
Executive Summary

A. Introduction

Mr. Mohammad Haroon Mahmood intends to construct a new building for the establishment of “3 Star Hotel” at Plot No 36, Sector I-8 Markaz, Islamabad.

The objective of the project is to construct a state-of-the art Hotel in Sector I-8 Markaz to provide safe and comfortable guest rooms, commercial facilities along with health club and swimming pool.

B. Policy, Legal and Administrative Framework

The project has been reviewed against the environmental legislations applicable in Pakistan, however, the laws and acts particular for the proposed project includes:

- Pakistan Environmental Protection Act, 1997 (PEPA, 1997)
- Pakistan Environmental Protection Agency (Review of IEE/EIA) Regulations, 2000
- National Environmental Quality Standards (NEQS), 2000

Mr. Mohammad Haroon Mahmood being the proponent of the project, will ensure that the construction and operational phases of the project will be in accordance with the recommendations of the IEE report and the Environmental Management Plan will be implemented.

C. Project Description

Mr. Mohammad Haroon Mahmood intends to construct a 3 Star Hotel named “3 Star Hotel” on 150’x180’ plot. The proposed Hotel will have ten floors which includes: Lower Ground floor, Ground floor, and 8 floors. There will be two parking basements and a Mumty. The total covered area is 134,979 sq. ft.

3 Star Hotel will comprise of 141 Guest Rooms, 2 restaurants, 2 Banquet Halls, 1 all day dining area, 3 Meeting/Board Rooms, 3 Offices, Gym, Retail Area, 1 Seminar Hall, and swimming pool. The estimated cost of the project is Rs. 849 million and expected to be completed in 3 years.

The 3 Star Hotel has several environment friendly features such as central HVAC, component of renewable energy on roof top and vertical gardening approach will be adopted.

D. Existing Environment

1- Physical Environment

Topography: Islamabad is located on the Northern edge of the track known as Potohar Plateau. The Potohar Plateau has an uneven water table, and land is gradually rising in elevation from 500 to 600 meters above the sea level and the highest point is 1,600 meters above mean sea level.

Geology and Soil Texture: The Potohar region has a complex geological history of mountain formation, alluvial-loessic depositions, and erosion cycles. The soil in Potohar region is shallow clayey with low productivity.

Surface Water: Rawal Lake is one of the main source waters for Islamabad. Rawal Lake, it is an artificial reservoir that provides the water needs for the cities of Rawalpindi and Islamabad.

The Soan and Kurang Rivers are the main streams draining in Islamabad area. Their primary tributaries are the Ling River, draining northwest ward into the Soan; Gumreh Kas, draining westward into the Kurang from the area between the Kurang and Soan; and Lei Nullah, draining southward into the Soan from the mountain front and urban areas. The Kurang and Soan Rivers are dammed at Rawal and Simly Lakes, respectively, to supply water for the urban area.

Ground Water: The ground water level ranges from approximately 150 to 180 ft. in the project area. Drinking water test from the adjacent Mosque was carried out. The result indicates that the water supply provided by CDA is fit for drinking purpose.

Climate: Islamabad has distinct seasons marked by wide variation in temperature. Rainfall in April and May is occasional, but the heaviest rain is experienced in July and August. The temperature ranges between -1 °C to 46 °C.

Air Quality: The Project site is located at a place with commercial area. The traffic density on adjacent road is low to moderate. The criteria of ambient air quality pollutants (NO_x, SO₂ PM₁₀, CO etc.), are expected to be low in the Project area.

Noise: The Project area has no industry, but commercial shops are present in the Project area. The Project activities can create noise pollution during its construction phase. However, a careful approach should be adopted to reduce the noise impacts during construction phase of the Project.

2- Ecological Environment

Flora: The vegetation of Islamabad is representative of Dry Tropical Semi Evergreen Scrub Forest zone. Islamabad has dense forests which include tree species: *Acacia nilotica* (Kikar), *Dalbergia sissoo* (Shisham), *Albizia lebbek* (Shrin), *Alstonia scholaris* (Alstonia), *Azadirachta indica* (Neem), *Bauhinia variegata* (Kachnar), *Bombax ceiba* (Semal), *Broussonetia papyrifera* (Paper Mulberry), *Callistemon lanceolatus* (Bottle Brush), *Cassia fistula* (Amaltas), *Cedrela toona* (Tun) etc.

The project site does not have any tree and no tree will be cut during the construction phase of the project.

Fauna: In its original form, the Dry Tropical Semi Evergreen Scrub Forest constitutes the habitat of wild fauna consisting of a host of animals and birds. The species found in Islamabad are among the mammals *Canis aureus* (Asian Jackal), *Canis lupus* (Wolf), *Felis chaus* (Jungle Cat), *Herpestes javanicus* (Grey Mongoos), *Hystrix indica* (Indian Porcupine), *Lepus nigricollis* (Indian Hare), *Funambulus pennantii* (Five Striped Palm Squirrel), *Rattus rattus*, (Rat). Among the reptiles are *Calotes versicolor* (Garden Lizard), *Echis carinatus* (Saw Scaled Viper), *Spalerosophis diadema* (Diadem Snake), *Uromastix hardwicki* (Spiny Tailed Lizard) etc.

3- Socio-economic and Cultural Environment

The 3 Star Hotel is located at Plot No 36, Sector I-8 Markaz, Islamabad. The project area may get direct positive or negative impacts of the Project.

Population: Islamabad is an estimated population of 2.0 million (Census 2017). Most of the houses are well constructed. The average household size is 6.0.

Agriculture: The land in rural areas of Islamabad is rain-fed and the agricultural production is high. Crops include wheat, maize, millet, and oats. Several vegetables are also cultivated in the area. Orchards are not common.

Education: There are number of private and public schools both for boys and girls i.e., Govt. Primary School, The City School, Roots International, Beacon House School.

Public Health: Islamabad has both public and private medical centers. The largest hospital in Islamabad is Pakistan Institute of Medical Sciences (PIMS) hospital.

Drinking Water Supply: The Sectors are facilitated by CDA Water Supply System. Moreover, there are bore wells at the houses for household and drinking purposes.

Employment: More than 90% of the population is engaged with business and employments. Mostly people are either serving in Government, having own businesses, working in private jobs, or are employed abroad.

Religious and Archaeological Sites: The major population of the Islamabad is Muslim. There is no archaeological site found in and around the proposed project site.

E. Public Consultation

Meetings were held with people working in the project area. The Project specific issues and its potential impacts on the local and regional environment were discussed.

Generally, the people of the area were supportive of the proposed project. They believed during construction phase employment opportunities will be created. However, some people mentioned that the dust, noise, and solid waste produced during the construction phase will affect their daily life and may cause health issues. However, the measures will be taken to minimize the dust, noise, and solid waste in the project premises to overcome the problems.

F. Impacts and Mitigation Measures

The Initial Environmental Examination of the 3 Star Hotel has identified potential impacts that are likely to arise during pre-construction, construction, and operational phases of the Project. To minimize the effects of adverse impacts of the proposed project, the IEE has recommended mitigation measures.

Physical Environment

Impacts: The soil-related issues include soil erosion, slope stability, and soil contamination. These may be caused by the land clearing, levelling, and grading, excavation and filling, construction activities and maintenance of equipment/vehicles.

Construction machinery and project vehicles will release exhaust emissions, containing carbon monoxide (CO), carbon dioxide (CO₂) Sulphur dioxide (SO₂), oxides of nitrogen (NO_x), and Particulate Matter (PM). These emissions can deteriorate the ambient air quality in the immediate vicinity of the project site. Furthermore, construction activities such as excavation, levelling, filling and vehicular movement may also cause fugitive dust emissions, which may become significant, as the project is located in Islamabad.

The project activities that will contaminate soil may also contaminate surface and groundwater. These include solid waste disposal, untreated wastewater disposal,

and equipment/vehicle maintenance. The solid waste will cause the air, water and soil contamination, if not handled properly.

Mitigations: To control soil erosion, slope stability, and soil contamination, excavated slopes will not be left untreated/unattended for long duration. Temporary measures, such as construction of temporary walls reinforced with brick lining bordering the construction areas to contain debris and spoil, will be undertaken to avoid soil erosion and water contamination.

The sewerage system of the 3 Star Hotel will be connected with the CDA sewerage line.

Vehicles and equipment will not be repaired at the project site. Construction machinery and vehicles will be kept in good working condition, and properly tuned, in order to minimize the exhaust emissions. Fugitive dust emissions will be minimized by spraying water on soil, where required. The mitigation measures recommended to forestall soil contamination will also prevent surface and groundwater contamination.

Proper solid waste management system will be ensured. During operational phase, solid waste will be collected and disposed of by CDA.

Ecological Environment

Impacts: The project site does not have any trees only few shrubs will be cleared during construction phase of the project.

Most of the potential impacts of the Project on the faunal resources are associated with damage to the natural vegetation. In addition, the wildlife (common birds, rodents) may be disturbed by noise, illumination, and mere presence of the people.

Mitigations: Clearing of natural vegetation will be minimized as far as possible during the construction works. A program will be developed in collaboration with CDA Environment Wing for the tree plantation in the project area.

For sustainable green building flowering, shrubs, seasonal flowers, roses etc. are to be added after completion of earth work, potted plants will be placed in windows and indoor available space of the 3 Star Hotel.

The measures to prevent soil and water contamination will forestall any adverse impacts on the faunal resources of the area. Solid waste will not be left in the open areas. Illumination levels at the site will be minimized, as far as possible. Appropriate diffusers will be used to restrict the illumination within the site.

Socio-economic Environment

Impacts: The project site is located in Sector I-8 Markaz, Islamabad. It can be accessed through Mir Chakar Khan Road. During construction phase, traffic load on these roads will slightly increase due to the project activities, and the heavy vehicles carrying construction material can cause traffic issues. The health & safety and security issues will also arise during construction and operational phase.

Mitigations: To avoid traffic congestion it is recommended that the construction material will be transported during evening hours or on weekend. Personal Protective Equipment's (PPEs) will be provided to the workers. Unauthorized access within the construction area will not be allowed. Keeping in view the safety and security, the 3 Star Hotel will be installed with security cameras and scanners during the operational phase. Firefighting arrangements, and emergency exits are made available in the design of each floor.

There are no reported sites of archaeological or historical significance at the land being acquired for the Project. However, in case any artefact is found, Pakistan Archaeology Department will be contacted.

G. Environmental Management Plan (EMP)

An Environmental Management Plan has been prepared which defines the institutional arrangements required for its implementation. It also provides the implementation mechanism for the recommended mitigation measures identified during the IEE study.

Environmental Management Plan provides a delivery mechanism to address the adverse environmental impact of the project during its execution, to enhance project benefits, and to introduce standards of good practice to be adopted for all project works.

An Environmental Monitoring Plan for construction and operational phases of the project has been prepared, which will ensure the proper implementation of the EMP. The estimated cost for Environmental Monitoring Plan during construction phase is **Rs. 1.435 million**.

H. Conclusions and Recommendations

On the basis of the overall impact assessment, more specifically, nature and magnitude of the residual environmental impacts identified during the present IEE, it is concluded that the proposed 3 Star Hotel project is unlikely to cause any significant, lasting impact on the physical, biological and socio-economic environment of the area, provided that the proposed activities are carried out as mentioned in the EMP, and the mitigation measures included in this report are completely and effectively implemented.

There are no remaining issues that warrant further investigation for the 3 Star Hotel. This IEE is considered adequate for the environmental justification of the project.