MERCURY

Managing Brownfield Project

11 – 15 July 2027
Online



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Ref: 16133_1084741 **Date:** 11 – 15 July 2027 **Location:** Online **Fees:** 1900 Euro

Introduction:

Managing brownfield projects presents a unique set of challenges distinct from greenfield developments. This course equips professionals with the knowledge and tools to navigate the complexities of brownfield environments successfully. It addresses project constraints such as pre-existing structures, regulatory frameworks, environmental hazards, and operational continuity.

Participants will learn to assess legacy infrastructure, identify risks, and manage stakeholder expectations effectively. The Managing Brownfield Project training explores cost control, safety measures, and innovative engineering practices tailored to brownfield sites. It emphasizes real-world case studies and practical methodologies for integrating new systems with existing assets. Learners will lead successful brownfield projects across various industrial sectors.

Targeted Groups:

This Managing Brownfield Project training targets professionals seeking specialized knowledge and skills:

- Project managers are involved in brownfield development.
- Civil, mechanical, and electrical engineers are working on upgrade projects.
- Facility managers are overseeing the plant revamp and extension.
- Operations managers engaged in infrastructure redevelopment.
- Safety and environmental compliance officers.
- Construction supervisors manage retrofitting tasks.
- Engineering consultants specializing in site optimization.
- Maintenance professionals work in aging facilities.
- Government and regulatory agency personnel.
- Investors and asset managers in industrial redevelopment.

Targeted Competencies:

Participants will gain the following competencies during the Managing Brownfield Project program:

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- Effective planning in brownfield project environments.
- Strategic assessment of existing infrastructure.
- Integration of safety and environmental standards.
- Execution of phased project timelines.
- Stakeholder management and communication.
- Risk identification and mitigation.
- Cost control and resource optimization.
- Application of retrofit and revamp engineering methods.
- Performance tracking and quality assurance.
- Adaptive problem-solving in complex environments.

Course Objectives:

Participants will achieve the following objectives by completing the Managing Brownfield Project course:

- Understand the strategic considerations unique to brownfield projects.
- Evaluate existing site conditions and infrastructure constraints.
- Interpret environmental and regulatory requirements accurately.
- Identify and mitigate technical and operational risks.
- Plan construction activities with minimal disruption to ongoing operations.
- Optimize resource allocation and scheduling in constrained environments.
- Develop cost-effective and safe brownfield execution strategies.
- Apply innovative technologies in site redevelopment and expansion.
- Coordinate multi-disciplinary teams in active sites.
- Enhance communication and negotiation with multiple stakeholders.
- Design practical engineering solutions for integration with legacy systems.
- Maintain health, safety, and environmental HSE compliance at all stages.
- Monitor performance and ensure project delivery within scope and budget.
- Implement continuous improvement practices in project execution.
- Document and evaluate lessons learned for future reuse.

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Course Content:

Unit 1: Introduction to Brownfield Project Management:

- Definition and key distinctions between brownfield and greenfield projects.
- Strategic drivers behind brownfield project development.
- Legal, environmental, and regulatory framework for brownfield redevelopment.
- Overview of brownfield risk profiles and project complexities.
- Identification of typical challenges in brownfield sites.
- Key project phases and milestones in brownfield developments.
- Importance of accurate site assessment and pre-project planning.
- Stakeholder mapping and engagement strategy.
- Case examples of successful brownfield projects in oil & gas, utilities, and industrial facilities.

Unit 2: Planning and Site Assessment for Brownfield Projects:

- Techniques for conducting structural and environmental site audits.
- Mapping existing utilities, hazards, and underground infrastructure.
- Identifying historical records and as-built documentation gaps.
- Regulatory site compliance and environmental remediation requirements.
- Integration of Geographic Information Systems GIS for site mapping.
- Risk-based prioritization of project elements.
- Evaluating compatibility between the new design and old systems.
- Feasibility studies and investment appraisal in constrained sites.
- Aligning planning outputs with project execution and control.

Unit 3: Engineering and Design in Brownfield Environments:

- Retrofit and revamp engineering approaches.
- Constraints in spatial design and equipment installation.
- Strategies for integrating modern systems with legacy infrastructure.
- Structural reinforcements and foundation adjustments.
- Temporary works and construction staging in operating sites.
- Utility relocation and interface coordination.
- Managing the obsolescence of existing systems and materials.
- Design for maintainability and future upgrades.
- Collaboration across disciplines in tight site conditions.

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Unit 4: Execution, Operations, and Safety Management:

- Planning phased construction to minimize operational disruptions.
- Health, Safety, and Environmental HSE protocols in brownfield zones.
- Access control and permit-to-work systems for active facilities.
- Emergency response planning and site evacuation routes.
- Contractor management and work-front control.
- Construction sequencing under tight spatial limitations.
- Real-time monitoring of operations during execution.
- Waste management and environmental impact reduction.
- Post-execution site validation and operational testing.

Unit 5: Project Control, Cost Management, and Performance Monitoring:

- Budget estimation techniques in complex environments.
- Cost overrun risks and mitigation strategies.
- Earned value management in brownfield projects.
- Procurement planning with lead-time constraints.
- Resource optimization under spatial and operational limitations.
- Change control and scope deviation management.
- Quality assurance and inspection protocols.
- Project closeout documentation and performance reporting.
- Capturing lessons learned and institutionalizing best practices.

Final Insights & Key Takeaways:

Managing brownfield projects requires a unique skill set that balances innovation with constraint management. This course delivers practical strategies, technical depth, and executional insights for professionals working in real-world redevelopment environments. Participants leave equipped to manage projects that transform outdated assets into high-value operational infrastructure. Success in brownfield project management lies in careful planning, integrated execution, and continuous adaptation.