CONCEPT

Sustainable Construction Management: Site Waste, Embodied Carbon and Circular Materials

19 – 23 April 2027
Dubai - Five-star CBD venue



Sustainable Construction Management: Site Waste, Embodied Carbon and Circular Materials

Ref: 929_21462 **Date:** 19 – 23 April 2027 **Location:** Dubai - Five-star CBD venue **Fees:** 19500 SAR

Introduction:

Sustainable construction management often breaks down on site: skips fill with mixed rubble that could have been reused, concrete and steel are bought without any carbon data, dust and runoff trigger complaints, and rating credits promised at design stage are lost because nobody kept the delivery tickets. This Core Concept course equips contractors, site managers and sustainability coordinators to run the construction phase to measurable targets for waste diversion, embodied carbon, site resources and neighbour impacts. Participants produce a Site Sustainability and Waste Management Plan for a case building project.

Course Objectives:

- Set up a site environmental management plan with aspects, controls, responsibilities and inspection routines for a building project
- Apply the waste hierarchy to construction and demolition streams through segregation, on-site reuse, recycling routes and material passports
- Select low-carbon materials and write sustainable procurement requirements using Environmental Product Declarations and supplier data
- Measure construction-stage embodied carbon from materials, transport and plant fuel and rank reduction options
- Control site energy, water, dust, noise, runoff and ecology impacts and log the evidence that green rating credits and clients require
- Report site sustainability KPIs and prepare a Site Sustainability and Waste Management Plan for a case building project

Target Audience:

- Contractor site managers responsible for daily site set-up, logistics, housekeeping and subcontractor supervision
- Construction project managers responsible for delivering client sustainability targets within cost and programme
- Site sustainability and environmental coordinators responsible for inspections, monitoring records and rating evidence
- Procurement and commercial staff responsible for buying materials, waste services and plant for construction packages
- Owner-side and consultant site representatives responsible for checking contractor environmental performance

Course Outline:

Day 1: Construction-Phase Sustainability Drivers and Site Baseline

- Construction-Phase Impact Profile: Materials, Waste, Energy, Water and Neighbours
- Client Sustainability Requirements Traced from Tender Documents to Site Actions
- Seven Construction Waste Source Categories from Design to External Factors
- Site Environmental Aspects and Impacts Register for a Building Project
- Site Sustainability Baseline Walkthrough Checklist

Day 2: Site Environmental Management Plan, Waste Hierarchy and Circularity Models

- Site Environmental Management Plan Structure: Controls, Owners and Inspection Frequency
- Waste Hierarchy Applied to Demolition, Excavation and Fit-Out Streams
- Circular Construction Models: Design for Disassembly, Material Banks and Take-Back Schemes
- Material Passports: Recording Building Components for Future Reuse
- Rating Credits Achievable During Construction: Waste, Materials, Pollution and Commissioning Evidence

Day 3: Waste Segregation, Low-Carbon Materials and Sustainable Procurement

- Skip Layout, Colour Coding and Segregation of Concrete, Masonry, Timber, Metal and Packaging
- Crushed Rubble and Recycled Aggregate Reuse Specification and Quality Checks
- Waste Transfer Notes, Diversion Rate Calculation and Carrier Verification
- Low-Carbon Concrete and Steel Options: Slag Cement Blends, Recycled Content and Bio-Based Products
- Sustainable Procurement Clauses Using Environmental Product Declarations and Supplier Questionnaires

Day 4: Embodied Carbon Tracking, Site Resources and Nuisance Control

- Construction-Stage Carbon Calculation: Material Quantities, Transport Distances and Plant Fuel Logs
- Embodied Carbon Reduction Options Ranked by Tonnes Saved and Cost
- Site Energy and Water Efficiency: Generator Sizing, Grid Connection, Metering and Wash-Water Recycling
- Dust, Noise, Vibration and Stormwater Runoff Controls with Monitoring Thresholds
- Ecology Protection Zones, Tree Protection and Community Liaison Log

Day 5: Case Walkthrough: Site Sustainability and Waste Management Plan

- Case Building Project Pack: Drawings, Bill of Quantities, Logistics Plan and Client Targets
- Mock Site Inspection Against the Environmental Management Plan and Waste Controls
- Supply Chain Engagement Plan for Subcontractors and Material Suppliers
- Sustainability KPI Dashboard: Diversion Rate, Carbon per Square Metre, Water Use and Complaints
- Site Sustainability and Waste Management Plan Presentation and Peer Challenge

Skills You Will Gain:

- Site Environmental Planning
- Construction Waste Segregation
- Recycled Aggregate Specification
- Material Passport Recording
- Embodied Carbon Quantification
- Low-Carbon Material Selection
- Site Nuisance Monitoring
- Rating Evidence Management

Why Attend This Course:

- Return with a Site Sustainability and Waste Management Plan for a case building project, tested in a mock site inspection
- Raise waste diversion and cut disposal costs by setting up segregation and reuse routes that crews follow
- Win and keep construction-phase rating credits by collecting delivery tickets, transfer notes and monitoring records as work proceeds
- Compare site practice with contractors, consultants and client representatives from residential, commercial, healthcare and infrastructure projects

Conclusion:

Sustainable construction is won or lost in the site compound, the skip area and the purchase order. The course moves from the construction-phase impact profile and site baseline, through the site environmental management plan, the waste hierarchy, circular models and material passports, to segregation, recycled aggregates, low-carbon materials and sustainable procurement. It then covers embodied carbon tracking, site energy and water, and nuisance and ecology controls, before a case walkthrough produces a Site Sustainability and Waste Management Plan with KPIs.