
Existing Building Assessment, Strengthening Options and Refurbishment Phasing Training Course

1 – 5 August 2027
Doha





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Programme Summary

Existing building assessment is the subject of this one-week training course for asset owners, project leaders and facility heads at managerial level, ending in a renovation planning pack for one existing building. Ageing buildings are often renovated on partial records, with unclear capacity for the intended use. The approach moves from records and condition, through capacity and intervention options, to phasing and control of the works, then to a worked pack. Mars Training Centre UK delivers this programme in existing building assessment.

The Business Case

Renovation budgets are often exceeded when hidden defects, weak records and late changes of scope surface after work has started. Owners who establish condition early, test capacity against the new use and compare intervention options on cost, disruption and risk can commit funds with more confidence and keep occupied buildings safe while work proceeds, and can agree realistic programmes with contractors.

- Scope Growth During Works: Falls as condition, capacity and unknowns are surveyed and priced before commitment.
- Disruption to Occupants: Reduces as phasing, access and temporary works are planned with the users.
- Safety Exposure: Improves as structural risks and temporary conditions are recorded and ranked.

Principles and Evidence Base

- ISO 13822: Its procedure for assessing existing structures shapes the survey, verification and intervention logic in Sessions 1 to 3.
- ISO 2394: Its general principles on reliability for structures frame the treatment of actions and resistance for a new use in Session 2.
- ISO 31000: Its risk management process guides the ranking of options and works risks in Sessions 3 and 4.

Intended Participants

- Asset and property owners who decide whether and how to renovate an existing building.
- Project leaders who plan and coordinate renovation and refurbishment programmes.
- Facility and estate heads who must keep buildings in use during the works.
- Cost and contract managers who price interventions and control variations.

The programme serves commercial, residential, public and industrial property portfolios.



Learning Outcomes

1. Participants will be able to construct a condition and records baseline for an existing building.
2. Participants will be able to evaluate the capacity of a structure for a proposed change of use.
3. Participants will be able to compare repair, strengthening, partial replacement and demolition options.
4. Participants will be able to diagnose the main hazards of working in an occupied building.
5. Participants will be able to prioritise works packages and phases against cost, risk and disruption.
6. Participants will be able to justify a renovation planning pack to a funding board.

Programme Structure

Day 1: Existing Building Assessment Foundations

What is known about the building, and what must still be found out?

- Records Search and Information Gap Register
- Visual Condition Survey Template
- Defect Pattern and Likely Cause Guide
- Investigation and Testing Scope Selection
- Case Review of Two Renovation Overruns

Day 2: Capacity and Change of Use

Can the structure carry what the owner now intends?

- Assessment Procedure from ISO 13822
- Load Change and Capacity Screening Table
- Reliability Concepts from ISO 2394 for Existing Structures
- Foundation and Lateral System Review Questions
- Remaining Service Life Estimate

Day 3: Intervention Options

Which intervention gives the best outcome for cost, risk and disruption?

- Repair, Strengthening, Replacement and Demolition Option Matrix
- Strengthening Method Families and Their Limits
- ISO 31000 Option Risk Comparison
- Cost Range and Contingency Build-Up
- Approvals and Specialist Appointments Plan



Day 4: Phasing and Control of the Works

How is renovation sequenced and controlled while the building stays in use?

- Works Package and Phase Breakdown
- Temporary Works and Propping Strategy Review
- Occupant Safety and Access Plan
- Hidden Condition Change Control Procedure
- Progress and Cost Reporting Dashboard

Day 5: Applying Existing Building Assessment to a Renovation

Is the planning pack ready for the owner and funding board to approve?

- Applying the Session 1 Survey Template to the Chosen Building
- Testing the Session 2 Capacity Table Against the New Use
- Checking Session 3 Option Matrix Scores and Costs
- Applying the Session 4 Phasing Rules to the Programme
- Completing the Renovation Planning Pack

Methodology

The programme is built around case analysis and structured exercises. Participants work with an anonymised building file, photographs, drawings and a proposed change of use, plan the investigation, screen capacity, score options and phase the works in small teams, then defend their pack before a simulated funding board. No site visits or calculations are included.

- Suggested activity: Building an information gap register for an office block with missing drawings.
- Suggested activity: Scoring repair and strengthening options for a car park deck.
- Suggested activity: Phasing the renovation of a school that stays open.

Capstone Output

Each participant completes a renovation planning pack for one existing building. It contains a records and condition baseline, a capacity screening summary, a scored option matrix, a cost range with contingency, a phasing plan and a hidden condition control procedure. It is used to brief the owner and funding board and to scope specialist appointments.



Frequently Asked Questions

Is existing building assessment training suitable for owners and managers without an engineering background?

Yes. Existing building assessment training is set at managerial level and assumes responsibility for property, projects or facilities, not structural analysis experience.

Which standards does existing building assessment rest on in this programme?

Existing building assessment rests on ISO 13822 for assessing existing structures, ISO 2394 for reliability of structures and ISO 31000 for risk management.

How is the existing building assessment planning pack used at work?

You use the existing building assessment planning pack to brief the owner and funding board, define specialist appointments and control hidden conditions during the works.

How does existing building assessment differ from new structural design training?

Existing building assessment deals with unknown records, remaining capacity and phased works in used buildings, while new design training starts from a defined brief.