Sustainable Infrastructure Training Course: Appraisal, Climate Risk, Bankability and Delivery Plans

18 – 22 January 2027
Tokyo

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Programme Summary

This one-week sustainable infrastructure training course is for directors, programme owners and project leads, and ends in a sustainability and bankability brief for one infrastructure project. Schemes shaped without testing climate exposure, whole-life cost or funding appetite tend to stall at approval or return for redesign. The programme moves from sustainability criteria to appraisal, climate risk, funding structure and delivery planning, using a worked scheme from the roads and water sectors. Mars Training Centre UK delivers this programme on sustainable infrastructure to mixed-organisation cohorts.

The Business Case

Infrastructure assets stay in service for decades, so choices made at preparation fix operating cost, resilience and community impact long after construction ends. Sponsors who test those choices early can explain them to funders and approval bodies, and can show why one option was preferred. Without that work, late design changes and funding gaps absorb time that delivery teams cannot recover.

- Whole-Life Cost: Uncertainty falls when options are compared on capital, operating and renewal cost rather than build cost alone.
- Funding Readiness: Improves when risks are allocated and tested before lenders or budget holders review the scheme.
- Approval Cycle Time: Shortens when criteria, evidence and climate assumptions are recorded in a form reviewers can check.

Principles and Evidence Base

- Envision: A sustainability rating framework for infrastructure, applied in Sessions 1 and 5 to set criteria and test the project brief.
- ISO 14090: Principles and guidelines for adaptation to climate change, applied in Session 3 to frame exposure and adaptation options.
- ISO 14040: Principles and framework for life-cycle assessment, applied in Session 2 to compare options on whole-life impact.
- UN Sustainable Development Goals: A set of global goals, applied in Session 1 to link project outcomes to measurable public benefit.

Intended Participants

- Programme directors who sponsor infrastructure schemes and answer for approval and delivery.
- Project owners who prepare business cases and appraisal packs for senior review.
- Public-sector leaders who decide which schemes enter a capital programme.
- Development and funding leads who structure finance and allocate risk between parties.
- Technical heads who must reconcile design choices with sustainability criteria.

Typical settings include transport, water and wastewater, energy networks and urban development.

Learning Outcomes

1. Participants will be able to construct sustainability criteria and outcome measures for an infrastructure project.
2. Participants will be able to evaluate options on whole-life cost and life-cycle impact.
3. Participants will be able to diagnose climate exposure and prioritise adaptation measures.
4. Participants will be able to justify a funding structure and risk allocation to a review panel.
5. Participants will be able to construct a delivery plan covering procurement, stakeholders and handover.
6. Participants will be able to justify a project brief for approval using the evidence assembled across the five sessions.

Programme Structure

Day 1: Sustainable Infrastructure Project Foundations

What must a sustainable infrastructure project show before it is worth appraising?

- Envision Criteria Review
- Sustainable Development Goals Linkage Map
- Project Need and Outcome Statement
- Stakeholder Interest Register
- Sustainability Criteria Scorecard

Day 2: Option Appraisal and Whole-Life Cost

How are options compared when cost and impact run beyond construction?

- Option Long-List Screening
- Whole-Life Cost Model
- ISO 14040 Life-Cycle Inventory Outline
- Embodied Carbon Comparison
- Multi-Criteria Scoring Matrix

Day 3: Climate Risk and Adaptation

Which climate hazards threaten the asset, and which responses are worth their cost?

- Hazard and Exposure Screening
- ISO 14090 Adaptation Framing
- Asset Vulnerability Rating
- Adaptation Option Table
- Climate Risk Register

Day 4: Funding Structure and Risk Allocation

How is a scheme made fundable, with risks placed with the parties best able to hold them?

- Revenue and Availability Models
- Funding Source Mapping
- Risk Allocation Matrix
- Bankability Test Questions
- Sensitivity Range Table

Day 5: Delivery Plan and Project Brief

Do the earlier findings join into a brief that an approval panel can act on?

- Applying the Session 2 Scoring Matrix
- Reading the Session 3 Climate Risk Register
- Testing the Session 4 Risk Allocation Matrix
- Delivery and Handover Plan
- Completing the Sustainability and Bankability Brief

Methodology

The programme is a structured exercise built on a prepared scheme file for a coastal road and water link, with cost data, hazard maps and a draft funding outline. Participants screen options, run whole-life comparisons, rate climate exposure and defend a funding structure to peers acting as an approval panel, then test their reasoning on a second scheme from the energy sector.

- Suggested activity: Scoring three options against agreed sustainability criteria and explaining the ranking.
- Suggested activity: Rating asset vulnerability to flood and heat and choosing two adaptation measures.
- Suggested activity: Allocating ten project risks between owner, contractor and funder and defending the split.

Capstone Output

Each participant completes a sustainability and bankability brief for one infrastructure project. It holds a criteria scorecard, a whole-life cost comparison, a climate risk register, a risk allocation matrix and a delivery plan outline. At work it is presented to the approval panel or funder and sets the review routine for later schemes.

Frequently Asked Questions

Is sustainable infrastructure project development suitable for managers without a technical background?

Yes. Sustainable infrastructure is taught through prepared scheme files and templates. You need responsibility for sponsoring, preparing or funding infrastructure schemes, but no engineering design experience.

Which standards does sustainable infrastructure appraisal rest on in this programme?

Sustainable infrastructure appraisal rests on the Envision framework, ISO 14040 for life-cycle assessment and ISO 14090 for climate adaptation, with the UN Sustainable Development Goals used to link outcomes to public benefit.

How is the brief from sustainable infrastructure development used at work?

You present the sustainability and bankability brief to the approval panel or funder, use its scorecard and registers to justify the chosen option, and keep its checks as the routine for later schemes.

How does sustainable infrastructure development differ from a programme on construction cost control?

Sustainable infrastructure development concentrates on shaping, appraising and funding a scheme before approval, while a construction cost control programme concentrates on managing spend once work is under way.