33. Fire - Passive Fire Protection & Escape Routes - Fire Escape External Stairs Structural Survey

Category:	Fire
Subcategory:	Passive Fire Protection & Escape Routes
Frequency:	36 Months
Status:	**Best Practice**
Type:	Approved Contractor
Priority:	Recommended
Commonality:	Occasional

Note: This document provides guidance to support compliance but is not a substitute for professional advice.

Why This Task Matters

Your proactive approach to surveying external fire escape stairs ensures that these critical evacuation routes remain structurally sound and safe. By identifying deterioration early in older schools or colleges with multi-storey blocks, you prevent potential failures that could endanger lives during emergencies. Your expertise in maintaining these essential safety structures demonstrates your comprehensive commitment to emergency preparedness.

Task Summary

Best Practice: A structural survey of external fire escapes should be carried out every three years to confirm their stability, corrosion protection, and safe use. This comprehensive assessment involves examining structural integrity, checking for corrosion or damage, verifying load-bearing capacity, and assessing weathering effects. The survey includes detailed inspection of stair treads, handrails, fixings, and structural connections, as well as checking for signs of movement or settlement. These metal structures can deteriorate over time, especially in older schools or colleges with multi-storey blocks. Ensuring their integrity is essential for safe evacuation of pupils in the event of fire. The survey includes photographic documentation and measurements of any defects. Evidence produced includes the surveyor's report detailing all findings and structural assessment, annotated photos showing areas

of concern or damage, and recommendations for repairs or maintenance.

Relevant Legislation & Guidance

- **Regulatory Reform (Fire Safety) Order 2005**: Requires means of escape to be maintained in good condition
- **Fire Safety: Approved Document B (Buildings other than dwellinghouses)**: Provides guidance on means of escape maintenance
- **British Standard BS 9999: Fire safety in the design, management and use of buildings - Code of practice**: Includes guidance on fire escape maintenance
- **Building Regulations 2010**: Require structural elements to meet safety standards
- **British Standard BS 5395: Stairs**: Specifies requirements for stair safety and maintenance

Typical Frequency

The structural survey should be conducted every three years, though this may vary based on building age, environmental conditions, and previous survey findings. In educational settings, three-yearly surveys are recommended for maintaining fire escape integrity. However, more frequent surveys may be needed for structures exposed to harsh weather, those showing signs of deterioration, or buildings in coastal areas.

Applicability

This task is recommended for educational establishments with external fire escape stairs, which is occasional as these are typically found in older multi-storey buildings. It is a best practice task essential for maintaining safe evacuation routes. The task applies to schools and colleges with external fire escape staircases.

Responsible Persons

- **Task Type**: Approved Contractor
- **Contractor Requirements**: This task should be carried out by a competent structural engineer or building surveyor with expertise in metal structures and corrosion assessment. Contractors should hold appropriate professional qualifications. Typical cost range: £400-£800 per survey depending on building size and complexity.
- **Permit to Work**: May require safe access arrangements and coordination with building users.
- **Delivery Model**: Normally contractor-delivered due to the specialist structural assessment knowledge required.

Key Considerations

- **Timing considerations**: Schedule during good weather conditions to allow thorough external inspection
- **Cost implications**: Budget £400-£800 per three-yearly survey for professional structural assessment
- **Resource requirements**: Allow access to all external areas and safe inspection methods
- **Potential disruption**: Minimal disruption as this is primarily an external inspection
- **Risk assessment requirements**: Survey findings should inform the fire risk assessment

Task Instructions

Prerequisites & Safety

- Ensure the surveyor has structural engineering expertise
- Provide access to building plans and previous survey records
- Confirm safe access methods for inspecting high-level areas
- Arrange for appropriate weather conditions

Tools & Materials

- Building plans and structural drawings
- Measuring equipment and levels
- Photographic equipment for documentation
- Corrosion assessment tools
- Safety equipment for working at height

Method (Step-by-Step)

Phase A: Pre-Survey Assessment

1. Review building plans and previous survey records
2. Identify all external fire escape stairs requiring survey
3. Gather information about building age and construction materials
4. Prepare survey schedule and safety procedures

Phase B: Visual Inspection

1. Examine structural framework for signs of corrosion or damage
2. Check stair treads and landings for wear or deformation
3. Inspect handrails, balustrades, and fixings for security

4. Assess concrete or masonry supports for cracks or movement
5. Verify corrosion protection systems and paint condition
6. Check drainage and weathering effects

Phase C: Structural Assessment

1. Measure and assess any deformations or settlements
2. Evaluate load-bearing capacity and structural integrity
3. Check connections and fixings for security
4. Assess corrosion levels and protection effectiveness
5. Verify compliance with current safety standards

Phase D: Documentation and Reporting

1. Document all findings with measurements and photographs
2. Prepare detailed survey report with structural assessment
3. Prioritise defects by risk level and urgency
4. Recommend repairs, maintenance, or replacement options
5. Provide cost estimates for recommended works

Measurements & Acceptance Criteria

- Structural members must show no significant deformation or corrosion
- Fixings and connections must be secure and intact
- Corrosion protection must be effective and well-maintained
- Handrails and barriers must meet safety height requirements

If Results Fail

Follow instructions on the Compliance Pod task completion form to record remedial/follow up actions and generate Reactive Task Tickets as required. Immediately restrict access to unsafe areas. Escalate critical structural issues to facilities management and arrange urgent engineering assessment. Implement alternative evacuation procedures for affected areas.

Reinstatement & Housekeeping

No reinstatement required as this is a survey task. Ensure any temporary access equipment is removed safely.

Completion Checks

Verify that the survey report provides comprehensive structural assessment. Confirm that all findings are documented with photographs. Ensure recommendations include prioritisation and cost estimates.

Client Oversight Checklist (Before the Visit)

- Confirm surveyor's structural engineering qualifications
- Provide building plans and previous survey records
- Arrange safe access to external stair areas
- Schedule during suitable weather conditions

Client Oversight Checklist (During the Visit)

- Observe inspection of structural elements and fixings
- Ensure comprehensive assessment of corrosion and damage
- Verify that measurements are taken accurately
- Confirm detailed photographic documentation

Deliverables & Acceptance Criteria (After the Visit)

- Receive detailed survey report with structural assessment
- Review annotated photographs showing areas of concern
- Ensure recommendations are prioritised by risk level
- Confirm that all documentation is complete and accurate

Defects & Follow-up

Follow instructions on the Compliance Pod task completion form to record remedial/follow up actions and generate Reactive Task Tickets as required. Prioritise critical structural repairs affecting safety. Agree timescales for implementing recommendations. Schedule follow-up surveys after major repairs.

Reinstatement & Sign-off

No reinstatement required. Complete final sign-off once the survey report is received and reviewed.

Record-Keeping & Evidence

- **Upload Process**: Upload any required statutory or supporting evidence to the corresponding task form in Compliance Pod.
- **Statutory Evidence**: No statutory evidence is required for this task.
- **Supporting/Good Practice Evidence**: Surveyor's report and annotated photos documenting structural condition support audit readiness.

Common Pitfalls & Best Practice Tips

- **Common mistakes to avoid**: Not inspecting concealed areas, underestimating corrosion effects, or failing to consider environmental factors
- **Best practices for efficient completion**: Maintain detailed structural records, conduct regular visual checks between surveys, and coordinate with building maintenance
- **Pro tips for educational settings**: Use survey visits to review escape procedures, coordinate with grounds maintenance for access, and maintain clear records of weather-related damage
- **Warning signs that indicate problems**: Visible corrosion, loose fixings, or signs of structural movement

Quick Reference Checklist

- Building plans and previous records reviewed
- All external fire escape stairs identified
- Structural framework and fixings inspected
- Corrosion levels and protection assessed
- Measurements taken and deformations noted
- Photographic evidence collected
- Detailed survey report prepared
- Evidence uploaded to Compliance Pod

Grouped Tasks

This task is not normally grouped with other tasks.

Related Tasks

- Fire - Passive Fire Protection & Escape Routes - Fire Doors Full Inspection
- Fire - Passive Fire Protection & Escape Routes - Fire Dampers Full Service & Inspection
- Fire - Passive Fire Protection & Escape Routes - Disabled Refuge Full Service & Inspection
- Fire - Passive Fire Protection & Escape Routes - Fire Doors Integrity & Gaps Check

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Users must ensure that all tasks are carried out in line with current legislation, manufacturer instructions, site-specific risk assessments, and organisational policies. Where necessary, professional advice should be sought from competent and accredited specialists — for example, fire risk assessors, water hygiene consultants, electrical engineers, gas safety contractors, or health and safety advisors.