

Facility Roof Drain And Scupper Debris Clearing Procedure

1.0 Maintenance Objective & Frequency

The objective of this procedure is to ensure all roof drains and scuppers are free of debris, leaves, gravel, and sediment that could obstruct water flow. Blocked drains can lead to ponding, increased structural load, roof leaks, and premature membrane failure. This PM is performed quarterly (every 3 months) and after any major storm event.

2.0 Lockout/Tagout (LOTO) & Safety

- **Fall Protection:** Wear a full-body harness with lanyard attached to a certified roof anchor point. Ensure guardrails or safety netting are in place if working within 2 metres of the roof edge.
- **Electrical Isolation:** Identify and lock out any rooftop electrical equipment (e.g., HVAC units, exhaust fans) that could be inadvertently energized or create a trip hazard. Verify zero energy state.
- **Pneumatic/Hydraulic Isolation:** Not applicable for this procedure.
- **PPE:** Hard hat, safety glasses with side shields, cut-resistant gloves, slip-resistant boots, and high-visibility vest. Use hearing protection if operating power tools (e.g., leaf blower).
- **Weather Check:** Do not perform this PM during rain, high winds (above 40 km/h), lightning, or icy conditions. Postpone until safe.

3.0 Required Tools, Parts & Lubricants

- Roof access ladder or stairway (certified and secured)
- Full-body fall arrest harness with shock-absorbing lanyard
- Heavy-duty leaf blower (gas or electric) with extension cord if electric
- Industrial wet/dry vacuum with HEPA filter (for fine sediment)
- Long-handled roof rake or squeegee (non-marring rubber blade)
- 5-gallon bucket or heavy-duty trash bags
- Garden hose with spray nozzle (for flushing drains)
- Flashlight or headlamp (for inspecting drain interiors)
- Debris screen or dome strainer replacement (if damaged or missing)
- Silicone sealant and caulking gun (for sealing drain flanges if needed)
- Camera or smartphone for documentation

4.0 Step-by-Step Maintenance Procedure

1. Perform a visual inspection of the entire roof surface from a safe access point. Note any standing water, ponding, or visible debris accumulation near drains and scuppers.
2. Don all required PPE and attach fall arrest lanyard to a certified roof anchor point. Ensure the lanyard is taut and will not allow a fall over the edge.

3. Using the leaf blower, clear loose debris (leaves, twigs, gravel) from the roof surface, directing it away from drains and scuppers. Work in sections, moving from the perimeter inward.
4. Remove the debris screen or dome strainer from each roof drain. Inspect for cracks, corrosion, or missing components. Replace if damaged. Place the screen aside in a clean area.
5. Using the wet/dry vacuum, remove any standing water and fine sediment from the drain basin. Vacuum the drain pipe opening to a depth of at least 300 mm to ensure no blockage.
6. Flush the drain pipe with a garden hose at full pressure for 30 seconds. Observe the water flow at the downspout or ground level to confirm unobstructed drainage. If flow is slow or absent, use a plumber's snake or call for professional drain cleaning.
7. Inspect scupper openings (if present) for debris buildup. Clear any obstructions using the roof rake or by hand (with gloves). Ensure the scupper box and flashing are intact and sealed.
8. Reinstall the debris screen or dome strainer securely. Apply a bead of silicone sealant around the flange if the original seal is compromised. Allow sealant to cure per manufacturer instructions before exposing to water.
9. Inspect the roof membrane around each drain for blisters, tears, or lifting. Report any damage to the facility manager for repair. Document with photos.
10. Collect all debris in trash bags or buckets. Remove from the roof and dispose of properly. Do not leave debris on the roof or in gutters.
11. Perform a final walk of the roof to ensure all tools and materials are removed. Check that no debris remains near drains or scuppers.

5.0 Verification & Return to Service

1. Simulate a heavy rain event by running a garden hose at full flow into each drain for 2 minutes. Verify water drains freely with no backup or ponding around the drain basin.
2. Visually confirm that all debris screens and scupper covers are properly seated and secure. Check that no tools or materials remain on the roof.
3. Remove LOTO devices and restore power to any rooftop equipment that was locked out. Ensure all access hatches or doors are closed and locked.
4. Complete the PM work order in ServiceGrid, including photos of each drain before and after cleaning, notes on any repairs performed, and confirmation of unobstructed flow.

Regulatory Disclaimer: This document is a generic maintenance template provided for educational and informational purposes only. It does not constitute professional engineering or reliability advice. The end-user assumes all liability for validating all step sequences, torque specs, and LOTO protocols against specific machinery OEM manuals before deployment to a live production floor.