Road Maintenance Management Course for Roads Directors and Asset Managers

7 – 11 March 2027
Kuala Lumpur

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Programme Summary

Road maintenance management is the subject of this one-week training course for roads directors, infrastructure asset managers and municipal works heads, ending in a road maintenance management plan for one network. Many authorities repair the roads that attract complaints, not the ones that will cost most to neglect, and budgets then follow the repairs rather than a strategy. The programme moves from asset principles and condition surveys to deterioration, treatment choice and funding, then maintenance contracts and performance monitoring, and applies them in one plan. Mars Training Centre UK delivers this programme on road maintenance management to mixed-organisation cohorts.

The Business Case

Roads, bridges, drainage and signage form some of the largest assets an authority owns, and their condition decides safety, journey times and the cost of future repair. A network that is surveyed consistently and funded by ranked need loses less value each year, and gives directors a defensible answer when budgets are cut or complaints rise. That evidence matters most to owners and funders.

- Network Condition: Improves when treatments are chosen by deterioration and timing rather than by complaint.
- Maintenance Spend: Becomes more efficient when funds are ranked by need and whole-life cost.
- Contract Performance: Strengthens when outputs and measures are written into maintenance contracts.

Principles and Evidence Base

- ISO 55000: Sets out the principles of asset management, applied in Session 1 to the value and risk view of a road network.
- ISO 55001: Sets requirements for an asset management system, applied in Sessions 4 and 5 to planning, contracts and performance review.
- Pavement Management System: Combines condition data, deterioration models and treatment rules, applied in Sessions 2 and 3 to survey reading and treatment choice.

Intended Participants

- Roads directors who answer for the safety and condition of a network.
- Infrastructure asset managers who plan renewal, repair and funding.
- Municipal works heads who direct maintenance crews and contractors.
- Contract managers who set and monitor maintenance outputs.

Typical settings include national road agencies, city works departments, toll operators and industrial estates.

Learning Outcomes

1. Participants will be able to evaluate the condition of a road network from survey and inventory data.
2. Participants will be able to diagnose deterioration patterns and their likely causes.
3. Participants will be able to select maintenance treatments by condition, timing and whole-life cost.
4. Participants will be able to prioritise works within a constrained maintenance budget.
5. Participants will be able to design a maintenance contract with measurable outputs and monitoring.
6. Participants will be able to justify a road maintenance management plan to an executive committee.

Programme Structure

Day 1: Road Maintenance Management Foundations

What does the network contain, and what is it worth keeping in good condition?

- Road Asset Inventory Register
- ISO 55000 Principle Review
- Network Hierarchy Map
- Service Level Statement
- Maintenance Risk Matrix

Day 2: Condition Surveys and Deterioration

How is condition measured, and how fast is it changing?

- Visual Condition Survey Guide
- Roughness and Rutting Reading
- Drainage and Verge Inspection Sheet
- Deterioration Curve Method
- Condition Index Dashboard

Day 3: Treatment Choice and Budget Priorities

Which treatment goes where, and in what order when funds run short?

- Treatment Selection Table
- Preservation Timing Chart
- Whole-Life Cost Comparison
- Works Ranking Matrix
- Budget Scenario Sheet

Day 4: Maintenance Contracts and Performance Monitoring

How are works bought and checked so that the network improves?

- Output Specification Outline
- Contract Packaging Options
- ISO 55001 Requirement Review
- Performance Indicator Set
- Audit and Defect Tracker

Day 5: Road Maintenance Management Plan for One Network

Do the earlier tools combine into one plan an executive committee can approve?

- Applying the Session 1 Service Level Statement
- Testing the Session 2 Condition Index Dashboard
- Checking the Session 3 Works Ranking Matrix
- Rehearsing the Session 4 Performance Indicator Set
- Completing the Road Maintenance Management Plan

Methodology

The programme uses a data workshop built on prepared case material for two networks, one an urban street network and one an intercity highway, each with inventory extracts, survey results, treatment costs, budget limits and contract terms. Participants work in groups, challenge each other's rankings and defend their plan to peers acting as an executive committee.

- Suggested activity: Ranking a year of works when the budget is cut by a quarter.
- Suggested activity: Reading survey results to find the section that should be treated first.
- Suggested activity: Rewriting a maintenance contract clause so that it measures outputs.

Capstone Output

Each participant completes a road maintenance management plan for one network. It holds an asset and service level summary, a condition and deterioration review, a ranked works programme, a contract and monitoring approach and an owner plan. The plan is used at work to brief an executive committee, to defend a budget request and to set targets with maintenance contractors.

Frequently Asked Questions

Is a training programme on road maintenance management suitable for directors without an engineering background?

Yes. Road maintenance management is taught through prepared cases and templates. It assumes responsibility for a network, a works budget or maintenance contracts, but no earlier work with survey or deterioration data.

Which standards does road maintenance management rest on?

Road maintenance management rests on ISO 55000 and ISO 55001 for asset management, together with the pavement management system approach of condition data, deterioration and treatment rules, each applied to prepared network cases.

How is the plan from road maintenance management used at work?

You use the road maintenance management plan to brief your executive committee, defend your budget request with ranked evidence, and set measurable targets with maintenance contractors.

How does road maintenance management differ from a programme on pavement design?

Road maintenance management concentrates on keeping an existing network in condition through surveys, treatments, budgets and contracts, while a pavement design programme concentrates on designing new or rebuilt structures.