipment.

10. Disclaimer

The inspection documented in this report represents a preliminary aerial visual assessment of the roof areas at the JS Davidson facility.

The purpose of this report is to provide a general overview of the visible condition of the roof coverings and associated components based on aerial imagery captured during the inspection.

This report does not constitute a full technical roof survey, structural assessment, or intrusive inspection. No physical access to the roof was undertaken and no materials were tested or sampled as part of this inspection.

Observations contained within this report are limited to conditions visible within the captured imagery at the time of inspection. Concealed defects, internal deterioration, hidden corrosion, moisture penetration, or structural deficiencies may exist but cannot be confirmed without further investigation.

Some aspects of the image review and defect identification process were assisted using artificial intelligence–supported image analysis tools to help identify potential areas of interest within the captured imagery. All interpretations and conclusions presented in this report were reviewed and assessed by the inspection operator.

The findings presented in this report should therefore be considered indicative observations rather than definitive technical diagnoses. Where concerns have been identified, further inspection by a qualified roofing contractor, building surveyor, or structural professional may be advisable.

Vista Fly accepts no liability for defects that were not visible within the available aerial imagery or that may exist beneath roof coverings or within concealed building elements.

11. Conclusion

The drone inspection of the JS Davidson Bourne facility identified multiple visible maintenance concerns across the roof zones.

The principal issues include biological growth, organic debris accumulation, restricted drainage, standing water, corrosion, vegetation growth and loose redundant materials on the plant deck.

The main corrugated roof sheets appear generally aligned from aerial inspection, with no obvious large-scale displacement visible. However, the roof coverings show widespread weathering and organic contamination. These conditions should be addressed through planned cleaning and close-range inspection.

Zone 4, the plant area, is the highest-priority maintenance zone due to ponding, vegetation growth, loose materials, corroded components and plant-related service interfaces.

Overall, the roof appears operational at a macro level, but targeted maintenance and further detailed inspection are recommended to preserve roof performance and reduce the risk of water ingress, drainage failure and progressive component deterioration.

12. Roof Condition Risk Map

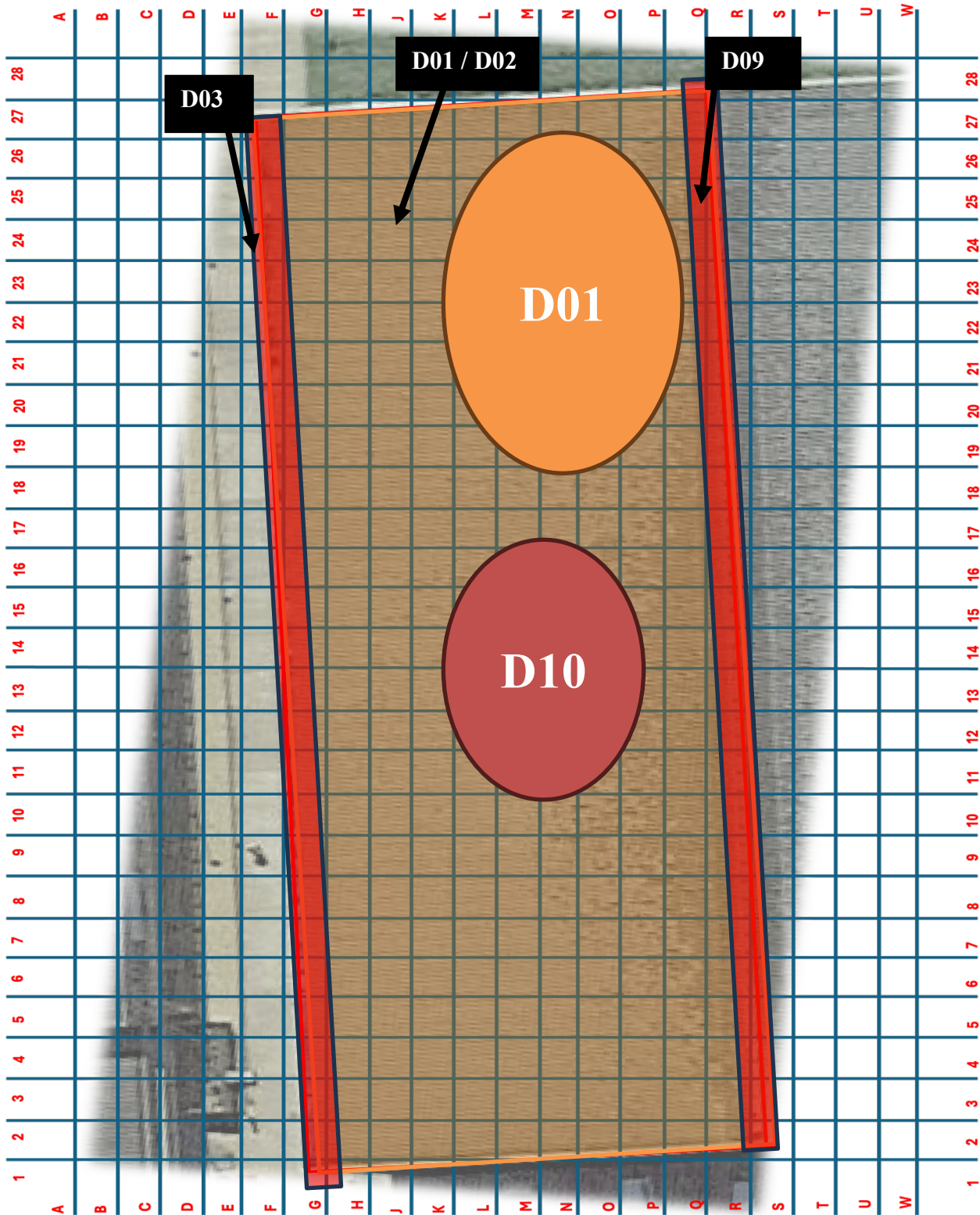
The risk map above provides a simplified visual summary of the roof condition based on observations made during the aerial inspection. It highlights areas where defects were identified and locations where monitoring or maintenance may be advisable.

This map should be read in conjunction with the detailed observations presented within this report.

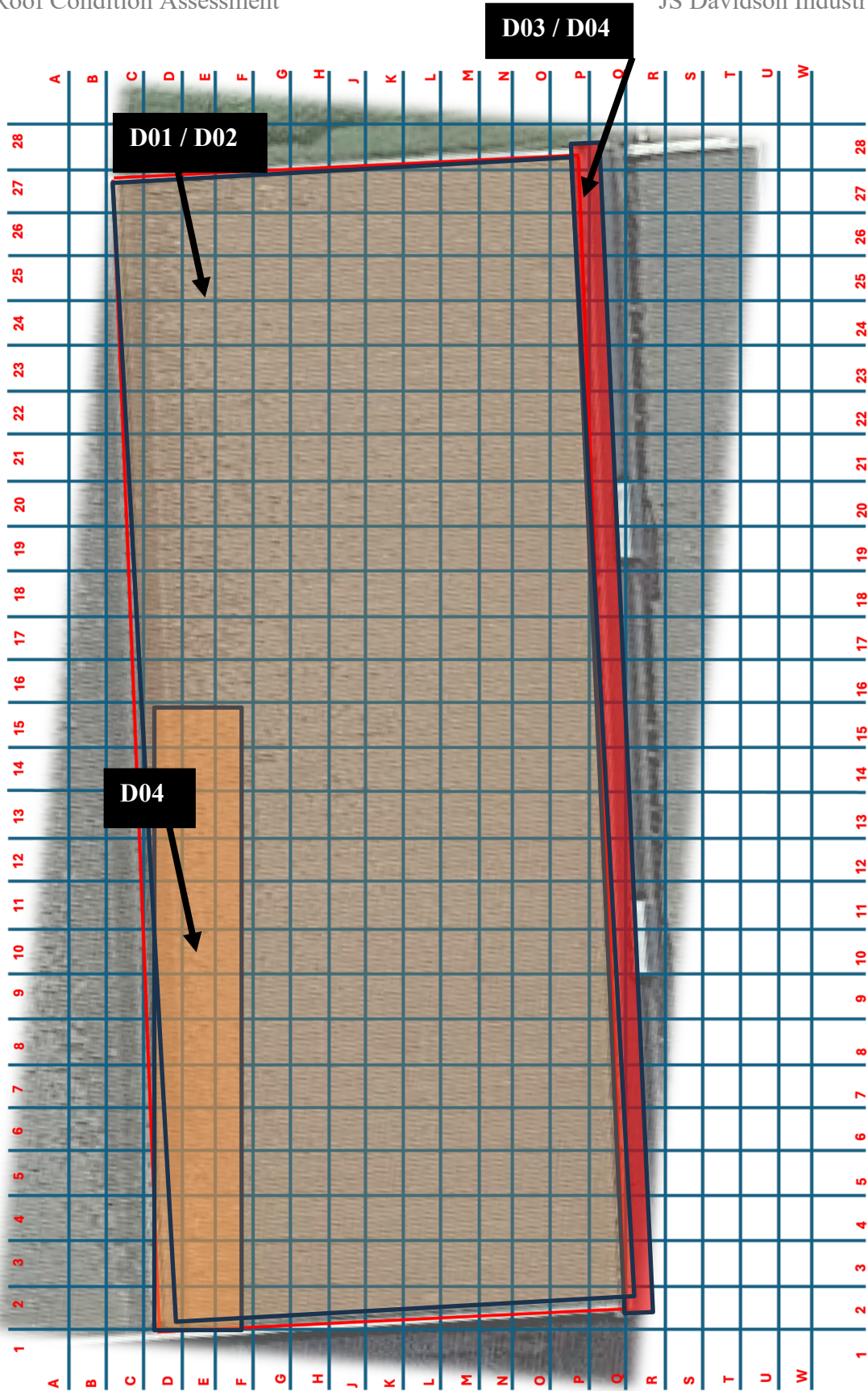
- **Defects identified during inspection**
- **Areas requiring monitoring**

CODE	DEFECT
D01	Moss/ Lichen / Biological growth to corrugated roof sheets
D02	Heavy Organic debris retained in corrugation valleys
D03	Blocked / restricted drainage at roof-to-wall junctions
D04	Vegetation growth at flashing, abutments and roof edges
D05	Corrosion to pipework, supports, fixings and steelwork
D06	Standing water / ponding to flat plant deck
D07	Loose / redundant materials and service debris
D08	Weathered rooflights / staining around rooflight upstands
D09	Biological growth and staining to perimeter cappings
D10	Localised sheet damage / cracking / open laps requiring close inspection

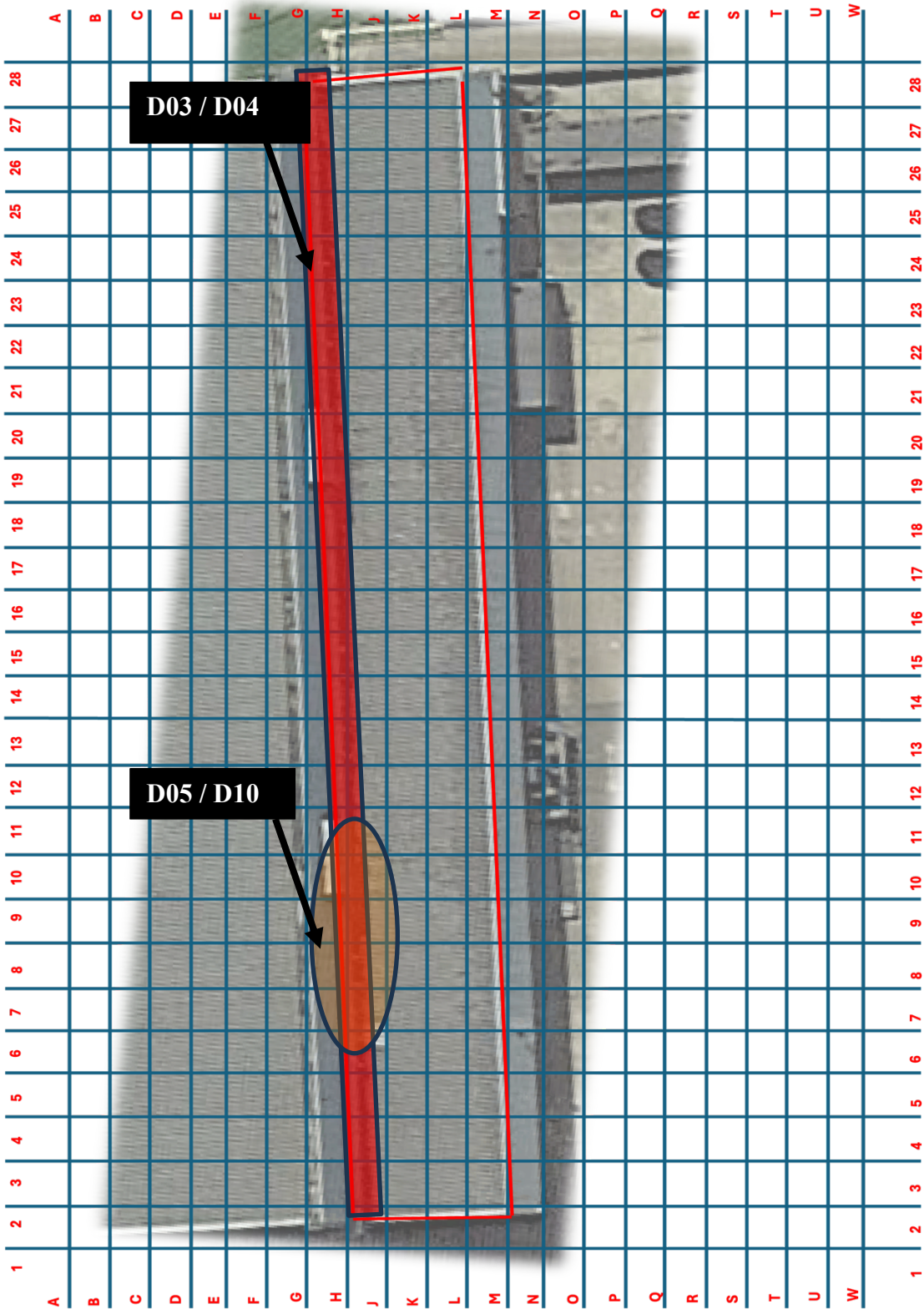
ZONE1



ZONE 2



ZONE3



ZONE 4

Due to the concentration of plant equipment, access structures and roof-mounted services within Zone 4, defects have been recorded as a general defect list rather than grid-marked locations. The plant deck contains multiple localised issues including standing water, moss and vegetation growth, loose redundant materials, corroded metalwork and weathered rooflight details. These defects should be reviewed during a close-range inspection and addressed as part of planned maintenance works.

Defect Ref	Defect Description	Priority
Z4-D01	Standing water / ponding present on flat plant deck areas.	High
Z4-D02	Moss and vegetation growth along plant deck edges, stair areas and drainage routes.	High
Z4-D03	Loose redundant pipe sections and materials stored on the roof surface.	Medium / High
Z4-D04	Loose cables / redundant service materials present around plant equipment.	Medium
Z4-D05	Corrosion and weathering to handrails, pipework, brackets, fixings and plant support components.	Medium
Z4-D06	Weathered and stained barrel rooflights / translucent rooflight covers.	Medium
Z4-D07	Staining and surface contamination around plant bases and service penetrations.	Medium
Z4-D08	Moss and debris accumulation around rooflight bases and drainage edges.	Medium
Z4-D09	General plant deck surface deterioration, staining and ageing of waterproofing finishes.	Medium
Z4-D10	Potential slip / trip hazards due to standing water, moss growth and loose materials.	High



13. Priority Action Table

Priority	Item	Recommended action
High	Blocked joint flashings and roof-to-wall drainage channels	Clear moss, silt, vegetation and debris; inspect flashings after clearance
High	Plant deck ponding	Clear drainage outlets, check falls, review waterproofing condition
High	Vegetation growth at abutments and roof edges	Remove vegetation and roots carefully; inspect underlying sheets and flashings
Medium	Corroded pipework, brackets and supports	Clean down, treat corrosion, repaint/protect or replace affected components
Medium	Corrugated roof sheet contamination	Clean roof coverings using suitable non-damaging methods
Medium	Loose/redundant materials on plant deck	Remove redundant pipe sections, cables and loose items
Low/Medium	Perimeter capping staining and lichen	Clean cappings and check fixings/seal laps

14. Defect Register

Defect ID	Defect	Zones affected	Priority
D01	Moss / lichen / biological growth	Zones 1, 2, 3, 4	Medium
D02	Organic debris in roof valleys	Zones 1, 2, 3	Medium
D03	Restricted drainage / blocked junctions	Zones 2, 3, 4	High
D04	Vegetation growth	Zones 2, 3, 4	High
D05	Corrosion to pipework/supports/steelwork	Zones 2, 3, 4	Medium
D06	Standing water / ponding	Zone 4	High
D07	Loose redundant materials	Zone 4	Medium
D08	Weathered rooflights / rooflight upstands	Zone 4	Medium
D09	Biological growth to cappings	Zones 1, 2, 3	Low/Medium
D10	Local cracking / sheet damage / open laps	Zones 1, 2, 3	High where confirmed