



ENVIRONMENTAL IMPACT ASSESSMENT - EIA

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ENVIRONMENTAL SPECIALIST CURRICULUM

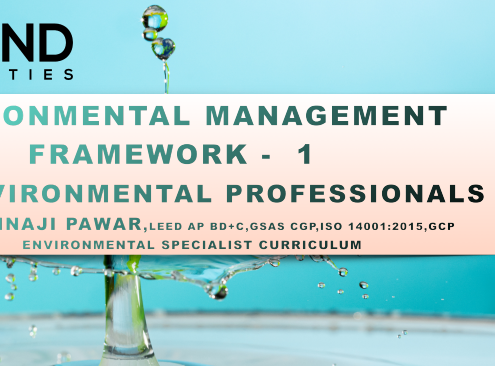




ENVIRONMENTAL MANAGEMENT FRAMEWORK - 1

FOR ENVIRONMENTAL PROFESSIONALS

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WHAT SHOULD YOU LEARN



- Environmental Management Plans (EMPs)
- Environmental Management Program Objectives
- General Environmental Management Measures
- Roles and Responsibilities of the Key Personnel
- Training and Competence
- Monitoring and Reporting

ENVIRONMENTAL MANAGEMENT PLAN

To ensure environmental sustainability, Project team has created an Environmental Management Plan(EMPs) outlining measures to eliminate, reduce and mitigate negative impacts to acceptable levels and to promote and enhance positive impacts.

The main objectives of the EMF/EMPs are the following:

- ✓ Ensure continuing compliance with Qatar's legislation and Client policy, as well as applicable international industry best practices
- ✓ Provide the initial mechanism for ensuring that measures identified to mitigate potentially adverse impacts are implemented
- ✓ Provide a framework for mitigating impacts that may be unforeseen or unidentified until project activities are underway and Provide a framework for the compliance auditing and inspection programs

ENVIRONMENTAL MANAGEMENT PROGRAM OBJECTIVES

This section focuses on identifying the core objectives that will provide the basis for implementation of the mitigation measures identified in Section 5.

The EMF has been organized based on Client's sustainable development objectives:

- Minimize environmental impact
- Implement pollution prevention measures
- Reduce and prevent harmful emissions
- Reduce unnecessary consumption of natural resources
- Reduce and recycle waste

In line with these commitments, the following sustainable development objectives have been defined specifically for the project development:

ENVIRONMENTAL MANAGEMENT PROGRAM OBJECTIVES +

- ✓ Promote the efficient use of natural resources
 - ✓ Minimize waste generation and promote reuse and recycling of generated waste
 - ✓ Prevent air pollution, minimize chemical air emissions and establish appropriate mechanisms for control, monitoring and corrective measures
 - ✓ Minimize noise impact on populations around the development and within project.
- Minimize emissions of greenhouse gases through improved energy efficiency
- ✓ Preserving biodiversity and the natural and cultural heritage through conservation, restoration and appropriate management

ENVIRONMENTAL PERFORMANCE OBJECTIVES AND GENERAL MITIGATION PRACTICES			
Valued Receptors	Environmental Performance Objectives	Guideline Objectives and General Mitigation Practices	Addressed Impacts
Climate and Air Quality	Minimise impacts from air emissions	<ul style="list-style-type: none">Maximise the number of major uses within the development in order to reduce the need for transportEncourage workers not living within QEZ3 to commute to work via public transportMinimise the transportation load generated by the development in order to reduce vehicle emissions per capitaThe roadway network layout will be based on traffic modelling and an Intelligent Transport System (ITS) will be used to manage the transport network and regulate traffic behaviour	<ul style="list-style-type: none">Decrease in air quality (exhaust emissions from transport)
		<ul style="list-style-type: none">Emissions should be minimized and controlled according to the Good International Industry Practices (GIIP) that are applicable to the relevant industry sector, through the combined application of best available technology (BAT), process modifications and emissions controlsAll construction contractors shall provide a project-specific air emissions management plan as a part of their Construction Environmental Management Plan (CEMP)All projects shall provide an air emissions management plan for normal and upset conditions during operations phase as a part of their Operations Environmental Management Plan (OEMP)The GSAS criteria and requirements for each type of plot will be followed. In order to achieve a targeted GSAS score of '1', each individual plot must achieve the following energy performance criteria: Light Industrial (123 to 148 kWh/m²/yr), Commercial (87 to 80 kWh/m²/yr), Retail (129 to 155 kWh/m²/yr), Residential (74 to 88 kWh/m²/yr), Mosques (85 kWh/m²/yr)The stack heights of all potential point sources of emissions should be designed according to GIIP to avoid excessive ground level concentrations	<ul style="list-style-type: none">Decrease in air quality (industrial emissions)Decrease in air quality (odours)Decrease in air quality (EF)

ENVIRONMENTAL PERFORMANCE OBJECTIVES AND GENERAL MITIGATION PRACTICES			
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Noise and Vibrations	Minimise impacts from noise emissions	<ul style="list-style-type: none">due to downwash, wakes, and eddy effects and to ensure reasonable diffusion to minimize impactsMachinery, fuel and chemical storage and dust generating activities should not be located close to boundaries and sensitive receptors if possibleMinimise the level of noise produced within the district and affecting the development and the surrounding environmentAny equipment to be installed in common district areas of individual plots should be of acceptable standards to ensure noise levels comply with legal and GSAS requirementsTraffic noise will be minimised as far as possible by setting speed limits in nearby residential areas	<ul style="list-style-type: none">Noise and Vibrations
Geomorphology and Soil	Minimise changes in landforms	<ul style="list-style-type: none">Encourage construction planning to minimise the adverse environmental effects caused by the construction process.All construction contractors shall provide a project-specific Construction Environmental Management Plan (CEMP). A Manating-approved template shall be followed for the CEMP	<ul style="list-style-type: none">Changes in landforms and equilibrium of coastal systems
	Minimise soil degradation	<ul style="list-style-type: none">Reverse, prevent, or minimize desertification and protect the development:<ul style="list-style-type: none">Common District: Landscaping Plans, Hardscaping Plans, Soil Erosion Prevention Plans and Silt Treatment, Fixation and Stabilization Plans.Individual plots: specific Soil Erosion Plan for individual plots greater than 1 ha in size where 25% or more of the site will undeveloped (free of pavement or buildings)Encourage development on land that is contaminated, previously developed or has low ecological value. Preserve or enhance the site through	<ul style="list-style-type: none">Erosion and desertificationSoil loss and compactionSoil pollution

ENVIRONMENTAL PERFORMANCE OBJECTIVES AND GENERAL MITIGATION PRACTICES			
Valued Receptors	Environmental Performance Objectives	Guideline Objectives and General Mitigation Practices	Addressed Impacts
Management of Resources	Minimise the use of raw materials;	<ul style="list-style-type: none">Individual plots: Develop and provide a Solid Waste Management Plan for each individual plot to achieve sustainability goals designed to divert organic waste way from landfills or other municipal facilities.	
		<ul style="list-style-type: none">Reduce power demand by promoting sustainable design guidelines and the use of renewable resourcesMinimise water consumption in order to reduce the burden on municipal supply and treatment systemsEncourage the use of regionally manufactured and assembled building elements and materials in order to reduce the carbon footprint of the materialsEncourage the use of responsibly sourced materials for primary infrastructure elements in order to minimize the depletion of non-renewable materialsEncourage the use of materials made from recycled content in order to reduce the need for virgin materialsEncourage the reuse of elements and materials in order to reduce the need for virgin materialsEncourage the use of materials and products which have to the lowest life cycle environmental impact and embodied energy	<ul style="list-style-type: none">General