



# Existing Structures Condition Assessment Course

28 December 2026 – 1 January 2027  
Tokyo

## Existing Structures Condition Assessment Course

**Ref:** 563\_143492 **Date:** 28 December 2026 – 1 January 2027 **Location:** Tokyo **Fees:** 12000 Euro

### Overview

Existing Structures Condition Assessment Course is a five-day intermediate course for structural and civil engineers, asset teams, inspectors, consultants, and reviewers who leave with a Structural Condition Assessment Report. Participants connect records, field observations, distress mapping, material deterioration, test selection, load-path checks, preliminary capacity screening, monitoring, risk classification, and repair priorities. The course turns scattered evidence into a traceable assessment pathway. Agile Leaders Training Center presents existing structures condition assessment through decision-ready engineering artifacts.

### Who Should Attend

- Teams responsible for planning assessments and reviewing existing-structure records
- Functions conducting visual inspection, defect mapping, and material condition surveys
- Personnel selecting tests, samples, instruments, and monitoring approaches
- Groups screening load paths, stability observations, capacity concerns, and immediate hazards
- Reviewers prioritizing investigation, monitoring, repair, and reporting decisions

The course assumes participants can interpret structural drawings and engineering records, and it leaves out detailed forensic analysis, code-specific member design, laboratory instruction, and final structural certification.

### Departments and Industries

The course supports departments and industries responsible for structural safety, asset condition, maintenance planning, and engineering assurance.

- Structural engineering, civil engineering, inspection, and design review
- Facilities, asset integrity, maintenance, and capital planning
- Buildings, industrial facilities, utilities, and transport infrastructure
- Property portfolios, healthcare facilities, education campuses, and commercial assets
- Engineering consultancy, project delivery, risk, and technical assurance

### Learning Objectives

By the end of this course, participants will be able to:



- Build an assessment scope, records register, and structural system map
- Apply inspection methods and produce a defect and distress map
- Evaluate deterioration evidence and select proportionate tests and monitoring
- Analyze load-path, stability, and preliminary capacity concerns
- Prioritize hazards, investigations, monitoring, and repair actions by risk
- Develop a Structural Condition Assessment Report

## **Course Agenda**

### **Day 1: Assessment Scope and Records**

- Assessment Purpose and Decision-Need Brief
- Existing Drawing and Document Review Register
- Use, Alteration, Incident, and Exposure History
- Structural System and Load-Path Map
- Inspection Safety, Access, and Constraint Plan

### **Day 2: Inspection and Distress Mapping**

- Visual Inspection Route and Field Checklist
- Crack, Deflection, Displacement, and Movement Survey
- Concrete, Steel, Masonry, and Timber Deterioration Atlas
- Defect Location, Extent, and Severity Map
- Immediate Hazard Recognition and Escalation Protocol

### **Day 3: Testing and Monitoring Evidence**

- Information-Gap and Test-Selection Matrix
- Nondestructive Testing Application Plan
- Sampling and Laboratory Test Register
- Monitoring Instrument and Baseline Schedule
- Evidence Reliability and Uncertainty Log

### **Day 4: Screening and Risk Decisions**

- Preliminary Load and Capacity Screening Worksheet
- Stability, Robustness, and Load-Path Observation Review
- Condition, Likelihood, and Consequence Risk Matrix
- Investigation, Monitoring, and Repair Priority Table
- Structural Condition Rating and Decision Record



## **Day 5: Condition Assessment Practice**

- Exercise: Define Assessment Scope and Review Records
- Exercise: Map Distress and Escalate Immediate Hazards
- Exercise: Select Tests and Build a Monitoring Baseline
- Exercise: Screen Capacity, Classify Risk, and Prioritize Actions
- Capstone Exercise: Structural Condition Assessment Report

## **Practical Exercises**

The course uses suggested activities to connect documentary evidence, field findings, screening judgments, and reporting.

- Suggested activity: define the decision need, review drawings and history, map the structural system, and record access and evidence constraints.
- Suggested activity: plan an inspection route, classify representative cracks and deterioration, map severity, and identify conditions requiring immediate escalation.
- Suggested activity: match information gaps with nondestructive tests, sampling, laboratory work, monitoring instruments, and uncertainty controls.
- Suggested activity: integrate observations, preliminary screening, risk ratings, action priorities, limitations, and recommendations in a Structural Condition Assessment Report.

## **FAQs**

### **Who suits the existing structures condition assessment course and what does it assume?**

It suits engineering and asset teams responsible for assessment, inspection, maintenance, or review, and assumes participants can interpret structural drawings, records, and common engineering information.

### **How does existing structures condition assessment differ from forensic engineering?**

Condition assessment organizes available records, observations, tests, screening, risk, and next actions, while forensic engineering normally investigates a specific failure, damage mechanism, or dispute through deeper causal analysis.

### **Which evidence supports a structural condition assessment?**

Useful evidence combines drawings, change and incident history, inspection observations, defect maps, measurements, test results, monitoring trends, load-path observations, assumptions, and documented limitations.



## **How are tests selected for existing structures condition assessment?**

Tests are selected from the decision need, suspected deterioration, material, accessibility, required confidence, consequence of error, and the information gap that the result must close.

## **What belongs in a Structural Condition Assessment Report?**

The report records scope, references, structural system, history, inspection findings, distress maps, tests, monitoring, screening results, uncertainty, risk ratings, immediate actions, investigation and repair priorities, limitations, and recommendations.

## **Conclusion**

Participants take back a Structural Condition Assessment Report linking records, field evidence, tests, screening judgments, risk ratings, and prioritized actions. It changes disconnected observations into a documented basis for investigation, monitoring, maintenance, and repair decisions. The report supports professional judgment without replacing detailed analysis, project-specific verification, or final certification.