



Organization Unit:	Environment Department	الوحدة التنظيمية :
Work Instructions title:	Technical Guideline No. 2 Environmental Impact Assessment (EIA) Requirements for Development, Infrastructure and Utility Projects	عنوان الوثيقة :
Doc Ref.	DM-ED-GU02-EIARDIUP	رقم الوثيقة :

TECHNICAL GUIDELINE

Number 02

Environmental Impact Assessment (EIA) Requirements for Development, Infrastructure, and Utility Projects

August 2018

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1.0 Introduction

This Technical Guideline shall be used in conjunction with the EPSS Technical Guideline No. 01 on Environmental Impact Assessment (August 2018). The environmental impact assessment (EIA) procedures and requirements outlined in this Guideline are applicable to any development, infrastructure, and utility project and to any project or activity as may be determined by the Environmental Planning & Studies Section (EPSS).

Issuance of this Guideline shall in effect supersede the EPSS Technical Guideline No. 02 on EIA Requirements for Land Development, Infrastructure, and Utility Projects issued on January 2017.

2.0 Reference Legislations

This Technical Guideline is issued under the same reference laws and regulation as for the above-mentioned EPSS Technical Guideline No. 01. In particular, this Guideline is issued in accordance to the provisions of Federal Law No. 24 of 1999 for the Protection and Development of the Environment, and its implementing rules and regulations.

3.0 List of Projects

Projects that are covered by this Guideline and the type of EIA document required, whether as an EIA Report (EIAR) or EIA Summary (EIAS), are listed below. The EPSS reserves the right to modify this list whenever necessary or as required.

3.1 Mixed-use, gated community, building complex, and urban development projects

Type of project	EIA document
Industrial estate / park / city	EIAS
Gated communities, mixed-use development	EIAS
Golf course	EIAS
Buildings (12 floors and above) with associated utilities such as chillers / cooling towers or sewage treatment plant or with a marina component	EIAS / EIAR

3.2 Infrastructure projects

Type of project	EIA document
Harbour(s) / terminal(s) / marina in coastal zone	EIAR
Promenade / marina in Creek / waterways including floating pontoons with mooring systems, piles supporting platforms, quay walls, revetment	EIAR
Temporary/permanent causeway(s) supported on piles	EIAR
Artificial canals connected to the Creek/sea/existing waterways, temporary/permanent causeway(s)	EIAR
Airport and airfields	EIAR
Dams, water reservoir	EIAR
Tunnels, tunnelling and related works	EIAR
Railway and mass transport network	EIAR
New highways, road network or bridges	EIAR
Bridges or piers located in Creek / waterways / sea	EIAR
Sewer, irrigation or drainage network	EIAR

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3.3 Electricity, gas or water utilities projects

Type of project	EIA document
Fossil fuel, gas, or mineral ore exploration and development including offshore structures / pipelines	EIAR
Pipelines for the transport of gas, oil, or chemical products	EIAR
Bulk storage facilities for petroleum, gas, chemical, or petrochemical products	EIAR
Desalination plant and potable water processing facility	EIAR
Groundwater extraction and purification and recharge	EIAR
Power generation plants (fossil fuel)	EIAR
Nuclear, solar, wind or hydro power plants	EIAR
Fuel filling stations	EIAS
District Cooling Plants (DCPs)	EIAS
Reverse Osmosis (RO) Plant	EIAS
Open substation	EIAS
High Voltage Overhead Power Transmission Lines	EIAS

3.4 Project Related to Waste

Type of project	EIA document
Sewage Treatment Plant (STP)	EIAS
Hazardous waste treatment facility	EIAR
Landfill and waste disposal site	EIAR
Waste sorting & recovery or transfer facility	EIAR
Waste incineration plant	EIAR
Waste to energy (WTE) plant	EIAR

3.5 Special types of project

Type of project	EIA document
Hospitals / veterinary / specialized medi-clinics / health facilities with incinerator and / or laboratories	EIAR
Effluent discharging outfalls	EIAR
Coastal stabilization	EIAR
Development of an artificial island(s) or peninsulas	EIAR
Submarine pipelines or cables	EIAR
Maintenance of existing beaches	EIAS

3.6 Mining, quarry, land reclamation and similar works

Type of project	EIA document
All types of mining works and extraction process involving natural resources other than specifically mentioned in Section 3.3 above	EIAR
Land reclamation, offshore dredging works and / or disposal	EIAR

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4.0 Siting Considerations

- 4.1 Any project or activity that is likely to create significant adverse impacts must be sited on appropriate location according to the applicable land use zoning regulations and with adequate buffer or separation distance from sensitive receptors.
- 4.2 The sensitivity of the receptors whether existing or planned, should be taken into consideration when providing suitable buffer or separation distance. The types, sensitivity, and description of sensitive receptors are provided in Table 1.

Table 1 – Description and Features of Sensitive Receptors Area

Sensitivity and (Type of Area)	Description and Features of the Receptors Area
High (Type 1 Area)	<ul style="list-style-type: none"> Protected areas for conservation of national or international importance Water supply reserves Hospitals and school premises High density residential block (according to land use classification), town center
Moderate (Type 2 Area)	<ul style="list-style-type: none"> Vital utilities such as electricity and energy sources, natural wealth reserves, and state-protected economic zones Light density residential blocks (according to land use classification), public parks Natural body of water Place of cultural heritage
Light (Type 3 Area)	<ul style="list-style-type: none"> Commercial buildings, offices, and other public areas Food products manufacturing premises Agricultural crops farmland
Marginal (Type 4 Area)	<ul style="list-style-type: none"> Industrial Animal farmland but without dairy or meat food products processing

- 4.3 The provision of adequate buffer or separation distance is essential. It will not only minimize the impact on sensitive receptors, but most importantly, it pre-empts any future conflicts that may arise due to harmful effects of wastes, noise, malodor, and other emissions and/or harmful discharges to the environment.
- 4.4 As shown in Figure 1, the separation distance shall be measured from the process or activity boundary, as the source of emissions, to the nearest property boundary of sensitive receptors; provided however that the receptor's property boundary forms part of a development within and is not merely an empty space. The activity boundary is the area that includes all the current and proposed activities from which emissions are expected.

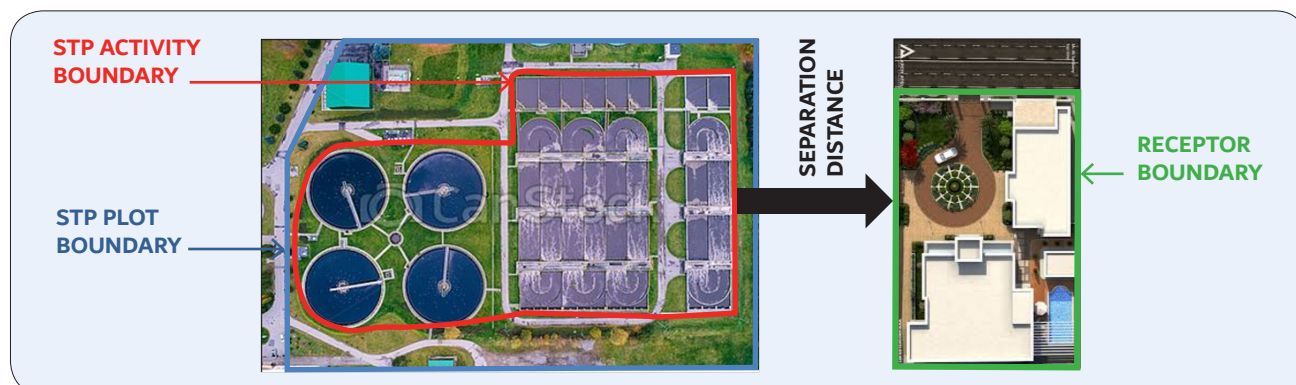


Figure 1: Concepts of Activity Boundary and Separation Distance

The recommended separation distances for STPs and Overhead Power Transmission Lines are presented in Annex I.

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4.5 Location of any project or activity near or inside a protected, conservation, heritage or any specific areas of concern shall be evaluated based on the submission of the EIA document.

4.6 The necessary Environmental Site Assessment (ESA) shall be conducted for any contaminated site or suspected of being contaminated with chemical or dangerous substance, abandoned site of industrial or manufacturing activity, abandoned waste disposal site, or any site that requires clean-up, remediation or restoration. The ESA (including the necessary rehabilitation or remediation measures, if required) shall be performed prior to the EIA baseline study.

5.0 Procedure for the Preparation of EIA document

5.1 The EIA Report / EIA Summary shall be prepared by an Environmental Consultant registered with Dubai Municipality Environment Department (DM-ED) and following the outlines presented as Annex II and Annex III, respectively, of this Guideline.

6.0 Documentary Requirements and Submissions

6.1 The appropriate EIA document, including the supporting documents and Annexes, shall be submitted to EPSS in one (1) hardcopy and two (2) sets of electronic copies either in PDF and/or MSWord formats (in properly labeled CDs/flash drives) along with the EC Application Form presented in Annex IV.

6.2 The EPSS may require the Project Owner and the appointed Environmental Consultant for technical meetings to discuss pertinent issues and/or require additional data. Alternatively, the Project Owner and Environmental Consultant may be directed in writing to submit the required additional data within a specified period of time not exceeding one month.

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ANNEX I

SEPARATION DISTANCE REQUIREMENTS FOR SEWAGE TREATMENT PLANTS (STPs) AND OVERHEAD POWER TRANSMISSION LINES

I. Sewage Treatment Plant

The minimum separation distance of a STP to sensitive receptors is given in Table 2 below.

Table 2: The required Separation Distance of STP to Sensitive Receptors

STP capacity, m ³ /day	Minimum Separation Distance ^{/a} (meters)			
	Type 1 Area	Type 2 Area	Type 3 Area	Type 4 Area
100 and below ^b	Subject to Study			
101 - 1000	75	75	50	25
1001 – 10,000	100	100	75	50
10,001-25,000	150	150	100	75
over 25,000	>200 ^{/c}	> 150 ^{/c}	> 150 ^{/c}	100

Reference: Design Guidelines for Sewage Works 2008 – Ontario Canada

Note:

/a Distance is measured, in meters, from the STP equipment to the boundary of the sensitive Receptor boundary as shown in Figure. 1.

/b The separation distance for STP with capacity equal to or less than 100 m³/day shall be subject further to a study on case-by-case basis.

/c The acceptable separation distance for STP of more than 25,000 m³/day capacity shall be determined on a case-by-case basis and based on the concept as stated hereunder.

The appropriate minimum separation distance can be suitably confirmed through the EIA study and, most importantly, depending on the following criteria:

- Protection of environment and public health;
- Prevailing DM Landuse Zoning Regulations;
- The type of treatment process, and noise or odor control measures in place;
- Proper odor assessment (odor modeling may be required in some cases); and
- Enhancement plan on the buffer zone.

II. Overhead Power Transmission Lines

To reduce the effect of electromagnetic field (EMF) towards the sensitive receptors, the recommended minimum separation distance from the overhead power transmission line, which shall be measured from the overhead power transmission cable easement, is given in Table 3 below.

Table 3: Recommended Separation Distance from Overhead Power Transmission Line

Nominal Operating Voltage of the Transmission Line	Minimum Separation Distance – measured from the edge of the Easement
110 kV and 132 kV	20 meters
275 kV and 330 kV	30 meters
500 - 550kV	40 meters

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The limits of public exposure to EMF set by the International Commission Non-Ionizing Radiation Protection (ICNIRP) that is adopted by EPSS shall not be exceeding as given in Table 4.

Table 4: ICNIRP Reference levels for general public exposure to time-varying electric and magnetic fields from Overhead Power Transmission Line

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field microTesla (μ T)
50 Hz	5000	80	100

ANNEX II

CONTENTS/OUTLINE OF AN

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

The **EIA Report**, in addition to the main body, shall include: (i) Cover/Title Page; (ii) Page containing the document review details (QA/QC Page), (iii) Table of Contents; (iv) List of Abbreviations; (v) List of Figures; (vi) List of Engineering Plans / Maps; (vii) Bibliography & References; and (viii) List of Annexes. The EIA Report shall also include an Executive Summary.

The **Executive Summary** should have all the vital data and key findings of the EIA study presented in a condensed form. The executive summary must include brief description of the proposed project, concise details of the environmental baseline characterization, summary of environmental aspects highlighting the most critical which are the potential sources of significant impacts, description of significant impacts, and the corresponding mitigation measures. Concise presentation of data should include maps, tables, and figures.

The **Body of EIA Report** shall be structured to contain of the following as minimum.

I - Introduction

This Chapter should contain the following:

1. The **Basic Project Information** which include the project title, project location, project owner, address, telephone and fax numbers, email, Dubai Economy License Number, and the name and designation of the contact person responsible for the project.
2. The **Project Rationale** stating the need for the project based on the national and local economic development and in terms of the contribution to the Dubai Strategic Vision.
3. The **Project Alternatives** presenting the methodology and criteria used in determining alternative concepts considered for the location, development design, process/technology selection, or resource utilization. An overview of the preferred concept must be presented. At least two alternatives must be considered (**with and without the project**).

II - Description of the Project's EIA process

This Chapter should include the following:

1. The EIA Team

Name of the Environmental Consultant including the complete contact details, Dubai Economy License Number, and the name of the designated contact person responsible for the Project. Name list of the EIA team members and the EIA Team Leader with their respective field of expertise, and the corresponding module or area of study assigned to each, in the preparation of report.

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2. EIA Methodology

Description of the EIA approach and methods used to identify / predict, and assess impacts and the list of data sources.

III - Reference Laws, Regulations, and Standards

This Chapter contains the list of relevant Federal Laws, Local Orders and their Implementing Rules and Regulations, Environmental Standards, and applicable International Treaties and Conventions. The key provisions of each referred laws and regulations shall also be cited with elaboration as to their relevance to the project.

IV - Description of the Project

This Chapter should include the following:

1. Description of the Project including the Master Plan (where applicable), scale, coverage, components, and any associated utilities required by the project
2. Location (use maps and photographs) showing project limits and adjacent land uses at least within 5 km radius from the project boundaries;
3. (Where applicable) For projects involving process, production, or processing of materials: detailed process description, process flowchart, plant layout, production capacity, utilities, list of equipment/machinery, and details pertaining to waste streams (air, water, hazardous waste, etc);
4. Project status, duration and schedule of phases (pre-construction, construction, operation), provide the construction timeline and the expected completion of the project; and
5. Total project cost.

V - Description of the Environment

This Chapter should include the following:

1. A clear delineation of the **EIA Study Area** within which impacts are considered. The study area should include all environmental resources that might be affected by the project.
2. Baseline conditions covering the environmental components that will be affected by the project. These may include all or any of the following (primary data):
 - **Water** (hydrology, hydrogeology, oceanography)
 - **Air** (meteorology, air quality, noise, vibration, EMF)
 - **Land** (land use classification, geomorphology, topography, soil quality)
 - **Biodiversity** (identification of flora and fauna)
 - Socio-cultural and economic, archaeological, and historical values,
3. The methodology of the study, description of the sampling stations, key findings on the baseline profiling, and analysis of the primary and secondary data.
4. Maps (easy to read and accurately scaled) showing the vital resources within and adjacent to the project area/study area, topographical and land features of the project/study area, location of the sampling stations, among others)

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VI - Assessment of Environmental Impacts

This Chapter should include the following:

1. Discussion, including a tabulation, of all identified environmental aspects and impacts expected from the project;
2. Assessment and criteria for determining the significance of environmental impacts;
3. Discussion on the significance of each impact with highlights on the most critically affected environmental components or sensitive receptor areas;
4. Tabulation of the assessed significant environmental aspects and impacts; and
5. Results and conclusions of any modelling undertaken to forecast the nature and extent of the identified environmental impacts.

VII - Mitigating Measures and Enhancement Plan

This Chapter should include the following:

1. Presentation of the proposed enhancements, mitigations, or actions for each identified significant environmental impacts associated with each project phase;
2. Assessment of the likely effectiveness of the enhancement and mitigation measures in terms of reducing or preventing impacts; and
3. Discussion of residual, unavoidable and cumulative impacts after incorporating the enhancement or mitigation measures.

VIII- Environmental Management and Monitoring Program (EMMP)

This Chapter should include the following:

1. Detailed description of environmental management practices and mitigation measures for each identified significant environmental impacts associated with each project phase, including the timetable of implementation;
2. Detailed description of the monitoring program which include, among others: the monitoring objectives to determine the effectiveness of the proposed enhancement and / or mitigation measures, environmental parameters to be monitored, sampling plan and frequency, methodology and equipment for measurement, data management & analysis, reporting schedules, and equipment calibration; and
3. Organizational structure, including the roles and responsibilities of the Environmental Management Team or office, administrative arrangements, and resources requirements for the implementation of the EMMP.

IX – Conclusions and Recommendations

The presentation of the conclusions and recommendations of the EIA study shall include a summary, presented as matrix or table, of all the significant environmental aspects and impacts including the proposed mitigation and enhancement measures, identified residual impacts, and proposed monitoring activity for each project phase.

X - Annexes

The list of Annexes shall include all or any of the following mandatory information (unless specified otherwise):

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1. Written authorization from the Project Owner stating the person/company/Environmental Consultant to represent and/or transact and/or to enter commitments on their behalf with regards to their application to secure an Environmental Clearance;
2. Copy of a valid Dubai Economy License of the Project Owner, the appointed Environmental Consultant, and (if applicable) the appointed STP / DCP Operator;
3. Latest Affection Plan indicating the area coverage and extent of project;
4. Project Master Plan (where applicable) and Site Plan showing all project components, and location of any utilities such as the associated sewage/wastewater treatment plants, cooling facilities, and similar auxiliary structures;
5. Additional engineering drawings showing the details of wastewater treatment (e.g. STP) and or cooling (e.g. cooling tower/DCP) facilities and project sewerage and drainage networks;
6. Construction schedule (Gantt Chart);
7. Results of the laboratory analysis conducted by a DAC accredited testing laboratory (if applicable and required);
8. Records of inter-agency communications (if applicable and required); and
9. Numerical modelling studies (where applicable).

ANNEX III

CONTENTS/OUTLINE OF AN

ENVIRONMENTAL IMPACT ASSESSMENT SUMMARY (EIAS)

The **EIA Summary**, in addition to the main body, shall include:(i) Cover/Title Page; (ii) Page containing the document review details (QA/QC Page), (iii) Table of Contents; (iv) List of Abbreviations; (v) List of Figures; (vi) List of Engineering Plans / Maps; (vii) Bibliography & References; and (viii) List of Annexes.

I. Basic Project Information

The Basic Project Information includes the project title, project location, details of the project owner and the Environmental Consultant, which include mailing address, telephone and fax numbers, email, Dubai Economy License Number, and the name and designation of the contact person responsible for the project.

II. Description of the Project

1. Description of the Project including the Master Plan (where applicable), scale, coverage, components, and any associated utilities required by the project.
2. Location and site plan showing all buildings, drains, discharge points to air, water, or land and storage areas for dangerous goods. The map must clearly show the adjacent land uses within 2 km. radius.
3. (Where applicable) For projects involving process, production, or processing of materials: detailed process description, process flowchart, plant layout, production capacity, and list of equipment/machinery.
4. Description of emissions and waste streams (where applicable) pertaining to:
 - 4.1 Emissions to air, noise, and electromagnetic field (EMF)
 - a. Description of air pollution sources;
 - b. Rate and type of air pollutant emissions (e.g. PM₁₀, TSP, SO₂, NO_x);
 - c. The type of fuel and rate of use in all fuel-burning installations;
 - d. The height and diameter of chimneys/stacks;
 - e. Discharge velocity of flue gases from chimney/stacks;

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- f. Details of the operation and maintenance of proposed air pollution control devices;
- g. Description of noise sources, noise levels, and control devices;
- h. Description of EMF sources and emission levels.

4.2 Wastewater Discharges

- a. Type and estimated volume of wastewater generation (sewage or process);
- b. Description of wastewater treatment (if any) and / or disposal;
- c. Operation and maintenance of wastewater treatment facility (if any on-site).

4.3 Hazardous Wastes

- a. Types and quantities of hazardous wastes
- b. Description of containment, treatment and disposal of hazardous wastes

4.4 Dangerous Goods

- a. List of dangerous goods with their respective CAS Number, quantities, and rate of use
- b. Location and description of storage, bulk storage tanks, bund walls, (where applicable).

5. Project Status

State the status of the project whether it is on the pre-construction, construction or operational phase. Where applicable, provide the construction timeline and the expected completion of the project.

6. Project Capital Cost

III. Description of the Environment

A description focused on the aspects of the environment likely to be affected by the project, which may include all or any of the following (secondary data):

- Water (hydrology, hydrogeology, water quality)
- Air (air quality, noise, vibration, EMF)
- Land (land use classification, geomorphology, topography, soil quality)
- Biodiversity (identification of flora and fauna)
- Socio-cultural and economic, archaeological, and historical values

IV. Impact Assessment and Mitigating Measures

A description of the identification and assessment of the potential environmental impacts associated with each project phase and the proposed measures to mitigate the identified impacts.

V. Environmental Management and Monitoring Plan

Description of environmental management measures for each identified significant environmental impacts associated with each project phase, timetable of implementation, monitoring plan with parameters, frequency, and the responsible party/ies who will implement the plan.

VI. Annexes

The list of Annexes shall include all or any of the following mandatory information (unless specified otherwise):

1. Written authorization from the Project Owner stating the person/company/Environmental Consultant to represent and/or transact and/or to enter commitments on their behalf with regards to their application to secure an Environmental Clearance;

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2. Copy of a valid Dubai Economy License of the Project Owner and the appointed Environmental Consultant, and (if applicable) the appointed STP / DCP Operator;
3. Latest Affection Plan indicating the area coverage and extent of project;
4. Project Master Plan (where applicable) and Site Plan showing all project components, and location of any utilities such as the associated sewage/wastewater treatment plants, cooling facilities, and similar auxiliary structures;
5. Additional engineering drawings showing the details of wastewater treatment (e.g. STP) and or cooling (e.g. cooling tower/ DCP) facilities and project sewerage and drainage networks;
6. Construction schedule (Gantt Chart);
7. Results of the laboratory analysis duly attested by a DAC accredited testing laboratory (if applicable and required).

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ANNEX IV

Environmental Clearance Application Form



Environment Department
Environmental Planning and Studies Section



Environmental Clearance Application Form

(For EPSS use only)

Reference No: EPSS - [] - [] New Renewal Amendment

Project Information	Project Name	[]	
	Project Classification	<input type="checkbox"/> Development Project <input type="checkbox"/> Infrastructure Projects <input type="checkbox"/> Utilities Project (STP/DCP) <input type="checkbox"/> Others (please specify) []	
	Plot No.	[]	
	Project Owner	<input type="checkbox"/> Private <input type="checkbox"/> Government []	
Environmental Consultant	Company Name	[]	
	DED License No:	[]	
	Email Address	Phone No.	Fax No.
STP/DCP Operator (if applicable)	Company Name	[]	
	DED License No:	[]	
	Email Address	Phone No.	Fax No.
Type of Document Submitted	<input type="checkbox"/> EIA Report	<input type="checkbox"/> Request for EC Renewal	Revision No: []
	<input type="checkbox"/> EIA Summary	<input type="checkbox"/> Request for EC Amendment	
Minimum Documents for Submissions		Attached	Remarks
		Yes	No
Written authorization to transact on behalf of the Client to secure EC.		<input type="checkbox"/>	<input type="checkbox"/>
Copy of a valid DED license of Project Owner (for Private Project Owners)		<input type="checkbox"/>	<input type="checkbox"/>
Copy of a valid DED license of the designated contractor, if any		<input type="checkbox"/>	<input type="checkbox"/>
Copy of a valid DED license of the Environmental Consultant		<input type="checkbox"/>	<input type="checkbox"/>
Copy of Affection Plan/s under the name of the Project Owner		<input type="checkbox"/>	<input type="checkbox"/>
Copy of Lease Agreement (if plot is not owned by the Project Owner)		<input type="checkbox"/>	<input type="checkbox"/>
Hard (1) and Soft Copies (2 CDs)		<input type="checkbox"/>	<input type="checkbox"/>
CRS in soft copy and hardcopy (for submission of revised report)		<input type="checkbox"/>	<input type="checkbox"/>
<p>DISCLAIMER: It is the sole responsibility of the appointed Environmental Consultant, or STP/DCP Operator (as applicable) to diligently complete this form, and provide correct and valid legal documents. The Environmental Planning & Studies Section reserves the right to reject any incomplete and inaccurate submission.</p>			
<p>COMMITMENT STATEMENT:</p> <p>I / We, on behalf of the Project Owner, hereby declare that the details provided above are true and correct to the best of my / our knowledge and I / we undertake to Inform DM of any changes therein, immediately. In case any of the above information, including the attached report, are found to be false or untrue or misleading, I am/we are aware that I / we will be held responsible and this may lead to delay in the approval / rejection of the application.</p>			
[]		[]	
Company Stamp / Full Name and Signature of the Company Owner		Date	

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ANNEX V

General Environmental Compliance Conditions

1. Prior approval shall be secured from the Environmental Planning and Studies Section (EPSS) for any modification / change in the project or inclusion of new projects components, or establishment of any additional facilities such as, but not limited to, Sewage Treatment Plant (STP), District Cooling Plant (DCP), or temporary concrete batching plants, not covered by the Environmental Impact Assessment (EIA), or change in designated Operator. The request of amendment of EC from the EPSS should be made by the Project Owner at least thirty (30) days prior to the change.
2. The Environmental Clearance (EC) shall be renewed at least thirty (30) days prior to its expiry date. The renewal of the EC is subject to the compliance of the Project Owner and/or its appointed contractors and operator to the compliance conditions stipulated herein/or additional project-specific requirements indicated in the issued EC, and payment of outstanding fees and penalties as a result of violations in the future, if any.
3. The EC does not exempt the Project Owner and/or its appointed contractors and operator from securing other government approvals or preclude other agencies/departments from enforcing their rules and regulations.
4. All applicable DM permit requirements shall be obtained and complied with. These include, but not limited to, permits from the DM Waste Management Department for the disposal of all wastes (e.g. solid, liquid, including sludge and hazardous waste), and permit from the EPSS for Storage of Dangerous Goods.
5. All air and noise emissions to the environment shall comply with the applicable Environmental Laws and Regulations in the Emirate of Dubai.
6. Discharge of any wastewater / effluent generated from the project implementation shall, at all times, comply with the applicable discharge limits/standards enforced by the concerned DM Departments.
7. All chemicals that shall be used for the buildings' maintenance, cooling system, firefighting equipment, among others, shall have zero ozone depletion potential (ODP) or low global warming potential (GWP).
8. All the required sampling and analyses shall be conducted by the Dubai Central Laboratory (DCL) and/or any laboratory accredited by the Dubai Accreditation Centre (DAC).
9. A copy of the EC shall be kept at the project site at all times. The Project Owner and/or its appointed contractors and operator shall allow access, and provide assistance to the authorized representatives of DM-ED in carrying out inspections, incident investigations, taking of pictures, and in obtaining relevant information such as onsite sources of emissions and effluent discharges at anytime, except if it is unsafe to do so.
10. The construction and/ or operation activities shall not cause any environmental pollution or any complaints from the public and its adjacent communities. In case of environmental pollution and/or complaints, the Project Owner and/or its appointed contractors and operator shall implement appropriate corrective actions, settle environmental disputes, and bear all responsibilities on any environmental damages and cost for any remediation thereof.
11. Any environment-related incidents and complaints shall be reported immediately to the Environmental Control Section (ECS) within twenty-four (24) hours. The incident report shall describe the likely cause, the time of occurrence, and the conditions under which an incident occurred, the extent of impact, and the remedial actions undertaken. In such events, a registered Environmental Consultant shall be appointed to determine and supervise the necessary corrective actions to be undertaken, and conduct the necessary monitoring activities to ensure compliance to the prescribed standards.
12. A **semi-annual** Environmental Performance Report (EPR) according to the prescribed format, including environmental protection measures implementation and monitoring, and a brief description with photo documentation of the construction progress (as applicable) shall be submitted to the ECS within seven (7) days after each reporting period.

Specific Conditions for Projects with Odour Emitting Sources

The following compliance conditions shall be applicable for, but not limited to, projects with odorous sources such as Sewage Treatment Plant (STP), in addition to the General Environmental Compliance Conditions (except for condition nos. 7 & 12):

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13. Adequate controls and mitigation measures shall be implemented for all air emission associated with the Project activities. All emissions to the air environment shall comply with the limits provided in the Cabinet Decree No. (12) of 2006. The ambient concentration of the below odorous gases shall not exceed the following limits at plot boundary and nearby sensitive receptor(s).

Ambient Air (Odour)		
H ₂ S *	7 µg/m ³ (30-min averaging)	WHO
NH ₃ *	30 µg/m ³ (30-min averaging)	NIH, US
Dimethyl disulphide	56 µg/m ³ (10-min averaging)	Ontario's Ambient Air Quality Criteria
Dimethyl sulphide	30 µg/m ³ (10-min averaging)	
Methyl mercaptan	13 µg/m ³ (10-min averaging)	

*Continuous measurement for 24 hrs at plot boundary and nearby sensitive receptor(s)

Whenever a foul odour complaint arises, the Project Owner/STP Operator shall conduct an air quality monitoring of H₂S and NH₃ at the odour control unit exhaust, plot boundary, and at nearby sensitive receptors, for at least 1-hour to 24-hours (continuous) extendable to seven (7) days. The monitoring instrument should have an averaging time of at least 10 minutes, including record of wind direction and valid calibration certificate.

14. A **quarterly** Environmental Performance Report (EPR) based on the prescribed format including a brief description with photo documentation of the construction progress (as applicable). For STP, EPR should include TSE laboratory analysis results and air quality monitoring report for H₂S and NH₃ with the meteorological data and monitoring location map. The quarterly EPR shall be submitted to the ECS within seven (7) days after each reporting period.

Specific Conditions for District Cooling Plant (DCP)

In addition to the General Environmental Compliance Conditions, the following condition shall be applicable (except for condition no. 7):

15. R-134a (or similar) shall be used as refrigerant for the DCP operation. All other chemicals (e.g. for maintenance, firefighting, etc.) that will be used for the DCP shall have zero or very low ozone depletion (ODP) and global warming potential (GWP).

Specific Conditions for Fuel Filling Stations

In addition to the General Environmental Compliance Conditions, the following conditions shall be applicable (except for condition no. 7):

16. The fuel storage tanks and fuel dispensing equipment shall be provided with adequate vapor recovery systems (VRS Stages 1 & 2) as per the submitted specifications and shall be operated and maintained in accordance with manufacturer's recommendations.
17. All chemicals that will be used for the buildings' maintenance and firefighting equipment, including the refrigerant for the VRS shall have zero ozone depletion potential (ODP) or low global warming potential (GWP).
18. All measures to prevent and/or control the spillage / leaks of petroleum products and chemicals from all relevant activities during the operation shall be implemented based on the Environmental Management Plan (EMP) framework in the approved EIAS.

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Specific Conditions for Coastal Projects

In addition to the General Environmental Compliance Conditions, the following conditions shall be applicable:

19. A construction No Objection Certificates (NoC) shall be obtained from the Coastal Environment Section (CES) prior to commencement of any marine construction works. In addition to the NOC, a Construction Environmental Control Plan (CECP) shall be approved by CES.
20. Any liquid fuel, oil and chemical shall be stored within impermeable secondary containment (bunded area). For a single-walled fuel tank, the secondary containment shall be at least 110% of the tank. For multiple drums and containers, the secondary containment must be 110% of the largest drum or 25% of the combined full capacity of all drums and containers. Spill kits must be located close to the designated storage area, and must be appropriate for the quantity and type of chemicals, oil and fuel stored on site.
21. Lightweight non-hazardous construction waste (paper, plastic, polystyrene) shall only be stored in bins and containers with lids, and they shall be emptied regularly to prevent overfilling and spilling. Similarly, they will be transported in closed waste trucks.
22. Hazardous waste shall temporarily be stored on site within a bunded area with impermeable surface, no connection to the drainage network or a surface water body. In the event of a spill, contaminated sand/soil shall be excavated immediately, and temporarily stored on site at the designated hazardous waste area. All hazardous waste shall be collected and disposed of at a licensed landfill for hazardous waste, by a licensed DM-approved waste contractor. Chain of custody records of collection and disposal of the contaminated soil as hazardous waste shall be retained on site.

Specific Conditions for Projects near or inside the Protected or Conservation Areas

In addition to the General Environmental Compliance Conditions, the following conditions shall be applicable:

23. A No Objection Certificates (NoC) shall be obtained from the Natural Resources Conservation Section (NRCS) prior to commencement of any activities inside the Protected or Conservation Area.
24. A Translocation Plan for the species that will be impacted by the Project shall be submitted to the NRCS within thirty (30) days from the date of issuance of the EC.
25. Implement necessary measures to protect any fauna or flora with conservation status categorized higher than "Least Concern" encountered during the project implementation as per requirements of NRCS Technical Guideline No. 3, on the Capture, Rescue, Translocation, Release and Restoration of Wildlife in the Emirate of Dubai.
26. Any ecological-related incident shall be reported to the NRCS within twenty-four (24) hours. The incident report shall describe the likely cause, the time of occurrence, and the conditions under which an incident occurred, the extent of impact, and the remedial actions undertaken. In such events, a registered Environmental Consultant shall be appointed to determine and supervise the necessary corrective actions to be undertaken, and conduct the necessary monitoring activities to ensure compliance to the prescribed standards.

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Project specific conditions/submission requirements, if any, shall be specified in the Environmental Clearance. The Dubai Municipality – Environment Department (DM-ED) reserves the right to amend the existing conditions of the EC or impose additional conditions.

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ANNEX VI-A

Environmental Performance Report Prescribed Forms (Development & Infrastructure Projects)

DUBAI MUNICIPALITY – ENVIRONMENT DEPARTMENT

ENVIRONMENTAL PERFORMANCE REPORT (Land Development and Infrastructure Projects)

This Environmental Performance Report (EPR) shall be submitted in compliance to the conditions of issued Environmental Clearance/No Objection Certificate (NOC). This reporting system shall allow concerned parties to demonstrate their compliance with environmental regulations and for DM-Environment Department to validate these.

The fields allotted in this EPR shall contain the summarized information covering a particular period as required in the EC/NOC condition. It shall be provided to Environmental Planning and Studies Section (EPSS), with a covering letter signed by the project owner/developer or its authorized representative(s), within seven (7) days after the end of the reporting period as specified in the issued EC/NOC.

BACKGROUND INFORMATION			
Name			
Type			
Location			Plot No.
Owner			
Representative of the Owner	Concerned Officer		EHS Officer
	Telephone Number		Telephone Number
	Fax Number		Fax Number
	E-Mail Address		E-Mail Address
Contractor			
Responsible Persons from the Contractor	Project Manager		EHS Officer
	Telephone Number		Telephone Number
	Fax Number		Fax Number
	E-Mail Address		E-Mail Address
Reporting Period			
Date of EC/NOC Issuance			Validity of Issued EC/NOC

PROJECT INFORMATION			
No.	Approved Activities/Project Components ¹	Status of Construction ²	Expected Date of Completion
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Note: 1. Refer to the details in the submitted EIA Report, this include the specific land development activities, type and number of buildings, utilities, etc.

2. Indicate the status of each project component (e.g. percentage of completion) and the on-going construction works.

For more information, please call Environmental Planning and Studies Section
04-6066812, 04-6066817 and 04-6066814

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ANNEX VI-B

**Environmental Performance Report Prescribed Forms
(Sewage Treatment Plant)**

DUBAI MUNICIPALITY – ENVIRONMENT DEPARTMENT

**ENVIRONMENTAL PERFORMANCE REPORT
(Sewage Treatment Plant)**

This Environmental Performance Report (EPR) shall be submitted in compliance to the conditions of issued Environmental Clearance (EC)/No Objection Certificate (NOC). This reporting system would allow concerned parties to demonstrate their compliance to the EC/NOC conditions and to the relevant environmental regulations

The fields allotted in this EPR shall contain concise data covering a particular period as required in the EC/NOC condition. A completed EPR shall be submitted to EPSS for evaluation and validation, within seven (7) days after the end of each month, or within the period as specified in the issued EC/NOC.

GENERAL INFORMATION			
STP Location			Plot No.
STP Owner			
Representative of the STP Owner	Concerned Officer		EHS Officer
	Telephone Number		Telephone Number
	Fax Number		Fax Number
	E-Mail Address		E-Mail Address
STP Operator			
Responsible Persons from the STP Operator	Facility Manager		EHS Officer
	Telephone Number		Telephone Number
	Fax Number		Fax Number
	E-Mail Address		E-Mail Address
Reporting Period			
Issue Date of EC/NOC		Validity of Issued EC/NOC	

TECHNICAL INFORMATION			
Description of the treatment process			
	(NOTE: Use additional sheets as necessary)		
Description of any enhancement or modification made on the STP			
Design Capacity/Day		Present Operation Capacity/Day	
No. of Days Operation		No. of Hours in Operation	

For more information, please contact Environmental Planning and Studies Section (EPSS)
Phone: 04-6066757; 04-6066812, or 04-6066814

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OPERATIONAL INFORMATION						
Source(s) of Incoming Sewage						
No.	Name of Source(s)	Location of Source(S)	Flowrate in cubic meter/day (M ³ /day) average	Volume (M ³) per month	Total Volume (M ³) for the Entire Reporting Period	
1						
2						
3						

Treated Sewage Effluent (TSE)						
Volume in cubic meters (M ³) of TSE each Month				Specific means of TSE reuse		
Month & Year			Grand Total	Application area where the TSE is reused		
Produced TSE				Disposal Point of the unused TSE		
Used TSE				ECS Permit No. (for the reuse/disposal of TSE)		
Unused TSE				Validity of the ECS Permit		

Sludge						
Quantity, in metric tons (MT) of Sludge produced each Month				Disposal Point		
Month & year			Grand Total	DM Permit No. (Disposal)		
Slurry Sludge				Validity of the Permit		
Dewatered Sludge						

Sampling and Result Laboratory Analysis of TSE							
General Information		Parameters	Unit	Test Method	Detection Limit	Value	Applicable DM Limit/Standard
Date of Sampling							
Time of Sampling							
Date Sample Received at Laboratory							
Time Sample Received at Laboratory							
Type of Sample							
Sampling Point/Source of Sample							
Name of Laboratory							

Sampling and Result of Laboratory Analysis of Sludge							
Date of Sampling	Time of Sampling	Parameters	Unit	Test Method	Detection Limit	Value	Applicable DM Limit/Standard

NOTE: (expand the Table as needed)

- Reporting period refers to a month or a quarter, depending on the requirement of the EC/NOC issued and must indicate the covered months and year as well as all of sources of sewage.
- Attach (as Annex STP-1) a map showing the application areas of TSE, if applied or disposed on-site. If the TSE is applied or disposed off-site, indicate its specific location.
- Attach (as Annex STP-2) the copies of permits issued by ECS for the reuse/disposal of TSE, and of sludge.
- Attach (as Annex STP-3) the report of tests/analyses provided by the DCA Accredited laboratory.
- Attach (as Annex STP-4) a drawing showing the components of the STP and the sampling points.

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TREATED SEWAGE EFFLUENT AND SLUDGE MANAGEMENT (TSESM)						
Sewage						
No.	Sources of Sewage	Location	Total Volume (m ³) for the Entire Reporting Period ¹			
1						
2						
3						
4						
5						

Flow Rate of Incoming Sewage		Volume of Incoming Sewage (m ³) Per Month			
Volume (m ³) of Incoming Sewage / Day	Ave. Vol. (m ³) of Incoming Sewage/Day	Month & Year ²	Month & Year ²	Month & Year ²	Grand Total ³

Treated Sewage Effluent					Specific Use of the Recycled TSE	
Volume (m ³) of TSE Per Month				Application Area of the Used TSE ⁴		
TSE Type	Month & Year ²	Month & Year ²	Month & Year ²	Grand Total	Disposal Point of the Unused TSE ⁵	
Produced TSE					ECS Permit No. (for the reuse/disposal of TSE)	
Used TSE					Validity of the Permit Issued	
Unused TSE						

Sludge						
Quantity (MT) of Sludge Per Month				Disposal Point		
Sludge Type	Month & Year ²	Month & Year ²	Month & Year ²	Grand Total	DM Permit No. (Disposal)	
Slurry Sludge					Validity of the Permit	
Dewatered Sludge						

Results Laboratory Analysis of TSE ⁷							
General Information		Parameters	Test Methods	Unit	Detection Limit	Result	Applicable DM Limit/Standard
Date of Sampling							
Time of Sampling							
Date Sample Received at Laboratory							
Time Sample Received at Laboratory							
Type of Sample							
Source of Sample							
Sampling Point							
Sampling Procedure							
Laboratory Involved							

Result of Laboratory Analysis of Dewatered Sludge ⁷							
Date of Sampling	Time of Sampling	Parameters	Test Methods	Unit	Detection Limit	Result	Applicable DM Limit/Standard

Notes:

- Reporting period refers to a month or a quarter, depending on the requirement of the EC/NOC issued.
- Indicate the month and year.
- Covers all the sewage from all sources.
- Attach (as Annex TSESM-1) a map showing the application areas of TSE, if applied or disposed on-site. If the TSE is applied or disposed off-site, indicate its specific location.
- Attach (as Annex TSESM-2) the copy of permit issued by ECS for the reuse/disposal of TSE, if any.
- Attach (as Annex TSESM-3) the copy of permit issued by ECS for the disposal of sludge.
- Attach (as Annex TSESM-4) the result of analysis provided by a DCL and/or DAC (Dubai Accreditation Center) accredited laboratory.
- Attach (as Annex TSESM-5) a drawing showing the components of the STP and the sampling points.
- Expand the table if necessary.

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For further information, please visit Dubai Municipality website www.dm.gov.ae

or contact the Environmental Planning & Studies Section (EPSS) at

Tel. Nos. 04-6066120, 04-6066257, 04-6066281, and, 04-6066814 or Fax No. 04-7033565

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