

Project	Expansion of Lucknow Airport in respect of Construction of New Integrated Terminal Building and Allied Facilities at Guraura, Aurangabad Zagir & Bhaktikhera, villages, Lucknow District, Uttar Pradesh..
Category	A [7 (a): Development of an Airport]
Project Proponent	Airport Authority of India, Lucknow, Uttar Pradesh
Location	The airport is located at adjacent of Lucknow. The airport is existing and well connected to the Kanpur road NH-25. Nearest villages are Guraura, Aurangabad Zagir & Bhaktikhera. Nearest railway station id Amausi at distance of 3.0 km in WNW.

INTRODUCTION

Chaudhary Charan Singh International Airport (LKO) is an airport serving Lucknow and Uttar Pradesh in India. It is situated in Amausi in the city of Lucknow, India and is named after Chaudhary Charan Singh, the 5th prime minister of India. It is the 12th busiest airport in India and is also the second busiest and largest in North and Central India after IGI airport Delhi. There is all existing infrastructure like runway with all allied facilities like terminal building, Apron, Apron Shoulder, Taxi Track, Runway Shoulder, boundary wall, perimeter roads and parking facilities. Now AAI, Lucknow decided to construct a new integrated terminal building and facilities.

The proposed project is a modernization/expansion project of domestic airport at Amausi, Lucknow, Uttar Pradesh. Existing Lucknow airport is spread over an area of 1261.18 acres/ 510.38 Ha of land which acquired by AAI. A total of 69.37 acres/ 28.07 Ha of land will be utilized for the modernization project.

The estimated cost of the project is 1,230.00 crores.

EIA METHODOLOGY

The EIA Report will address all the Terms of Reference and will be prepared in accordance to the Environment Protection Act 1986 and EIA Notification 2006 published by Ministry of Environment and Forests, Govt. of India dated 14th September 2006 and further amendments thereof. It will form part of the application to the Statutory Authority.

SITE & STUDY AREA

The airport is existing & AAI is expanding the only terminal building. The airport was constructed in 1986 to facilitate and operate passengers. With an increasing number of passengers, AAI decided to upgrade the airport. On 17 July 2008, the Government of India officially renamed it Chaudhary Charan Singh Airport. It was granted international status in May 2012.

Lucknow Airport, previously called Amausi International Airport is now renamed as Chaudhary Charan Singh International Airport. It was constructed with the purpose of facilitating VVIPs; it was only in 2005 when the AAI took decision to upgrade the Airport owing to increased number of passengers and also because of introduction of private operators in the sector.

A new terminal, equipped with latest technology, at Lucknow's Chaudhary Charan Singh Airport is operative since June 2, 2012. It is being used both for arrivals and departures of domestic and

international flights. The new terminal is a three-tier building which can accommodate around 650 passengers at a time.

PROJECT DESCRIPTION

The project is modernization / expansion of existing airport by developing the new integrated terminal building (T-1) & allied facilities after demolition of the present terminal building.

Construction of a new centrally air-conditioned Modular Integrated Terminal Building of 1,00,000 Sq. m (excluding 20000 Sq. m Basement area), considering fast growing air traffic and demand for better passenger facilities an area of 15,000 Sq. m. kept for retail commercial outlets | retiring rooms and airlines offices to tap future potential at the Airport. The building to be provided with aesthetically appealing & soothing interior decoration matching the modern structure. Space planning to ensure that no dead Space/ Area are created in the building. After construction of new domestic terminal, the passengers will be able to avail GRIHA 4 star facilities and this would enhance the comfort of the passengers.

Construction of multilevel car park for at least 1500 cars and surface parking for VIP cars & 10 buses, Separate car and scooter parking area for AAI and airlines staff at appropriate location. Multilevel Car Parking to be made for retailer in car parking area & it has to be developed on Built & Operate System and shall include its space planning and mode/for its operations. Other miscellaneous facilities are as below:

- Airport Director's office with associated office space, Conference hall, Retiring rooms, toilet for staff to be provided.
- Development of four-lane vehicular road from Terminal Building/ Car parking with canopy covering two lanes in front of the Terminal Building on the city side and connecting the main approach road to the city.
- Provision of VIP/ CIP lounges, provision of adequate number of chairs, furniture, furnishings etc. in the departure lounge common concourse, check-in area, security hold area and arrival lounge.
- Provision of water supply pumping arrangement system, Water Filtration, water cooler & R.O/ U.V. Filters, Sewage Treatment Plant (STP), Effluent Treatment Plant (ETP) as per norms and as per site conditions.
- Sub-station, AC plant room and related service facilities. Provision should be made for the AC Plant Room vertical through AHU rooms, backup generators for essential services etc. in the lower ground floor.
- Dismantling of terminal Building (T1), AC plant room, CCR hall, Substation, Existing Cargo Building etc. falling the location of the propose Terminal Building and reconstruct the AC plant room, CCR hall and Substation in the service area with adequate capacities considering the overall demand.

Also electrical works & other equipment/services are proposed with adding the communication, navigation & surveillance works.

The demolition of old terminal building, power house, CCR room, cargo complex, cafeteria, AC plant

room & toilets are proposed. Due to this demolition, approx. 1,50,000 m³ debris will be generated which will be disposed off by scientific method as per norms.

PROJECT LOCATION

This section will discuss the geographic location of the project. The location of the project will clearly define geographical features (e.g. watersheds, national parks / protected areas, military reservations, etc.) and the general access to the project site (e.g. presence of existing road networks, feeder roads, etc.).

PROJECT INFORMATION // PROCESS INFORMATION

This portion will include the following:

- Statement of the Official name of the project and name/s of proponents (including address, telephone nos., etc.) responsible / liable;
- Vicinity Plan, Processes involved, Site layout, water balance diagram
- Project cost and area
- Resource / Manpower requirements
- Time frame for project implementation

PROCESS DESCRIPTION

Major design parameters for the facility will be considered which will include review of the forecast of passenger traffic at Airport. Assess the suitability of land for airport development and its adequacy to meet the essential requirements of airport development. Master Plan proposal will be considered based on the attributes of the available traffic data and optimization of other technical and environmental considerations, based on the performance standards surveyed at other airports, determine peak hour traffic for development and prepare draft terminal building plans to handle the traffic. Utility requirements (Aviation Fuel, LDO, power, and water) will be provided. The emissions from DG sets, noise due to flight operations, sewage and associated wastes, and solid waste disposal measures will be discussed.

PRE-CONSTRUCTION

This section shall discuss / describe the various components of the projects. This section shall also discuss the major activities to be undertaken during the construction phase, which shall include but not be limited to:

- Site mobilization
- Site clearing
- Construction of the major facilities / project components
- Construction of support services e.g. Water & Power supply & Tele-communications, etc.
- Demolition of Terminal-1

OPERATION

This section shall discuss the activities to be undertaken during the operation, which shall include but not limited to:

- Major maintenance activities
- Manpower requirements
- Fuel Requirement
- Energy requirements

BASELINE ENVIRONMENTAL SCENARIO

Description of the existing environment, assessment of historical trends of environmental data specific to the proposed site and description of the socio-economic setting in the area will provide an overall picture of the proposed site before any development activities are undertaken. Thus, equipped with the knowledge of the existing environment and awareness of the specifications of the proposed project will help in reliable prediction of the project impacts.

Methodologies used in the data collection (primary data) shall be briefly discussed with the corresponding interpretation of the data obtained. Likewise, all sources of information (secondary data) shall be identified and appropriately acknowledged.

Study Modules	Scope of Coverage	Methodology (Type and Resources)
Topography	<ul style="list-style-type: none"> • Landform Pattern 	<ul style="list-style-type: none"> • Slope & Elevation
Soil	<ul style="list-style-type: none"> • Soil physical & chemical characteristics /analysis 	<ul style="list-style-type: none"> • Primary soil survey and analysis
Hydrology	<ul style="list-style-type: none"> • Groundwater table • Drainage system 	<ul style="list-style-type: none"> • Characterization of inland surface water
Meteorology / Climatology	<ul style="list-style-type: none"> • Wind Rainfall Pattern • Frequency distribution of wind direction • Temperature • Associated atmospheric pressure 	<ul style="list-style-type: none"> • Primary Data Collection • Secondary data from nearest IMD station.
Air Quality	<ul style="list-style-type: none"> • Ambient Air Quality • PM10, PM2.5, SO2, NOx and CO 	<ul style="list-style-type: none"> • Identification of air pollution sources • Air quality measurement
Water Quality	<ul style="list-style-type: none"> • Surface and Ground Water characteristics • Physico-chemical and bacteriological characteristics 	<ul style="list-style-type: none"> • Sampling and analysis of surface and ground water
Noise Level	<ul style="list-style-type: none"> • Ambient noise level at proposed site and nearby areas 	<ul style="list-style-type: none"> • Noise quality measurement
Traffic Intensity	<ul style="list-style-type: none"> • Traffic characterization and assessment of peak hours 	<ul style="list-style-type: none"> • Primary traffic survey on nearby road intersections

Study Modules	Scope of Coverage	Methodology (Type and
Flora	<ul style="list-style-type: none"> • Summary of vegetative cover 	<ul style="list-style-type: none"> • Primary ecology survey supported by secondary data collected from regional office
Fauna	<ul style="list-style-type: none"> • Terrestrial fauna species inventory survey 	<ul style="list-style-type: none"> • Primary ecology survey supported by secondary data collected from regional office
Demography	<ul style="list-style-type: none"> • Population Size • Population density, household size • Population by gender • Literacy rate • Occupational and employment status 	<ul style="list-style-type: none"> • Principal data from census
Other Social Services	<ul style="list-style-type: none"> • School facilities • Telecommunication, water and power facilities 	<ul style="list-style-type: none"> • Principal data from census
Transportation	<ul style="list-style-type: none"> • Network and mode of transportation 	<ul style="list-style-type: none"> • Identification of main and access road, mode of

ASSESSMENT OF ENVIRONMENTAL IMPACTS

There shall be an assessment on feasibility and cost-effective measures to prevent or reduce significant negative environmental impacts identified, to an acceptable level. In this section, the following aspects will be assessed.

- The project component and development activities that result in discharges to the environment and the effect of these on the environment:
- Existing conditions in the site area, including existing land-use, resources and other activities, which in combination with the project activity having potential to affect the environment.
- Anticipated environmental effects

This chapter will include appropriate tables and figures to illustrate and summarize the key Information that is relevant in understanding the environmental and socio-economic environment. The environmental and socio-economic impact of the proposed project having regard for regional and cumulative effects will be presented. Wherever possible, the impacts will be quantified. This section will also include measures to address emergency response requirements for accidental events and also estimate costs of those measures and of the institutional training requirements to implement them.

The existing air quality of the region and the impact of the proposed project on regional air quality will be discussed. The component of the project, which will affect air quality, will be identified. Also the ways and means of reducing the air emissions impact will be discussed.

Project activities during construction and operation phases that will affect noise levels and the potential for increased noise resulting from this project will be presented. The effect on noise levels during the construction and operation phase will be ascertained. The project activities that will affect surface water and ground water will be identified. Any water minimization considerations will be included. The quantity and source of wastewater will be presented including a summary of water quality effects and possibility of recycling.

Future waste management projections, storage and disposal plans and locations will be discussed. The quantity and composition of any waste including solid and hazardous wastes produced will be estimated and classified.

Land-use and Socio-economic information will also be provided. The impact on the resources and the present population will be highlighted. This will include the effects on employment, livelihood, economy and infrastructure.

Resource / Environment	Construction Phase Impact	Operation / Maintenance Phase Impact
Land	<ul style="list-style-type: none"> Modification of land forms 	<ul style="list-style-type: none"> Change in present form
Water Quality	<ul style="list-style-type: none"> Change in quality of surface and groundwater 	<ul style="list-style-type: none"> Change in quality of water bodies, if required
Air Quality	<ul style="list-style-type: none"> Dust generation Change in construction of pollutant gases 	<ul style="list-style-type: none"> Change in level of gaseous pollutants i.e. TSP, SO₂ and NO_x
Noise Level	<ul style="list-style-type: none"> Change in noise level 	<ul style="list-style-type: none"> Change in noise level from various sources such as aircraft operation,
Wastewater / Solid Waste Management	<ul style="list-style-type: none"> Wastewater / Solid waste management 	<ul style="list-style-type: none"> Solid waste management
Socio-economic	<ul style="list-style-type: none"> Change in employment pattern Change in infrastructure facilities 	<ul style="list-style-type: none"> Change in economy of region Employment benefits

ENVIRONMENTAL MANAGEMENT PLAN

Environment Management Plan will address all the relevant issues like Land Management, Noise pollution, Air emissions, Water Management, Hazardous materials management, Waste Management besides landscape plan and Rain water harvesting.

MONITORING PROGRAM

The EIA will contain a monitoring program for parameters included in the baseline studies. An Environmental Monitoring Plan containing the following information would serve as a guide in the monitoring activities:

- Frequency of sampling and sampling points
- Sampling parameters
- Work and financial plan for the current year

The chapter would describe the project cost towards environment protection.

CONTINGENCY / EMERGENCY RESPONSE PLAN

Procedures on how to cope with emergencies / accidents shall be outlined in a comprehensive contingency / emergency response plan. The institutional responsibilities will be made clear and the flow of communication in cases of emergencies will be included.