



भारतीय विमानपत्तन प्राधिकरण  
**AIRPORTS AUTHORITY OF INDIA**

देहरादून हवाई अड्डा, देहरादून।

**Dehradun Airport, Dehradun**

Dated: 06.10.2021

To,  
The Member Secretary (Infra- 2)  
Ministry of Environment, Forests and Climate Change, Govt. of India  
Indira Paryavaran Bhavan,  
Jor Bagh Road, New Delhi-110003

**Subject: Submission of Application for grant of Terms of Reference (TOR) for Project-  
Development of Sarsawa Airport (Integration of Terminal Building and Allied facilities in  
Sarsawa Airstrip at Village- Sherpur, Tehsil- Naqeebpur, District-Saharanpur, Uttar  
Pradesh 247232 by Airport Authority of India (AAI)**

Respected Sir,

Airports Authority of India (AAI) has proposed for "**Development of Sarsawa Airport (Integration of Terminal Building and Allied facilities in Sarsawa Airstrip**" located at Khasra No. 207, 215, 208, 306, 225, 210, 226, 223, 229, 227, 211, 228, 209, 239, 355, 362, 224, 250, 212, 15, 74, 103, 246, 234, 522, 206, 249, 244, 238, 245, 217, 246, 248, 243, 216, 253, 247, 251, 252, 240, 241, Sherpur Naqeebpur, Uttar Pradesh 247232.

Under UDAN 3.0, Sarsawa Airport has been planned to be developed for Regional Connectivity Scheme (RCS), Ministry of Civil Aviation, Government of India. The scheme was launched in 2016 to stimulate regional air connectivity and make air travel affordable to the masses. Sarsawa Airport in Saharanpur has also been included in the fourth phase of Ude Desh ka Aam Nagrik (UDAN) Scheme in December, 2019.

The total plot area of the project is 65.04 Acres i.e., 26.3304 ha (Excluding area of runway & IAF base). Peak Hour Passenger handling capacity of the building will be 150 (Arrival- 75 PAX + Departure- 75 PAX).

The proposed project falls under **Item 7(a) i.e.,** Airports/All projects including airstrips, which are of commercial use; **Category A.** Being a Category A project, it is required to obtain prior Environmental Clearance from MoEF&CC, New Delhi.

We are hereby submitting the following documents:

1. Form-1
2. Pre-feasibility Report with requisite annexures
3. Proposed Terms of Reference

We request you to kindly accept our application and grant us the Terms of Reference at the earliest.

Thanking You

Yours faithfully

(Authorized Signatory) Jasbir Singh  
Dy. GEN. MANAGER (Engrg.-Civil)  
Airports Authority of India (AAI)

भारतीय विमानपत्तन प्राधिकरण / AAI  
देहरादून एयरपोर्ट, देहरादून  
DEHRADUN AIRPORT, DEHRADUN

निदेशक विमानपत्तन, देहरादून हवाई अड्डा, देहरादून- 248140, दूरभाष : 0135-2412052 फ़ैक्स : 2410358

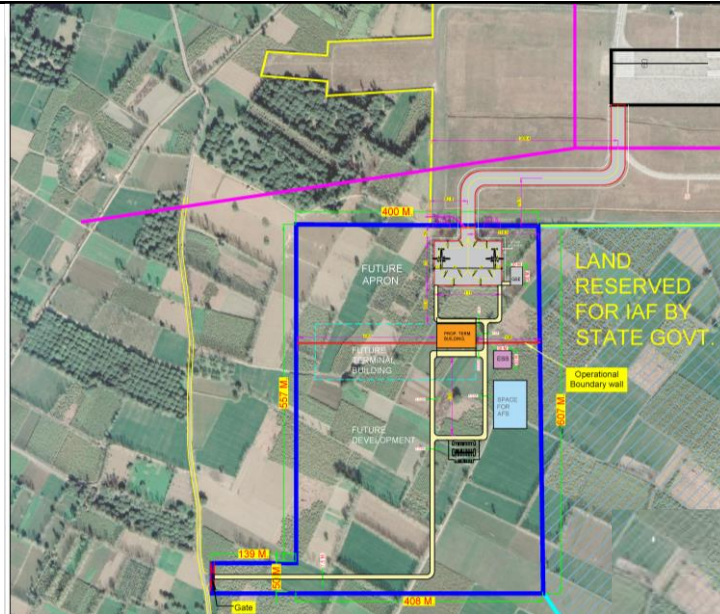
**Airport Director, Dehradun Airport, Dehradun - 248140, Telephone: 0135-2412052, Fax : 2410358**

"हिन्दी पत्रों का स्वागत है।"

# FORM-1

for

## DEVELOPMENT OF SARSAWA AIRPORT (INTEGRATION OF TERMINAL BUILDING AND ALLIED FACILITIES IN SARSAWA AIRSTRIP)



at

Khasra No. 207, 215, 208, 306, 225, 210, 226, 223, 229, 227, 211, 228, 209, 239, 355, 362, 224, 250, 212, 15, 74, 103, 246, 234, 522, 206, 249, 244, 238, 245, 217, 246, 248, 243, 216, 253, 247, 251, 252, 240, 241, Village-Sherpur Nageebpur, Tehsil-Nakur, District-Saharanpur, Uttar Pradesh-247232

Category as per EIA notification 2006 and its amendments:	Activity 7(a) , Airports Category A
Total Plot Area	65.04 Acres (26.3304 Hectares)
Total Handling Capacity	Passenger Capacity: 150 PAX per day
Total Cost of Project	Rs. 146.62 Crores
NABET Acc. No.	NABET/EIA/1922/RA0197 dated 15.03.2021 (Valid till 23.11.2022)

### PROJECT PROPONENT



### **AIRPORTS AUTHORITY OF INDIA (AAI)**

Jolly Grant Airport, Dehradun -248140

Email: [vidn.enggc@AAI.AERO](mailto:vidn.enggc@AAI.AERO) ; Phone no.: 079-86295469

UID No.: EQMS/FORM-1AAI(SAR)/7(a)A/PR-663/05102021

Report Release Date: 05/10/2021

Revision No: 00

### ENVIRONMENT CONSULTANT



(Approved Consultant)



Since 1998

**EQMS INDIA PVT LTD.**

QCI/NABET Accredited Consultant

304-305, 3rd Floor, Plot No. 16, Rishabh Corporate Tower, Community Centre, Karkardooma, Delhi – 110092

Phone: 011-42270087, 43062757; Website: [www.eqmsindia.com](http://www.eqmsindia.com) ; E-mail: [eqms@eqmsindia.org](mailto:eqms@eqmsindia.org)

*Disclaimer: This document has been prepared with all reasonable skills, knowledge, care, and diligence by M/s. EQMS India Pvt. Ltd., Karkardooma, Delhi, the NABET accredited and national level leading Environmental Consultancy Organization within the terms of the contract with the client (Project Proponent), incorporating their General Terms and Conditions of Business and taking account of the resources devoted to it by Business Agreement. The report was discussed with the project proponent in details before releasing. This report has been prepared using information received from Client, collecting primary data and compilation of secondary data from available resources. We are not responsible for the origin and authenticity of the information, drawings or design details provided by the Client.*

**FORM-1**  
**Development of Sarsawa Airport**  
**(Integration of Terminal Building & Allied Facilities in Sarsawa Airstrip)**  
**Airports Authority of India**



**FORM-1**

**(II) Basic Information**

S. No.	Item	Details
1.	<b>Name of the Project</b>	Development of Sarsawa Airport (Integration of Terminal Building and Allied facilities in Sarsawa Airstrip) at Khasra No. 207, 215, 208, 306, 225, 210, 226, 223, 229, 227, 211, 228, 209, 239, 355, 362, 224, 250, 212, 15, 74, 103, 246, 234, 522, 206, 249, 244, 238, 245, 217, 246, 248, 243, 216, 253, 247, 251, 252, 240, 241, Village-Sherpur Naqeebpur, Tehsil-Nakur, District-Saharanpur, Uttar Pradesh-247232 by Airports Authority of India.
2.	<b>S. No. in the schedule</b>	7(a)
3.	<b>Proposed capacity / area/ length/ tonnage to be handled/ command area/ lease area/ number of wells to be drilled</b>	Handling Capacity of Airport: 150 PAX per day (0.5 million Persons per year)
4.	<b>New/Expansion/ modernization</b>	New/Greenfield  There is existing airstrip located at Sarsawa Airbase owned by IAF. The Airbase handles civilian flights for VIP Transport to Yamuna Nagar and Saharanpur.  Under UDAN 3.0, Sarsawa Airport has been planned for development under RCS. Hence, integration of terminal building and allied activities at Sarsawa Airstrip has been planned. Since the airstrip is a defense airstrip, Environmental clearance was not applicable to the existing airstrip.
5.	<b>Existing Capacity / area etc.</b>	No  There is existing airstrip located at Sarsawa Airbase owned by IAF. The Airbase handles civilian flights for VIP Transport to Yamuna Nagar and Saharanpur. Since the airstrip is a defense airstrip.
6.	<b>Category of Project i.e. 'A' or 'B'</b>	Category 'A'
7.	<b>Does it attract the general condition? If yes, please specify</b>	No
8.	<b>Does it attract the specific condition? If yes, please specify</b>	No
9.	<b>Location</b>	
	<b>Plot/Survey/Khasra No.</b>	Khasra No. 207, 215, 208, 306, 225, 210, 226, 223, 229, 227, 211, 228, 209, 239, 355, 362, 224, 250, 212, 15, 74, 103, 246, 234, 522, 206, 249, 244, 238, 245, 217, 246, 248, 243, 216, 253, 247, 251, 252, 240, 241
	<b>Village</b>	Sherpur, Naqeebpur

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**Airports Authority of India**



S. No.	Item	Details
	<b>Tehsil</b>	Nakur
	<b>District</b>	Saharanpur
	<b>State</b>	Uttar Pradesh 247232
10.	<b>Nearest Railway Station / airport along with distance in KMs</b>	<b><u>Nearest Railway Station</u></b> Sarsawa Railway Station (3.14 km, N) <b><u>Nearest Highway:</u></b> NH-73 (1.04 km, NE) <b><u>Nearest Airport:</u></b> Dehradun Airport (Jolly Grant Airport) (73.82 km, NE)
11.	<b>Nearest Town, city, District headquarters along with distance in Kms</b>	<i>Nearest Town</i> – Sarsawa (2.44 km, NW)
12.	<b>Village Panchayats, Zila Parishad, Municipal Corporation, local body (complete postal address with telephone nos. to be given)</b>	Municipal Corporation: Saharanpur Nagar Nigam - Municipal Corporation Address: Gurudwara Road, Saharanpur, Uttar Pradesh-247001 Contact No.: 084770 08027 Email Address: saharanpurnagarnigam.in
13.	<b>Name of the Applicant</b>	Airports Authority of India (AAI)
14.	<b>Registered address</b>	Jolly Grant Airport, Dehradun -248140
15.	<b>Address for correspondence:</b>	Jolly Grant Airport, Dehradun -248140
	<b>Name</b>	Mr. Jasbir Singh
	<b>Designation</b>	DGM (Engg-C)
	<b>Address</b>	Jolly Grant Airport, Dehradun -248140
	<b>E-mail</b>	<a href="mailto:vidn.enggc@AAI.AERO">vidn.enggc@AAI.AERO</a>
	<b>Telephone No.</b>	07986295469
	<b>Fax No.</b>	-
16.	<b>Details of Alternate Sites examined, if any. Location of these sites should be shown on a toposheet</b>	None The project has been planned for developmental activities with operational airbase station i.e., Sarsawa Airbase Station. There are neither domestic nor international airports located in 50 km radius of the airbase station. The nearest airport to site is Dehradun Airport located approx. 74 km away. Sarsawa Airforce Station handles a few civilian flights only for VIP transport to Yamuna Nagar & Saharanpur. To increase the accessibility of local people, development of terminal building and allied facilities have been planned. Hence, no alternate site has been examined. Environmental and other infrastructural facilities will be developed for airport.
17.	<b>Interlinked Projects</b>	None
18.	<b>Whether separate application of interlinked project has been submitted?</b>	Not Applicable
19.	<b>If yes, date of submission</b>	Not Applicable

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S. No.	Item	Details
20.	If no, reason	Not Applicable
21.	Whether the proposal involves approval/ clearance under: if yes, details of the same and their status to be given (a) The forest (Conservation) Act, 1980 (b) The wildlife (Protection) Act, 1972 (c) The C.R.Z Notification, 1991	No No No
22.	Whether there is any Government order/ policy relevant / relating to the site?	No
23.	Forest land involved (hectares)	No
24.	Whether there is any litigation pending against the project and/ or land in which the project is propose to be set up? (a) Name of the Court (b) Case No. (c) Orders/ directions of the court, if any and its relevance with the proposed project	No

**(II) Activity**

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

S. No.	Information/Checklist confirmation	Yes/ No	Details there of (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	Yes	The proposed project is Integration of terminal building and allied activities besides existing Sarsawa Airstrip. 65.04 Acres of land has been handed over by State Government of Uttar Pradesh to Airports Authority of India for development of terminal building and related activities.  Presently, the land use of site is agricultural use which will be converted to airports. Likewise, Land cover of the site is also agricultural. It will be developed into airport.
1.2	Clearance of existing land, vegetation and buildings?	Yes	There will be no clearance of existing land or vegetation. The land is vacant.
1.3	Creation of new land uses?	Yes	Presently, the land use of site is agricultural use which will be converted to airports.

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S. No.	Information/Checklist confirmation	Yes/ No	Details there of (with approximate quantities /rates, wherever possible) with source of information data
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Soil Investigation will be carried out.
1.5	Construction works?	Yes	The facilities planned for the project includes of terminal building, an apron to park 2 no. of ATR-72-600 type of aircraft, taxi tracks. Aircraft support facilities like refueling, ground support etc. will also be provided.
1.6	Demolition works?	No	There will be no demolition works involved in the proposed project.
1.7	Temporary sites used for construction works or housing of construction workers?	No	Approx. 100 no. of labours will be hired by Contractor from nearby area for civil construction and installation of machinery. Temporary labour hutments will be provided on vacant land within the Project boundary.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Excavation will be done for construction of foundation of building and landscaping works. Proposed Terminal Building will be elevated upto 15 m.
1.9	Underground works including mining or tunneling?	No	Not Applicable
1.10	Reclamation works?	No	Not Applicable
1.11	Dredging?	No	Not Applicable
1.12	Offshore structures?	No	Not Applicable
1.13	Production and manufacturing processes?	No	No, production is envisaged in the project as proposed project is development of terminal building and allied activities.
1.14	Facilities for storage of goods or materials?	Yes	<b>During Construction Phase:</b> Facilities for storage of raw material & finished goods will be provided at site separately. <b>During Operation Phase:</b> Facilities for storage of goods will be provided in terminal building.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	<b>SOLID WASTE MANAGEMENT &amp; DISPOSAL</b>  <b>Construction Phase:</b> 15 kg/day solid waste generated from construction labours will be disposed of by authorized agency to Municipal Waste Disposal Site.  <b>Operation Phase:</b> The total solid waste generation from the project will be 81 kg/day. Out of total, 41 kg/day Biodegradable waste will be treated in Organic Waste

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S. No.	Information/Checklist confirmation	Yes/ No	Details there of (with approximate quantities /rates, wherever possible) with source of information data
			<p>Convertor to get converted to manure. Manure will be used for landscaping purposes. 1 kg/day STP Sludge will also be used as manure in green area. 39 kg/day of recyclable waste will be given to authorized vendors. Solid Waste Management Rules,2016 will be followed.</p> <p><b>LIQUID EFFLUENT MANAGEMENT &amp; DISPOSAL</b></p> <p><b>Construction Phase:</b> 4 KLD of domestic sewage generated from labours will disposed off in septic tanks attached with soak pits.</p> <p><b>Operational Phase:</b> Total wastewater generation from airport will be 17.4 KLD that will be treated in inhouse Sewage Treatment Plant (Capacity-25 KLD). 16.3 KLD of STP treated water will be completely reused in the premises for purposes like landscaping, flushing and miscellaneous works. It will be a <b>“Zero-liquid Discharge Project”</b>.</p>
1.16	Facilities for long term housing of operational workers?	No	There will be no provision of housing facilities in the project.
1.17	New road, rail or sea traffic during construction or operation?	Yes	<p>There will be development of connecting road to be constructed by State Government from outer ring road to connect the airport. However, existing Rail facility will be used during construction and operation phase.</p> <p>Following modes of transport are available near to the site:</p> <p><u>Nearest Railway Station:</u> Sarsawa Railway Station (3.14 km, N)</p> <p><u>Nearest Highway:</u> NH-73 (1.04 km, NE)</p>
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	Yes	There will be development of connecting road to be constructed by State Government from outer ring road to connect the airport.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	None
1.20	New or diverted transmission lines or pipelines?	No	Not Applicable

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S. No.	Information/Checklist confirmation	Yes/ No	Details there of (with approximate quantities /rates, wherever possible) with source of information data
1.21	Impoundment, damming, converting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not Applicable
1.22	Stream crossings?	No	None
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	There will be abstraction of approximately 58.5 KLD freshwater from borewell that will be done after getting permission from concerned authority.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	No drain/water body will be affected due to the project development. However, run-off may increase due to development of paved surfaces which will be managed through storm water drains and rainwater harvesting.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	During the construction phase, about 10-15 trucks are estimated per week. Adequate parking space within the project site for loading and unloading of materials will be provided during construction phase. For proposed terminal building, parking area for 50 no. of cars will be provided.
1.26	Long-term dismantling or decommissioning or restoration works?	No	No long-term dismantling or decommissioning or restoration works will be involved.
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not applicable.
1.28	Influx of people to an area in either temporarily or permanently?	Yes	Construction workers will mostly be employed from local area. <b>Construction Phase:</b> Approx. 100 no. of temporary employees will be required for construction purposes. <b>Operational Phase:</b> The total population of airport will be 280 no. including passengers, staff, visitors.
1.29	Introduction of alien species?	No	The landscaping will be carried out with mainly local species with a few ornamental varieties of flora that are well suited to the local conditions.
1.30	Loss of native species or genetic diversity?	No	Not Applicable
1.31	Any other actions?	No	Not Applicable

**2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):**

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S. No.	Information/checklist confirmation	Yes/ No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	Yes	Presently, 65.04 Acres of undeveloped land has been handed over to AAI for development of terminal building and allied activities. There will be change in land use as well as land cover to airport & related services.
2.2	Water (expected source & competing users) unit: KLD	Yes	<b>Source:</b> Borewell <b>Construction Phase:</b> Approx. 5 KLD water will be used for domestic purposes for construction workers while 5 KLD will be used for construction works. Freshwater will be used only for domestic purposes. <b>Operational Phase:</b> Total water requirement of the project will be 74.8 KLD. Out of total, freshwater requirement will be 58.5 KLD sourced from borewell, and rest will be sufficed by recycling STP treated water.
2.3	Minerals (MT)	Yes	Minerals such as sand and aggregates will be used during the construction phase.
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	Yes	Construction material to be used during construction phase includes sand, aggregates, bricks, cement, steel, soil etc.
2.5	Forests and timber (source – MT)	No	Only limited usage of timber will be used, and this will be purchased from authorized vendors only
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	<b>Power:</b> <b>Construction Phase:</b> DG Set of capacity 1x250 kVA will be used for construction purposes. <b>Operational Phase:</b> The power requirement of the project will be 2000 kVA. For backup purposes, 2 no. of DG Sets of capacity 750 kVA (each) will be installed. <b>Fuel:</b> HSD and Jet fuel will be used as fuel.
2.7	Any other natural resources (Use appropriate standard units)	No	None

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**3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.**

<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/ No</b>	<b>Details thereof (with approximate quantities/rates, wherever possible) with source of information data</b>
3.1	<b>Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)</b>	Yes	Jet fuel for Aircraft and Diesel for DG sets to be stored in the airport premises. It shall also be handled as per The Manufacture, Storage, and Import of Hazardous Chemical Rules, 1989 as amended and Material Safety Data Sheet. All measures shall be adopted to reduce or eliminate the Hazard.
3.2	<b>Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)</b>	No	Suitable drainage and waste management measures (with frequent spray of insecticides etc.) will be adopted in the airport to prevent stagnation of water or accumulation of waste. This will effectively restrict the reproduction and growth of disease vectors.
3.3	<b>Affect the welfare of people e.g. by changing living conditions?</b>	Yes	The development of the proposed airport will induce economic and social benefits to the people in the project influence zone. Economic development not only in the direct influence area, but also for the surroundings and would generate employment opportunities. The employment opportunities will grow steadily resulting in more demand of skilled, educated and un-skilled people thereby increasing the standard of education in nearby area.
3.4	<b>Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,</b>	No	Impacts of this type are not expected.
3.5	<b>Any other causes</b>	No	No other cause

**4. Production of solid wastes during construction or operation or decommissioning (MT/month)**

<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/ No</b>	<b>Details thereof (with approximate quantities/ rates, wherever possible) with source of information data</b>
4.1	<b>Spoil, overburden or mine wastes</b>	No	No such spoil, overburden or mine wastes will be generated.

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S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
4.2	Municipal waste (domestic and or commercial wastes)	Yes	<p><b>Construction Phase:</b> 15 kg/day solid waste generated from construction labours will be disposed of by authorized agency to Municipal Waste Disposal Site.</p> <p><b>Operation Phase:</b> The total solid waste generation from the project will be 81 kg/day. Out of total, 41 kg/day Biodegradable waste will be treated in Organic Waste Converter to get converted to manure. Manure will be used for landscaping purposes. 1 kg/day STP Sludge will also be used as manure in green area. 39 kg/day of recyclable waste will be given to authorized vendors. Solid Waste Management Rules,2016 will be followed.</p>
4.3	Hazardous wastes (as per Hazardous Waste Management Rules).	Yes	Hazardous waste generated from airport will be only used oil from DG sets which will be given to approved recycler for disposal.
4.4	Other industrial process wastes	No	No industrial waste will be generated from the project
4.5	Surplus product	No	Not applicable
4.6	Sewage sludge or other sludge from effluent treatment	Yes	1 kg/day STP sludge will be used as manure for landscaping purposes.
4.7	Construction or demolition wastes	Yes	<p>The construction waste will consist of excess earth and construction debris along with cement bags, steel in bits and pieces, insulating and packaging materials etc. Excavated soil will be used for land filling, leveling and road construction.</p> <p>Recyclable waste construction materials will be sold to recyclers. Excess C&amp;D waste will be sent to approved landfill site.</p>
4.8	Redundant machinery or equipment	No	Redundant machinery will not be used at the site or left at site after construction is completed.
4.9	Contaminated soils or other materials	No	Contaminated soils or other materials will not be generated.
4.10	Agricultural wastes	No	None
4.11	Other solid wastes	No	None

**5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)**

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil	Yes	<b>During Construction Phase:</b> Vehicular Emissions like CO & HC's and dust generation due to use of construction machinery and vehicles.

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S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
	fuels from stationary or mobile sources.		<p><b>During Operation Phase:</b></p> <p>The main source of Air emission from Airport is aircraft, vehicle and GSE. Air emissions include dust, SO<sub>2</sub>, NO<sub>x</sub>, CO, HC, VOC, PM<sub>10</sub>&amp; PM<sub>2.5</sub> and other Pollutants. All measures will be adopted at the airport to maintain the ICAO emission standards. Efforts will be made to reduce the use of fuel to save money and reduce emission. CNG and electric operated vehicles will be used in ground support facility. A greenbelt will be provided all around the perimeter of parking lot, along arrival/Departure roads and residential area. Beside the trees, grass lawn area will be provided in front of the Terminal Building.</p> <p>Stack height to the DG sets will be provided as per CPCB guidelines.</p>
5.2	Emissions from production processes.	No	No production process is proposed.
5.3	Emissions from materials handling including storage or transport.	Yes	Dust emissions will be envisaged during transport and handling of construction materials. Such emissions will be temporary and will be controlled by the use of water sprinkling and other viable techniques like covering of loose material and under construction buildings.
5.4	Emissions from construction activities including plant and equipment.	Yes	Construction and erection activities will lead to fugitive emission. Proper upkeep and maintenance of vehicles, sprinkling of water on roads at construction site etc. will reduce the impact on the air quality.
5.5	Dust or Odor from handling of materials including construction materials, sewage and waste.	Yes	Dust will be anticipated during loading and unloading of construction material and excavation of upper earth surface. These will however be temporary in nature, which will be controlled by providing water sprinklers. Tarpaulin cover will be provided on stored loose materials to reduce the dust emission. Under construction building will be covered with green cloth.
5.6	Emissions from incineration of waste	No	No incinerator is proposed.
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Not Applicable as there will be no burning of waste in open air
5.8	Emissions from any other sources	No	None

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**6. Generation of Noise and Vibration, and Emissions of Light and Heat:**

<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/ No</b>	<b>Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data</b>
6.1	<b>From operation of equipment e.g. engines, ventilation plant, crushers</b>	Yes	<p>Noise is expected to be generated during construction phase mainly from application of heavy machinery, DG sets and traffic.</p> <p>Regular maintenance of machineries and DG set shall be carried out. Acoustic enclosures to DG set shall be provided. PPE's will be provided to workers.</p> <p>During operation of an airport, movement of aircraft and vehicle are the main line source of noise pollution causing impact in the broad area. The impact of other source of noise pollution like DG sets, motors, GSE, etc. is limited to the premises only. Noise from aircraft depends upon type of aircraft, daily air traffic, meteorology of the area, technique of takeoff and landing, LTO cycle, etc.</p> <p>All DGCA/MOEF&amp;CC/ICAO standards and procedure will be followed at the airport.</p>
6.2	<b>From industrial or similar processes</b>	No	None.
6.3	<b>From construction or demolition</b>	No	Minor noise will be generated from the construction activity. Barricades shall be installed, and greenbelt will also get develop to help in reducing the impact.
6.4	<b>From blasting or piling</b>	No	Blasting and piling are not envisaged as part of the construction process.
6.5	<b>From construction or operational traffic</b>	Yes	<p>During construction phase, 10-15 trucks per week are expected during construction stage. Noise due to this traffic will be managed by taking behavioral management measures. Honking will be prohibited at the site and drivers will also be inducted to minimize the honking and over speed. Speed limit will be kept at 15 kmph within the site.</p> <p>During operation phase, vehicular traffic will generate the noise. As remediation measures, honking will be prohibited at the site and speed limits will be restricted to 15 kmph at the site. Green belt all around the airport will be provided for reducing the noise level.</p>
6.6	<b>From lighting or cooling systems</b>	No	No significant noise impact will result from lighting or cooling systems.
6.7	<b>From any other sources</b>	Yes	<p>Noise from DG sets during construction phase and operation phase will be managed by providing DG sets with the acoustic enclosures.</p> <p>During operation phase, pumps and motors will be provided with the noise mufflers and closed room. Regular</p>

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S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data
			maintenance and servicing will be done to maintain the noise levels.

**7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:**

S.No .	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
7.1	<b>From handling, storage, use or spillage of hazardous materials</b>	Yes	Occasional & minor fuel spills may occur. These will not affect water or land because of appropriate flooring & presence of spill control procedures. All applicable precautions will be taken in storing and handling of hazardous chemicals. Hazardous waste to be generated will be used oil from DG set and it will be disposed-off as per Hazardous & Other Waste (Management and Handling) Rules, 2021.
7.2	<b>From discharge of sewage or other effluents to water or the land (expected mode and place of discharge).</b>	No	All wastewater will be treated in STP and treated water will be completely reused within the premises. The complex will be "Zero-liquid Discharge Project".
7.3	<b>By deposition of pollutants emitted to air into the land or into water</b>	No	All possible measures shall be adopted to avoid or accumulation of pollutants in air, land or water. SPCB and CPCB standards shall be adopted,
7.4	<b>From any other sources</b>	Yes	Emission from Aircraft is envisaged for which all DGCA/MOEF&CC/ICAO standards shall be followed to reduce the emission.
7.5	<b>Is there a risk of long term build-up of pollutants in the environment from these sources?</b>	No	No such effect is envisaged.

**8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment**

S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	<b>From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances</b>	No	To deal with fire, fire extinguishers and sand buckets will be provided at construction site. For operation phase, firefighting system and fire station will be provided as per MoCA and NBC laws. Disaster management Plan will be prepared for mitigating Risk of accident. The proposed mitigation measures:

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S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
			<ul style="list-style-type: none"> <li>• Preventive measures like SOP, Work Permit System, and Physical Monitoring are taken to eliminate the chance of accident on account of explosion, spillages, fire or hazardous substances etc.</li> <li>• Fire hydrant system will be provided as per defined guidelines to fight any emergency.</li> <li>• Emergency vehicle will be made available at the site to provide transportation to hospital in case of any eventuality.</li> <li>• Fire extinguishers will be made available near all machines and all persons are professionally trained to extinguish the fire at source itself.</li> <li>• Existing Fire station by IAF will be used for emergency fire protection services.</li> </ul>
8.2	<b>From any other causes</b>	No	Not envisaged
8.3	<b>Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?</b>	No	<p>The area falls in Zone-IV (High Risk zone), according to the Indian Standard Seismic Zoning Map (As per IS 1893 (Part I): 2002) Suitable seismic coefficients in horizontal and vertical directions respectively, will be adopted while designing the structure.</p> <p>This area is having moderate rainfall and there is no history of cloudburst.</p>

**9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality**

S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
9.1	<p><b>Lead to development of supporting utilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:</b></p> <ul style="list-style-type: none"> <li>• Supporting infrastructure (roads, power supply, waste or wastewater treatment, etc.)</li> <li>• housing development</li> </ul>	Yes	There will be development of connecting road to be constructed by State Government from outer ring road to connect the airport road.

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S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
	<ul style="list-style-type: none"> <li>• extractive industries</li> <li>• supply industries</li> <li>• other</li> </ul>		
9.2	Lead to after-use of the site, which could have an impact on the environment	No	None
9.3	Set a precedent for later developments	Yes	The project will lead to infrastructural development in nearby areas.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	Not Applicable.

**(III) Environmental Sensitivity**

S.No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	No	None
2	Areas which are important or sensitive for ecological reasons -Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Yes	Yamuna River (10.20 km, NW)
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	None
4	Inland, coastal, marine or underground waters	Yes	Yamuna River (10.20 km, NW)
5	State, National boundaries	No	None
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Yes	<i>Nearest Railway Station:</i> Sarsawa Railway Station (3.14 km, N)  <i>Nearest Highway:</i> NH-73 (1.04 km, NE)  <i>Nearest Airport:</i> Dehradun (Jolly Grant) Airport (73.82 km, NE)

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7	Defense installations	Yes	Sarsawa Airforce Station (Adjacent)
8	Densely populated or built-up area	Yes	<ul style="list-style-type: none"> <li>• Sherpur Naqeebpur (0.3 km, N)</li> <li>• Dholapda (1.90 km, S)</li> <li>• Sarsawa (2.44 km, NW)</li> </ul>
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Yes	<p><i>Schools</i></p> <ul style="list-style-type: none"> <li>• Primary School &amp; UPS Sarsoheri (0.21 km, N)</li> <li>• Kendriya Vidyalaya, Sarsawa (0.69 km, N)</li> <li>• Balaji Public School (1.34 km, N)</li> <li>• Gurukul Education World (1.49 km, NW)</li> <li>• AK Public School (2.20 km, NW)</li> <li>• Mother Teresa Public School (3.50 km, NW)</li> <li>• Navgurukulam School (6.78 km, S)</li> </ul> <p><i>Hospitals</i></p> <ul style="list-style-type: none"> <li>• Sarsawa Government Hospital (2.43 km, NW)</li> </ul> <p><i>Temples</i></p> <ul style="list-style-type: none"> <li>• Shiv Mandir (2.79 km, N)</li> <li>• Ravidas Mandir (2.18 km, SW)</li> </ul>
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	Yes	Yamuna River (10.20 km, NW)
11	Areas already subjected to pollution or environmental damage. (Those where existing legal environmental standards are exceeded)	No	None
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	Yes	Project area falls in the Seismic Zone-IV (High Damage Risk Zone)



भारतीय विमानपत्तन प्राधिकरण  
**AIRPORTS AUTHORITY OF INDIA**  
देहरादून हवाई अड्डा, देहरादून।  
**Dehradun Airport, Dehradun**


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I hereby give undertaking that the data and information given in the application and enclosure are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any of the project will be revoked at our risk and cost.

**Date-** 06.10.2021

**Place -** Dehradun

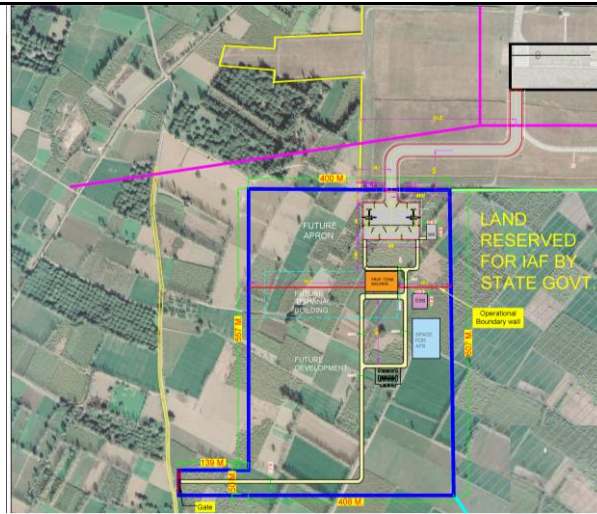
**Authorized Signatory**

  
06.10.2021  
इंजी. जसबीर सिंह / Er. Jasbir Singh  
उप महाप्रबंधक (इंजी. - सिविल)  
Dy. GEN. MANAGER (Engg.-Civil)  
भारतीय विमानपत्तन प्राधिकरण / AAI  
देहरादून एयरपोर्ट, देहरादून  
DEHRADUN AIRPORT, DEHRADUN

# PRE-FEASIBILITY REPORT

for

## DEVELOPMENT OF SARSAWA AIRPORT (INTEGRATION OF TERMINAL BUILDING AND ALLIED FACILITIES IN SARSAWA AIRSTRIP)



at

Khasra No. 207, 215, 208, 306, 225, 210, 226, 223, 229, 227, 211, 228, 209, 239, 355, 362, 224, 250, 212, 15, 74, 103, 246, 234, 522, 206, 249, 244, 238, 245, 217, 246, 248, 243, 216, 253, 247, 251, 252, 240, 241, Village-Sherpur Nageebpur, Tehsil-Nakur, District-Saharanpur, Uttar Pradesh-247232

<b>Category as per EIA notification 2006 and its amendments:</b>	Activity 7(a) , Airports Category A
<b>Total Plot Area</b>	65.04 Acres (26.3304 Hectares)
<b>Total Handling Capacity</b>	Passenger Capacity: 150 PAX per day
<b>Total Cost of Project</b>	Rs. 146.62 Crores
<b>NABET Acc. No.</b>	NABET/EIA/1922/RA0197 dated 15.03.2021 (Valid till 23.11.2022)

### PROJECT PROPONENT



#### **AIRPORTS AUTHORITY OF INDIA (AAI)**

Jolly Grant Airport, Dehradun -248140

Email: [vidn.enggc@AAI.AERO](mailto:vidn.enggc@AAI.AERO) ; Phone no.: 079-86295469

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Report Release Date: 05/10/2021

Revision No: 00

### ENVIRONMENT CONSULTANT



(Approved Consultant)



Since 1998

**EQMS INDIA PVT LTD.**

QCI/NABET Accredited Consultant

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*Disclaimer: This document has been prepared with all reasonable skills, knowledge, care, and diligence by M/s. EQMS India Pvt. Ltd., Karkardooma, Delhi, the NABET accredited and national level leading Environmental Consultancy Organization within the terms of the contract with the client (Project Proponent), incorporating their General Terms and Conditions of Business and taking account of the resources devoted to it by Business Agreement. The report was discussed with the project proponent in details before releasing. This report has been prepared using information received from Client, collecting primary data and compilation of secondary data from available resources. We are not responsible for the origin and authenticity of the information, drawings or design details provided by the Client.*



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## 1 EXECUTIVE SUMMARY

Sarsawa Airstrip is located at Village-Sherpur Naqeebpur, Tehsil-Nakur, District-Saharanpur, Uttar Pradesh. The airstrip belongs to Western Air Command/Indian Air Force. The Airport handles civilian flights on a regular basis for VIP Transport to Yamuna Nagar and Saharanpur.

Under UDAN 3.0, Sarsawa Airport has been planned to be developed for Regional Connectivity Scheme (RCS), Ministry of Civil Aviation, Government of India. The scheme was launched in 2016 to stimulate regional air connectivity and make air travel affordable to the masses. Sarsawa Airport in Saharanpur has also been included in the fourth phase of Ude Desh ka Aam Nagrik (UDAN) Scheme in December, 2019.

Under this proposition, **Airports Authority of India** has proposed for “**Development of Sarsawa Airport-Integration of Terminal Building and Allied facilities in Sarsawa Airstrip**”. The total plot area of the project is 65.04 Acres i.e., 26.3304 ha. (Excluding area of runway & IAF base). Total handling capacity of project will be 150 persons per day (Arrival- 75 PAX + Departure- 75 PAX). Total cost of the project is Rs. 142.62 Crores.

The proposed project falls under **Item 7(a) i.e., Airports/All projects including airstrips, which are of commercial use; Category A.** Being a Category A project, it is required to obtain prior Environmental Clearance from MoEF&CC, New Delhi.

Details of Project have been provided in **Table 1 & Table 2**, respectively.

**Table 1 : Details of Sarsawa Airport**

S.No.	Particulars	Unit	Details
1	Total Cost	Rs. (Crores)	142.62
2	<b>HANDLING CAPACITY</b>		
	Person Handling Capacity	PPD	150
		MPPA	0.05 Million
3	<b>PROJECT AREA DETAILS</b>		
	Plot Area	Acres	65.04
	Built-up Area (including Terminal Building, Service block and Canteen/Rest room)	m <sup>2</sup>	7000
	Maximum Height of Building	m	15
4	<b>COMPONENTS OF AIRPORT</b>		
	ATC Tower	No.	1 (With IAF-Existing)
	Number of Buildings	No.	2 (Terminal Building, Service block)
	Number of Aprons	No.	1
5	<b>POPULATION DETAILS</b>		
	Staff	No.	100

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S.No.	Particulars	Unit	Details
6	<b>SERVICE DETAILS</b>		
	Total Water Requirement	KLD	74.8
	Freshwater Requirement	KLD	58.5
	Wastewater Generation	KLD	17.4
	STP Capacity	KLD	25
	Biodegradable Waste	kg/day	42
	Recyclable Waste	kg/day	39
	Total Waste	kg/day	81
	Power Requirement	kVA	2000
	Power Backup (DG Sets)	kVA	2x750 kVA
	Parking	Cars & Two-wheelers (ECS)	50 Cars

**Table 2: Technical Details of Airport**

S. No.	Particulars	Unit	Details
<b>GENERAL INFORMATION</b>			
1.	Airport Operator	-	Airports Authority of India
2.	Suitability	-	2 nos. (ATR – 72 – 600)
3.	Aircraft operations (Scheduled/Non-scheduled)	-	Both
4.	Handling Capacity of Airport	MPPD	150 (75 Arrival + 75 Departure)
<b>CONNECTIVITY</b>			
5.	Rail Connectivity	-	Sarsawa Railway Station (3.14 km, N)
6.	Road Connectivity	-	NH-73 (1.04 km, NE)
<b>AIRPORT LAND AREA &amp; UTILIZATION</b>			
7.	Plot Area	Acres	65.04
8.	Built-up Area (including Terminal Building, Service block and Canteen/Rest room)	sqm	7000
<b>AERODROME DATA</b>			
9.	Aerodrome reference points Coordinates and its site	-	295942N 772532E (Inside Airforce Station, North of middle marker 138 feet from Runway edge)

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S. No.	Particulars	Unit	Details
10.	Aerodrome Reference Code (ARC)	-	2C
<b>RUNWAY &amp; TAXIWAY</b>			
11.	Runway Orientation	-	09/27 (089/269)
12.	Runway Dimensions	m	2743 m X 45 m (9000 X 150 feet)
13.	Runway Strength	-	75/R/C/X/T
14.	Runway Shoulder	-	150 feet on either side of runway
15.	Taxiway Length and Width (With AAI)	m	445 m x 23 m
16.	Details of Taxiway	-	1 (9000 X 35 feet) Concrete surface
17.	Shoulder Width Taxiway	-	5.5 m
18.	Runway Lights	-	Standard, 3 aspects OW lighting system
19.	ATC+ Fire Station	-	Category-5 (Existing)
20.	NDB	-	Available- SP: 298 kHz
21.	Rescue and Fire Fighting System	-	Aerodrome Category-5
22.	Approach Lighting System	-	Runway 27- Basic Approach Lighting System Runway 09: Lead-in-lights
<b>TERMINAL BUILDING</b>			
23.	Number of Building	No.	1
24.	No of Aprons	No.	1
25.	Facilities	-	Passenger Arrival & Departure facility.

### 1.1 Plant location and area classification

Sarsawa Airstrip is located at Khasra No. 207, 215, 208, 306, 225, 210, 226, 223, 229, 227, 211, 228, 209, 239, 355, 362, 224, 250, 212, 15, 74, 103, 246, 234, 522, 206, 249, 244, 238, 245, 217, 246, 248, 243, 216, 253, 247, 251, 252, 240, 241, Village-Sherpur Naqeebpur, Tehsil-Nakur, District-Saharanpur, Uttar Pradesh-247232.

The nearest highway to project site is National Highway-73 located 1.04 km, NE from site. There will be development of connecting road to be constructed by State Government from outer ring road to connect the airport. The co-ordinates from center of the project are Latitude: 29°59'19.95"N & Longitude: 77°24'24.64"E. The total plot area of the project is 263304 m<sup>2</sup> (65.04 acres). Total 65.04 Acres of land has been handed over by State Government of Uttar Pradesh to Airports Authority of India for development of Terminal Building and allied activities at Sarsawa Airstrip. Presently, the land use is agricultural that will be changed to airport. Land documents have been annexed as **Enclosure-1** & Layout Plan of the project has also been annexed as **Enclosure-3**.

## 1.2 Green belt

Landscaping will be developed along the airside, landside, roads, and parking area. Unpaved areas will be developed as Lawn area for beautification of surrounding areas. For the proposed project, 6679.00 m<sup>2</sup> of area will be developed as green. Along with tree plantation, lawn will be developed in front of the Terminal Building. Green area will be provided on either side of terminal access roads. Landscaping will be maintained with strong avenue planting and lower-level shrubs with grass cover and hedges on all sides.

## 1.3 Water requirement

**Construction Phase:** Approx. 5 KLD water will be used for domestic purposes for construction workers while 5 KLD will be used for construction works. Freshwater will be used only for domestic purposes. 4 KLD of domestic sewage generated from labours will be disposed-off in septic tanks attached with soak pits.

**Operational Phase:** Total water requirement of the project will be 74.8 KLD. Out of total, freshwater requirement will be 58.5 KLD and rest will be sufficed by recycling STP treated water. Freshwater will be sourced by Borewell. Total wastewater generation from airport will be 17.4 KLD that will be sent to Sewage Treatment Plant (Capacity-25 KLD). 16.3 KLD of STP treated water will be completely reused in the premises for purposes like landscaping, flushing and miscellaneous works.

## 1.4 Power requirement & supply/ source

**Construction Phase:** DG Set of capacity 1x250 kVA will be used for construction purposes.

**Operational Phase:** The power requirement of the project will be 2000 kVA. For backup purposes, 2 no. of DG Sets of capacity 750 kVA will be installed.

Details of Power and Fuel Requirement have been provided in **Section 3.8.2**.

## 1.5 Effluent Management

**Construction Phase:** 4 KLD of domestic sewage generated from labours will be disposed-off in septic tanks attached with soak pits.

**Operational Phase:** Total wastewater generation from airport will be 17.4 KLD that will be sent to Sewage Treatment Plant (Capacity-25 KLD). 16.3 KLD of STP treated water will be completely reused in the premises for purposes like landscaping, flushing and miscellaneous works.

The details of effluent and sewage management plan are provided in **Section 3.9.1**.

## 1.6 Air Emission & Management

**Construction Phase:** The main sources of air emissions will be construction machinery like drills, cranes etc. and vehicular movement. To control air emissions during construction, following measures will be implemented: -

- Barricading will be done around the project boundary to control limit dust dispersion into the surroundings.

- Construction material vehicles will be covered during transportation.
- Dust suppression will be done by regular water sprinkling in and around the project site.

**Operational Phase:** The main sources of air emissions from Airport are aircraft, vehicle and GSE. Air emissions include dust, SO<sub>2</sub>, NO<sub>x</sub>, CO, HC, VOC, PM<sub>10</sub> & PM<sub>2.5</sub> and other pollutants. All measures will be adopted at the airport to maintain the ICAO emission standards. Control measures and designs will be implemented to reduce the use of fuel which would eventually result in cost-effective and lower pollution potential air travel. CNG and electric operated vehicles will be used in ground support facility. Stack height to the DG sets will be provided as per CPCB guidelines. Proper traffic management plan will be prepared to prevent traffic congestion at internal terminal road. Wide access pathways and sufficient nos. of exit & entry shall be provided to minimize the congestion.

Further details have been provided in **Section 3.9.3**.

### **1.7 Solid & Hazardous Waste Management**

**Construction Phase:** 15 kg/day solid waste generated from construction labours will be disposed-off by authorized agency to Municipal Waste Disposal Site.

**Operation Phase:** The primary source of waste at airport are from aircrafts, airport, airlines, retail outlets, restaurants, restrooms, flights catering centers, air cargo terminals, GSE maintenance facilities, landscaping, etc. Each of these creates various types of waste including municipal solid waste (MSW), construction and demolition waste (C&D), green waste, deplane waste (waste from aircrafts), lavatory waste, hazardous and industrial waste, e-waste, spill cleanup and remediation waste, biomedical waste, etc.

The total solid waste generation from the project will be 81 kg/day. Out of total, 41 kg/day Biodegradable waste will be treated in Organic Waste Converter to get converted into manure. Manure will be used for landscaping purposes. 1 kg/day STP Sludge will also be used as manure in green area. 39 kg/day of recyclable waste will be given to authorized vendors. Solid Waste Management Rules,2016 shall be followed.

Details of Waste generation and management from the project is given in **Section 3.9.2**.

### **1.8 Noise Pollution and Management**

**Construction Phase:** -The main sources of noise pollution will be construction machinery, DG sets and vehicular movement.

**Mitigation Measures:** -

- Acoustic enclosures will be installed for DG sets in accordance with CPCB norms.
- Construction machineries will be provided with acoustic pads for noise reduction during operation.
- The construction activity will be carried out mostly during daytime.
- Proper maintenance of noise generating transport vehicles.

**Operation Phase:** Major sources of noise pollution from the airport are movement of aircraft and vehicles and operation of machineries like DG Sets, motors etc.

**Mitigation Measures**

- DGCA/MOEF&CC/ICAO standards and procedure will be followed.
- Restriction to the noisy aircrafts will be made.
- Proper scheduling of the aircraft will be done to minimize the noise level.
- DG set will be placed in acoustic enclosure with anti-vibration pads to reduce noise and vibration from DG sets.
- Ear plugs/mufflers will be given for workers, working in noisy areas.
- Double Glazed glass will be used in Terminal building to reduce noise.
- Sufficient oiling and lubrication will be done to all the parts of the machineries to ensure that minimal noise is generated.
- Green Area will be developed around the parking area and roads to reduce noise.
- Signage for no honking will be displayed.
- Noise adsorption material will be used for construction of terminal building and other development area.
- Noise barrier will be installed wherever possible and required.

Further mitigation measures have been provided in **Section 3.9.4**.

## 2 INTRODUCTION

Sarsawa Airstrip is located at Village-Sherpur Nageebpur, Tehsil-Nakur, District-Saharanpur, Uttar Pradesh-247232. The airstrip belongs to Western Air Command/Indian Air Force. The Airport handles civilian flights on a regular basis for VIP Transport to Yamuna Nagar and Saharanpur.

Under UDAN 3.0, Sarsawa Airport has been planned to be developed for Regional Connectivity Scheme (RCS), Ministry of Civil Aviation, Government of India, AAI has proposed **“Development of Sarsawa Airport- Integration of Terminal Building and allied facilities in Sarsawa Airstrip”**. The total plot area of the project is 65.04 Acres i.e., 26.3304 ha. (Excluding area of runway & IAF base). Total handling capacity of project will be 150 persons per day (Arrival- 75 PAX + Departure- 75 PAX). Total cost of the project is Rs. 142.62 Crores.

The proposed project falls under **Item 7(a) i.e.**, Airports/All projects including airstrips, which are of commercial use; **Category A**. Being a Category A project, it is required to obtain prior Environmental Clearance from MoEF&CC, New Delhi.

### 2.1 Identification of Project & Project Proponent

#### 2.1.1 Identification of Project

As per **UDAAN 3.0** provided under National Civil Aviation Policy 2016 (NCAP 2016), Airport Authority of India has proposed for **“Development of Sarsawa Airport (Integration of Terminal Building and allied facilities in Sarsawa Airstrip)”**. The existing runway has length of 2743 m x 45 m with orientation of 09/27.

The development works will involve construction of Terminal building (Area- 2000 m<sup>2</sup>), an apron to park 2 no. of ATR-72-600 type of aircraft, taxi tracks as per IMG norms along with car parking of 50 no. of cars.

### SALIENT FEATURES OF PROPOSED PROJECT

- The building will provide an aesthetically appealing and soothing interior decoration matching the modern structure. Adoption of GRIHA measures in the design to achieve 4-star rating under GRIHA V-2015.
- Adequate provisions of passengers with restricted mobility (PRM's), visually challenged and persons with hearing impairment will be provided as per “Harmonized guidelines and space standards for barrier free environment with disability and elderly persons”, February 2016 by Ministry of Urban Development, Govt. of India.
- Adequate no. of toilets with drinking facility will be provided in all passenger movement areas. Suitable ramps will be provided at entry and exit for differently abled persons.
- Check-In Area: The terminal building with provision of departure concourse, check-in area and check-in counters, feeder conveyor belts, queuing space, queue managers, back-up

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offices for airlines, facilitation counters, weighing machines, X-BIS for registered baggage counters etc.

- The passenger frisking in security check area with adequate space of locating Door Frame Metal Detectors (DFMDs), X-ray machines, frisking platforms for gents and cubicles for ladies, Inspection tables for manual checking of hand baggage and adequate space/room for security staff etc.
- Security Hold Area and bus lounge will be provided, isolated smoking area, childcare room, and associated facilities. Creation of retail area having retail islands/shops, without affecting passenger movement and food & beverage area, snack bar counter will be provided to attract passengers for impulsive buying.
- Provision for travel requisite, airlines offices & ticket selling counters, ATM/Bank Counters etc., Meet & Greet Area, First Aid Room, Facilitation Counters, Caretaker room with store, Airport terminal Manager Office and other facilities, infrastructure for advertisements and artwork at suitable locations.

The details of the airport have been provided in **Table 1 & 2** above.

### **2.1.2 Identification of Project Proponent:**

Airports Authority of India (AAI) is a statutory body (created through the Airports Authority of India Act, 1994) working under the Directorate General of Civil Aviation, Ministry of Civil Aviation, Government of India is responsible for creating, upgrading, maintaining, and managing civil aviation infrastructure in India. It provides Communication Navigation Surveillance / Air Traffic Management (CNS/ATM) services over Indian airspace and adjoining oceanic areas.

AAI is currently managing a total of 137 Airports, including 23 International Airports, 10 Customs Airports, 81 Domestic Airports and 23 Civil enclaves at Defense Airfields. AAI also has ground installations at all airports and 25 other locations to ensure safety of aircraft operations. AAI covers all major air-routes over Indian landmass via 29 Radar installations at 11 locations along with 700 VOR/DVOR installations co-located with Distance Measuring Equipment (DME). 52 runways are provided with Instrument landing system (ILS) installations with Night Landing Facilities at most of these airports and Automatic Message Switching System at 15 Airports.

The main responsibilities of AAI as a statutory organization are as follows:

- 1) **PASSENGER FACILITIES:** The main functions of AAI inter-alia include construction, modification & management of passenger terminals, development & management of cargo terminals, maintenance of apron infrastructure including runways, parallel taxiways, apron etc., Provision of Communication, Navigation and Surveillance which includes provision of DVOR / DME, ILS, ATC radars, visual aids etc., provision of air traffic services, provision of passenger facilities and related amenities at its terminals thereby ensuring safe and secure operations of aircraft, passenger and cargo in the country.
- 2) **AIR NAVIGATION SERVICES:** In tune with global approach to modernization of Air Navigation infrastructure for seamless navigation across state and regional boundaries, AAI has been going ahead with its plans for transition to satellite based Communication,

Navigation, Surveillance and Air Traffic Management. Several co-operation agreements and memoranda of co-operation have been signed with US Federal Aviation Administration, US Trade & Development Agency, European Union, Air Services Australia and the French Government Co-operative Projects and Studies initiated to gain from their experience. Through these activities more and more executives of AAI are being exposed to the latest technology, modern practices & procedures being adopted to improve the overall performance of Airports and Air Navigation Services.

- 3) **SECURITY:** The continuing security environment has brought into focus the need for strengthening security of vital installations. With this in view, a number of steps were taken including deployment of CISF for airport security, CCTV surveillance system at sensitive airports, latest and state-of-the-art X-ray baggage inspection systems, premier security & surveillance systems. Smart Cards for access control to vital installations at airports are also being considered to supplement the efforts of security personnel at sensitive airports.
- 4) **AERODROME FACILITIES:** In Airports Authority of India, the basic approach to planning of airport facilities has been adopted to create capacity ahead of demand in our efforts. Towards implementation of this strategy, a few projects for extension and strengthening of runway, taxi track and aprons at different airports has been taken up.
- 5) **HRD TRAINING:** A large pool of trained and highly skilled manpower is one of the major assets of Airports Authority of India. Development and Technological enhancements and consequent refinement of operating standards and procedures, new standards of safety and security and improvements in management techniques call for continuing training to update the knowledge and skill of officers and staff.
- 6) **IT IMPLEMENTATION:** Information Technology holds the key to operational and managerial efficiency, transparency, and employee productivity. AAI initiated a program to indoctrinate IT culture among its employees and this is most powerful tool to enhance efficiency in the organization.

The main function of AAI is as follows:

- Design, Development, Operation and Maintenance of international and domestic airports and civil enclaves.
- Control and Management of the Indian airspace (excluding special user airspace) extending beyond the territorial limits of the country, as accepted by ICAO.
- Provision of Communication, Navigational and Surveillance aids.
- Design, Development, Operation and Maintenance of passenger terminals.
- Development and Management of cargo terminals at international and domestic airports.
- Provision of passenger facilities and information systems in the passenger terminals.

### **MISSION AND VISION OF AAI**



**Table 3: Details of Authorized Signatory for Project**

<b>Project Proponent</b>	:	Airports Authority of India
<b>Registered Address</b>	:	Jolly Grant Airport, Dehradun -248140
<b>Authorized Signatory</b>	:	Mr. Jasbir Singh
<b>Designation</b>	:	DGM (Engg-C)
<b>Email ID</b>	:	<a href="mailto:vidn.enggc@AAI.AERO">vidn.enggc@AAI.AERO</a>
<b>Contact No.</b>	:	07986295469

## 2.2 Brief description of Nature of Project

The proposed project titled “**Integration of Terminal Building and allied facilities**” with Sarsawa Airstrip owned by Indian Air Force. The project has been planned under visionary of UDAN 3.0 under National Civil Aviation Policy (NCAP-2016) to enhance regional connectivity through fiscal support and infrastructure development.

The proposed project falls under **Item 7(a) i.e.,** Airports/All projects including airstrips, which are of commercial use; **Category A.** Being a Category A project, it is required to obtain prior Environmental Clearance from MoEF&CC, New Delhi.

### **2.3 Need for the project and its importance to the country:**

#### **ROLE & SIGNIFICANCE OF AIRPORT IN NATIONAL ECONOMY**

Airports being nuclei of economic activity are considered to play a significant role in the national economy. The quality of airport infrastructure, which is a vital component of the overall transportation network, contributes directly to a country's international competitiveness and the flow of foreign investment. Likewise, 97% of the country's foreign tourists arrive by air and tourism is the nation's second largest foreign exchange earner. Airports also represent a country's window on the world. They can be effectively used as symbols of national pride if we pay sufficient attention to their quality and maintenance.

Across the world, the trend is towards an extremely high percentage, ranging from 60 to 70% of the total revenue of airport operators being generated from non-aeronautical sources at major airports. In India, although these services are now provided by private agencies, the comparable figure for AAI at international airports is just 22%. There will be a major thrust towards increasing the share of commercial revenue emerging from non-aeronautical sources. This will help in optimal exploitation of the full commercial potential of airports and make many airports not only viable but capable of generating surpluses for further expansion and development.

It is now increasingly recognized that aviation, far from being a mere mode of transportation for an elite group, is crucial for sustainable development of trade and tourism. In this context, it is vital that airport infrastructure grows in anticipation of the escalating needs of the air transport industry. As this is a capital-intensive sector, there is an obvious need for perspective planning with a vision for the next twenty years and to muster the combined resources of the public and private sectors, both domestic and foreign.

#### **NATIONAL CIVIL AVIATION POLICY 2016 (NCAP 2016)**

*Vision:* To create an eco-system to make flying affordable for the masses and to enable 30 crore domestic ticketing by 2022 and 50 crores by 2027, and international ticketing to increase to 20 crores by 2027. Similarly, cargo volumes should increase to 10 million tons by 2027.

*Mission:* Provide safe, secure, affordable, and sustainable air travel for passengers and air transportation of cargo with access to various parts of India and the world.

#### *Objectives*

- Establish an integrated eco-system which will lead to significant growth of civil aviation sector, which in turn would promote tourism, increase employment and lead to a balanced regional growth.
- Ensure safety, security, and sustainability of aviation sector using technology and effective monitoring.
- Enhance regional connectivity through fiscal support and infrastructure development.
- Enhance ease of doing business through deregulation, simplified procedures, and e-governance.
- Promote the entire aviation sector chain in a harmonized manner covering cargo, MRO, general aviation, aerospace manufacturing and skill development.

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As per an ICAO (International Civil Aviation Organization) study - “Economic benefits of civil aviation: ripples of prosperity”, the output and employment multipliers of aviation are 3.25 and 6.10 respectively. This implies that every 100 Rupees spent on air transport contributes to 325 Rupees worth of benefits, and every 100 direct jobs in air transport result in 610 jobs in the economy. In fact, the study attributes over 4.5% of the global Gross Domestic Product (GDP) to civil air transport.

As the Indian economy grows, consumption-led growth in populated metros is expected to spill over to hinterland areas. This is also expected to be on account of factors of production (land, labor, etc.) becoming costlier in the densely populated metro cities. In this scenario, air connectivity can provide required impetus to the economic growth of regional centers (towns / cities). One of the key objectives of NCAP 2016 is to “establish an integrated eco-system which will lead to significant growth of civil aviation sector, which in turn would promote tourism, increase employment and lead to a balanced regional growth”.

NCAP 2016 also seeks to sustain and nurture a competitive market environment in the civil aviation sector. While it would be best for growth in the sector and establishment of regional air connectivity to materialize through open market mechanisms in terms of airlines assessing demand on various routes, developing networks through deployment of appropriate capacities & technologies, infrastructure developing in sync with demand, etc. it was felt that facilitating / stimulating regional air connectivity would be desirable from a public policy perspective and may need financial support, at least in the initial period, to trigger participation of players. It is in this context that NCAP 2016 provides for a Regional Air Connectivity Scheme (RCS or the Scheme).

### **REGIONAL AIR CONNECTIVITY SCHEME**

Under Regional Connectivity Scheme (RCS), the route for Sarsawa Airport has been fixed in order to achieve the purpose of UDAN 3.0, NCAP 2016. Sarsawa Airport has been categorized as “Underserved Airport” (*‘Underserved Airport’ means any airport which is not an Unserved Airport and at which, there are no more than fourteen (14) scheduled commercial flight departures per week as per the latest flight schedule published by the DGCA on its website).*

Under UDAN 3.0, Sarsawa Airport has been considered under “Priority RCS Route” (*‘Priority RCS Route’ means an RCS Route in which, at least one of the origin and destination airport is an RCS Concession Airport located in Priority Area(s), provided that in case of connection between two airports, at least one of the RCS Concession Airport should satisfy the definition of Underserved Airport or Unserved Airport.*)

Hence, development of terminal building and allied facilities for runway at Sarsawa Airstrip has been planned. The project will accentuate the commercial status of the airport and hence would serve the purpose of NCAP,2016.

### **BENEFITS OF PROPOSED PROJECT**

- Airport is directly or indirectly key to the development and revenue generation. It expects boost of industrialization, multi-modal-connectivity, and infrastructure development in the hinterland.
- Reduction of Carbon footprint by use air for transportation instead of road transport.

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- The development of the proposed airport will induce economic and social benefits to the people in the project influence zone. Economic development will be not only in the direct influence area, but also for the surroundings and would generate employment opportunities.
- The employment opportunities will grow steadily resulting in more demand of skilled, educated and un-skilled people thereby increasing the standard of education and living in the city.
- The commercial development such as retail outlets, food-courts, multiplexes, and market zone shall lift the socio-economic status of the area.
- The aviation industry itself is a source of considerable economic activity, creating jobs that directly serve passengers at airlines, airports, and air navigation services providers. These include check-in, baggage handling, onsite retail, cargo, and catering facilities. These could be a push for people in the project influence area to scale up their primary education enrolment for women and children, to cater to the requirement of new works and employment opportunities that will be created by the airport as well as its allied services like the hotel industry, transport, tourism, etc.

**2.4 Demand/Supply Gap:**

To achieve goals and objectives set under UDAN 3.0, the proposed project has been planned. Development of terminal building and related activities will also enable airport to earn good amount of profit. As per latest air traffic forecast, growth rate of approximately 7.6% has been anticipated for aircraft movement and 9.2% for passenger movement. To cater the anticipated demand, the project of development of terminal building & related activities has been proposed.

The traffic forecast for all Indian Airports taken together with the base year 2012-13 is given below in **Table 4**:

**Table 4 : Air Traffic Forecast- All Indian Airports taken together**

Year	Aircraft Movement (in '000)			Passengers (in Millions)		
	Int'l	Dom	Total	Int'l	Dom	Total
2012-13 (Base Year)	313.91	1164.90	1478.81	43.03	116.37	159.40
2021-22	505.79	1928.19	2433.99	75.48	217.45	292.93
2022-23	536.14	2082.45	2618.59	80.76	239.19	319.96
<b>Growth Rate (%)</b>	<b>6.0%</b>	<b>8.0%</b>	<b>7.6%</b>	<b>7.0%</b>	<b>10.0%</b>	<b>9.2%</b>

(Source: <https://www.aai.aero/en/content/airport-policy>)

**2.1 Imports vs. Indigenous production**

No, production has been envisaged as proposed project is integration of terminal building & allied facilities besides existing airstrip.

## **2.2 Export possibility**

Not applicable. Airport will provide the transportation facility.

## **2.3 Domestic/Export Markets**

Airport will only provide the transportation facility.

## **2.4 Employment Generation (Direct and Indirect) due to the project**

**Construction Phase:** Approx. 100 no. of temporary employees will be required for construction purposes.

**Operational Phase:** The manpower of the airport will be 100 no. including both contractual and permanent staff.

### 3 PROJECT DESCRIPTION

The proposed project involves development of 1 no. of terminal building of capacity 150 PAX per day (Arrival: 75 PAX & Departure: 75 PAX), apron to park 2 no. of ATR-72P600 aircrafts, taxi track with existing runway of length 2743 m x 45 m of Sarsawa Airstrip.

The total plot area of the project is 65.04 Acres i.e., 26.3304 ha. (Excluding area of runway & IAF base). Total handling capacity of project will be 150 persons per day (Arrival- 75 PAX + Departure- 75 PAX). Total cost of the project is Rs. 142.62 Crores.

The proposed project falls under **Item 7(a) i.e.**, Airports/All projects including airstrips, which are of commercial use; **Category A**. Being a Category A project, it is required to obtain prior Environmental Clearance from MoEF&CC, New Delhi.

#### 3.1 Type of Project including interlinked and interdependent projects if any

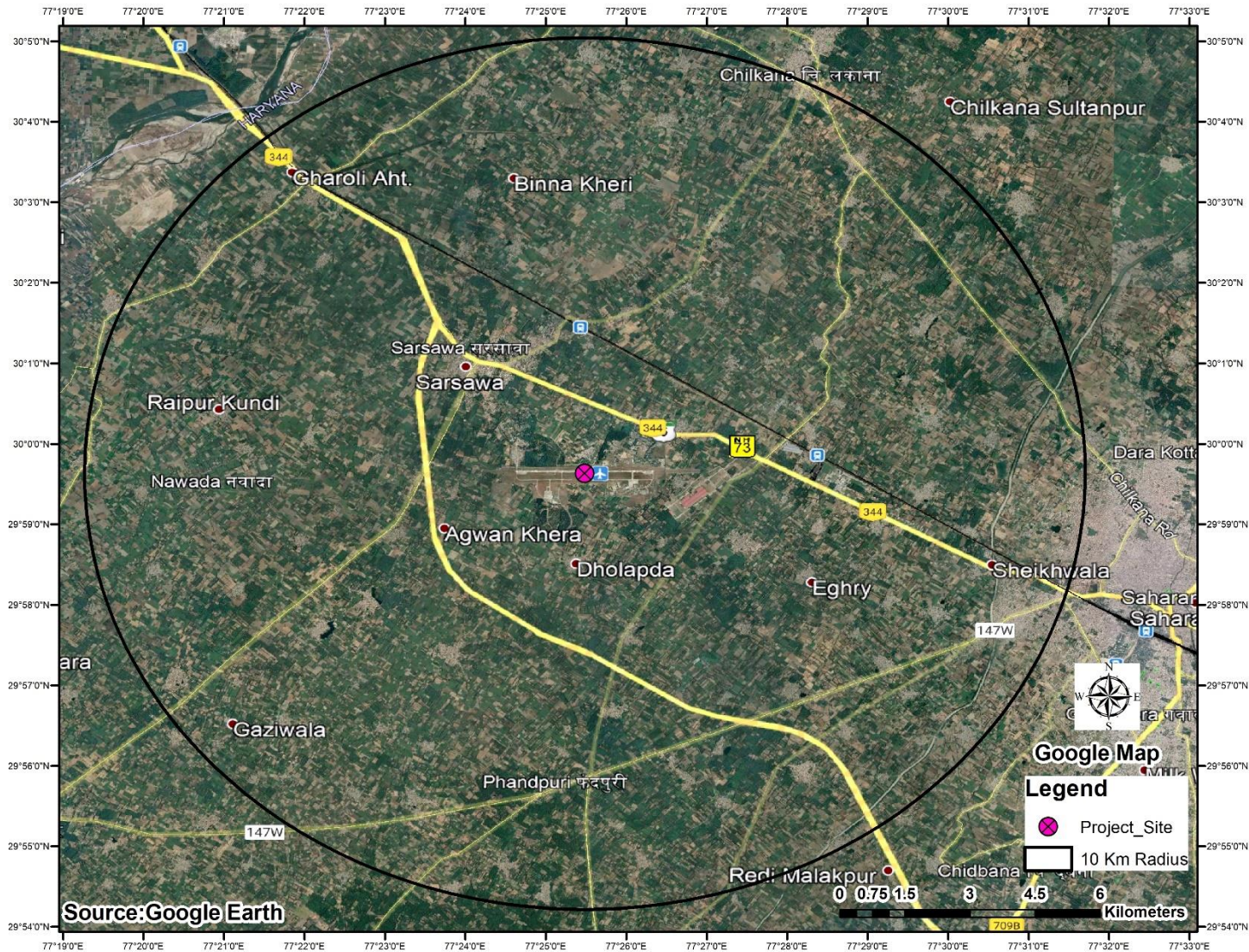
There is no interlinked project. The project falls in **Item 7(a); Category A** under schedule of EIA Notification, 2006 and its subsequent amendments.

#### 3.2 Location (specific location and project boundary & project lay out) with coordinates.

Sarsawa Airstrip is located at Sherpur Naqeebpur, Uttar Pradesh-247232. The nearest highway to project site is National Highway-73 located 1.04 km, NE from site. There will be development of connecting road to be constructed by State Government from outer ring road to connect the airport road. The co-ordinates from center of the project are Latitude: 29°59'19.95"N & Longitude: 77°24'24.64"E.

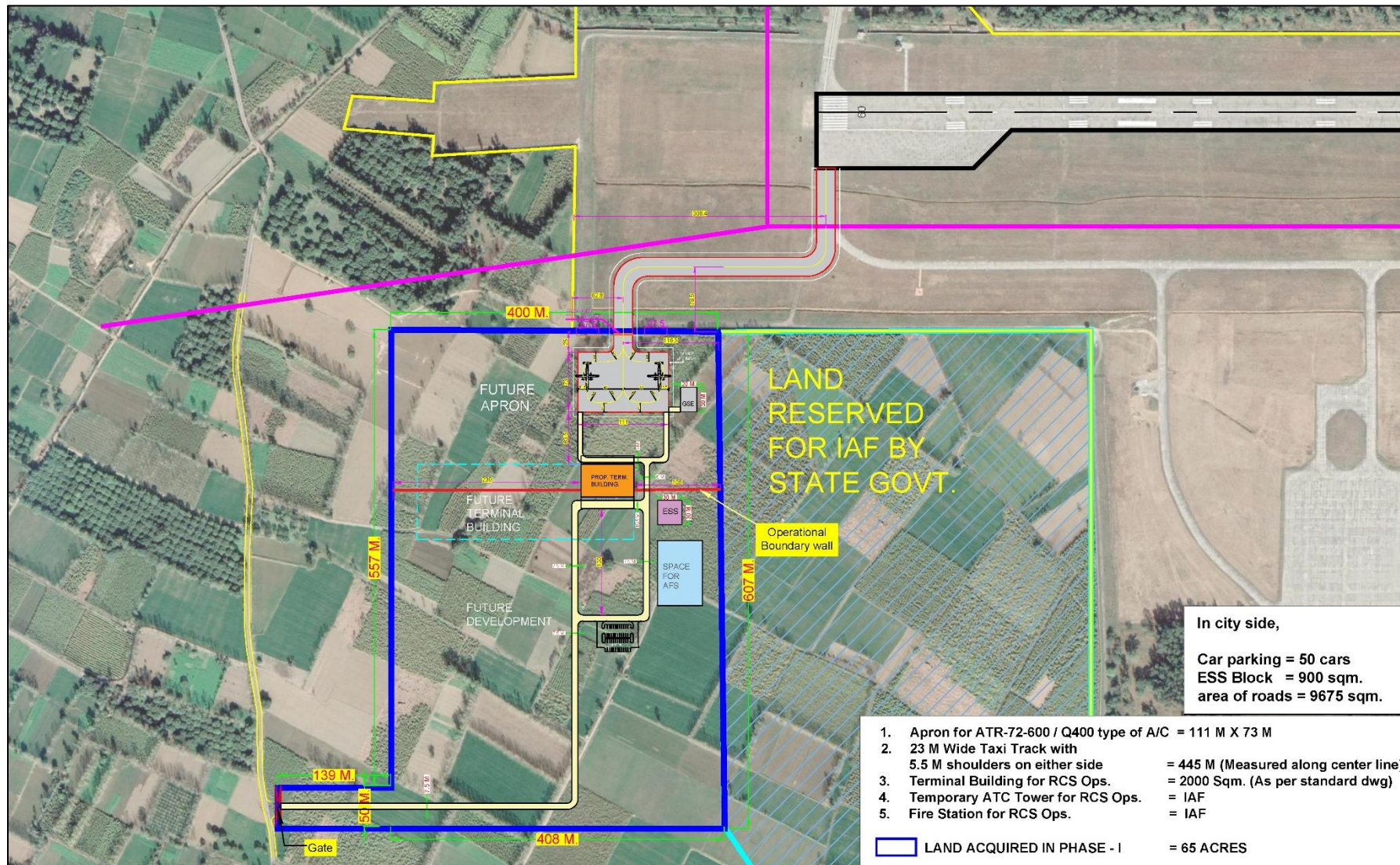
Google Image showing project boundary and 10 km area map is shown in **Figure 2** and layout plan is shown as **Figure 3 & 4**.

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**Figure 1: Google Map (including 10 km study area) of Project**

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**Figure 2: Layout Plan of proposed project (Bird's eye view)**





**3.3 Details of alternate sites considered and the basis of selecting the proposed site, particularly the environmental considerations gone into should be highlighted**

The project has been planned for development and integration of terminal building and allied activities along with operational airstrip to ease accessibility of people with the area. There are neither domestic nor international airports located in 50 km radius of the airstrip. The nearest airport to site is Dehradun Airport located approx. 74 km away. Sarsawa Airstrip handles a few civilian flights only for VIP transport to Yamuna Nagar & Saharanpur.

To increase the accessibility of local people, development of terminal building and allied facilities have been planned. Hence, no alternate site has been examined. Environmental and infrastructural facilities will be developed for airport. Adequate measures will be adopted to control pollutants within permissible limits.

The following major factors validate the selection of site of proposed expansion:

- Site is well-connected to air, road and rail facilities.
- Availability of runway and ATC Tower.
- Availability of skilled and unskilled manpower in nearby.

The site is in Sherpur Naqeebpur, Uttar Pradesh-247232. It is situated 2.44 km, SW from Sarsawa and 10.25 km, NW from Saharanpur. The nearest highway to project site is NH-73 located 1.04 km, NE from the project site. The nearest railway station to the project site is Sarsawa Railway Station located 3.14 km, N from site. The nearest airport to project is Dehradun Airport (Jolly Grant Airport) located approx. 73.82 km, NE from site. The environmental sensitivity details from the project are depicted in following **Table 5**:

**Table 5 : Environment Sensitivity of Project**

S. No.	Environmental Features	Within 500 m-2 km area around Project Site	Within 2-5 km area around Project Site	Within 5-10 km area around Project Site
<b>1.</b>	<b>Ecological Environment</b>			
A	Presence of Wildlife Sanctuary/ National Park/Biosphere Reserves	None	None	None
B	Reserved /Protected Forests	None	None	None
C	Wetland of state and national interest	None	None	None
D	Mangroves	None	None	None

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S. No.	Environmental Features	Within 500 m-2 km area around Project Site	Within 2-5 km area around Project Site	Within 5-10 km area around Project Site
E	Critically Polluted Area	None		
<b>2. Physical Environment</b>				
F	Road Connectivity	NH-73 (1.04 km, NE)	None	None
G	Rail Connectivity	None	<ul style="list-style-type: none"> <li>Sarsawa Railway Station (3.14 km, N)</li> <li>Pilkhani Railway Station (4.61 km, E)</li> </ul>	None
H	Defence Installation	Saraswa Airforce Base (Adjacent)	None	None
I	Densely Populated Area	Sarsawa (2.44 km, NW)	None	None
J	Other village close to Proposed Project	<ul style="list-style-type: none"> <li>Sherpur Naqeebpur (0.3 km, N)</li> <li>Dholapda (1.90 km, S)</li> </ul>		
K	Topography	273-279 amsl	270- 279 amsl	266-285 amsl
L	Seismicity	Zone-IV		
<b>3. Social Environment</b>				
N	Physical Setting	Airport & Residential	Residential	Residential
O	Physical Sensitive Receptors	<u>Schools</u> <ul style="list-style-type: none"> <li>Primary School &amp; UPS Sarsoheri (0.21 km, N)</li> <li>Kendriya Vidyalaya, Saraswa (0.69 km, N)</li> <li>Balaji Public School (1.34 km, N)</li> </ul>	<u>Schools</u> <ul style="list-style-type: none"> <li>Gurukul Education World (1.49 km, NW)</li> <li>AK Public School (2.20 km, NW)</li> <li>Mother Teresa Public School (3.50 km, NW)</li> </ul> <u>Hospitals</u> <ul style="list-style-type: none"> <li>Sarsawa Government Hospital (2.43 km, NW)</li> </ul> <u>Temples</u>	<u>Schools</u> <ul style="list-style-type: none"> <li>Navgurukulam School (6.78 km, S)</li> </ul>

S. No.	Environmental Features	Within 500 m-2 km area around Project Site	Within 2-5 km area around Project Site	Within 5-10 km area around Project Site
			<ul style="list-style-type: none"> <li>• Shiv Mandir (2.79 km, N)</li> <li>• Ravidas Mandir (2.18 km, SW)</li> </ul>	
P	Archaeological Monuments	None	None	None

### 3.4 Size or Magnitude of Operation

Details of size and magnitude of operation of project have been provided in **Table 1 & 2** above.

### 3.5 Project description with process details (a schematic diagram/flow chart showing the project layout, components of the project etc. should be given)

#### A. CIVIL WORKS

##### (i) APRON AND TAXIWAY

- C/o apron 111 M X 73 M for parking of 02 nos. ATR-72-600 Type of Aircraft.
- Provision of GSE Area measuring 20m x 30 m.
- Construction of 445m long (approx.), 23 m wide taxi Track with 5.5m shoulder on either side also keeping the provision of Q-400 type of Aircraft.
- Provision of vehicular road 445m long (approx.) and 6m wide in and around Apron as per drawing.
- Development of Taxiway strip with suitable grading.
- The slopes on Apron, Taxiway, Strip etc. should be as prescribed in DGCA CAR, under various paragraphs.
- Storm water drains to be provided wherever required.
- Construction of Prefabricated Terminal Building with an area of 2000 sq. m. for 150 peak hour Pax (75 arr. + 75 dep.)
- Construction of car parking for 50 cars.

##### (ii) TERMINAL BUILDING

- 2000 sq. m. Terminal Building for 150 Peak Hour passengers. (75 Arr. + 75 Dep.) Preferably Pre-engineered / Prefab structure.

##### (iii) COMMON CONCOURSE

- Common concourse area should have provision for snack bar, toilets, AHU switch room, drinking water, first aid room, supporting office for AAI and airlines.

##### (iv) CHECK-IN AREA

- The check-in area should have 04 nos. Check-in counters and adequate queuing space.
- 01 no. baggage conveyor belt for registered baggage.
- Adequate number of toilets (ladies, gents and physically challenged persons) back up offices for airlines, AHU, switch room, drinking water facilities, storing space for 50 baggage trolleys etc.
- Seating arrangements for passengers after check-in and before security check.
- Isolated smoking area with proper ventilation.

(v) **SECURITY HOLD AREA**

- The security hold should accommodate at least 150 pax. at a time with adequate number of toilets (ladies, gents and physically challenged persons), frisking booth 03 nos. (02 for gents and 01 for ladies), space for X-Ray machine for hand baggage, AHU, Switch room, drinking water, snack bar facility and childcare room.

(vi) **BAGGAGE COLLECTION / ARRIVAL LOUNGE**

- The baggage collection and arrival lounge should have 01 no. conveyor belts of adequate length.
- Adequate space for storing baggage trolleys, space for storing of mishandled / unclaimed baggage.
- Adequate number of toilets (ladies, gents and physically challenged persons) AHU, switch room, drinking water, prepaid taxi counter.
- Provision of Information counter and Pre-paid Taxi counter.

**B. ELECTRICAL WORKS**

- Provision of standby power supply system including DG sets.
- Adequate LED lighting system to have required standard of illumination and all internal electrical installations including lightning protection system to be installed.
- Provision of fire detection & alarm. Provision for fire hydrants and water sprinklers system as per standard along with fire extinguishers.
- Provision of illuminated Mandatory and Information Signages inside Terminal Building, Kerb area, Car Park area, Apron side and Taxiways.
- Provision of lighting on Car Park, around Terminal Building, Taxiway & Apron as per standard requirements.
- To optimize the use of electricity in toilets and other passenger amenities, appropriate arrangements may be provided.
- Provision of GLF as per ICAO and CAR norms.
- Provision of water coolers with RO.
- Provision of high mast on apron with flood light.
- Provision of lighting on approach road (city side and air side).
- Provision of perimeter road lightings.
- Provision of baggage handling system.
- Provision of PA system.

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- Provision of Switch room, fire control room, and electrical maintenance room in terminal building.
- Provision of VRF/ VRV / split / window type Air Conditioning, as per site requirements.
- Augmentation of power supply i/c Substation equipment's etc.

**C. AIRPORT SYSTEMS**

- Public address system and car calling system.
- Surveillance Close circuit TV System (SCCTC) and provision of adequate number of close circuit TV monitors, in the security control room, Terminal manager room, APD Office etc.
- Provision of Flight Information Display System (FIDS) with adequate number of Display Devices in departure, arrival and security hold area for passenger facilitation.
- Provision of adequate number of X-Ray machines for scanning Registered Baggage (RB) / Hand Baggage (HB), including provision of required number of ETDs, DFMDs and HHMDs as per BCAS norms.
- Provision of adequate no. of VFF FM sets (Walkie-Talkie, Base Stations and mobile stations).
- Provision of Telephone Exchange / digital EPABX / IP EPABX system for Terminal Building including telephone / intercom instruments, wiring etc.

**D. IT SYSTEMS**

- Passive and Active networking components such as OFC, UTP cabling, Routers, Core and Access switches and accessories. Provision of Raceways, cable trays and conducting and cabling.
- Server room and adequate space for keeping network switches along with electrical power points and UPS.
- Access Control System as per BCAS requirement.
- Provision of Internet and VPN bandwidth.

**E. MISCELLANEOUS**

- Provision of Trolley Gate on Taxi Track along with IAF boundary wall.
- Provision shall be made to connect the proposed Taxi track with existing IAF Taxi track on Turn pad at runway end 09.
- Development of site.
- Construction of perimeter road of 3.75m width with shoulder, all along the boundary wall inside operational area.
- Provision of Tactile Path (as per ADA) from the designated place in city side of terminal building up to nearest check-in counter and provision of Ramps wherever necessary for the movement of persons with disability as per the latest guidelines.
- Provision of Reserved Lounge and its furnishing.
- Provision of Housekeeping, store, lost & found items room in Terminal Building.
- Provision of vehicle parking, canteen and toilet facility in car parking area / city side area, ticket counter on city side of Terminal building.

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- Horticulture and gardening work in the green area marked on City side as per enclosed drawings.
- Hydro pneumatic water supply system as per requirements.
- Construction of property Boundary wall and Operational Boundary wall of 2.45m + 0.45m with concertina coiled barbed wire. (Location as per drawing).

\*All the Works to be carried out as per DGCA CAR / BCAS Specifications.

Green building norms to be followed for four-star ratings of GRIHA.

## **F. SITE LAYOUT**

Site Plan of the proposed terminal building has been provided in **Annexure-2**.

### **3.6 Raw material required along with estimated quantity, likely source, marketing area of final products, mode of transport of raw material and finished product.**

Raw materials required for construction shall be provided in the EIA Report.

### **3.7 Resource optimization/recycling and reuse envisaged in the project, if any, should be briefly outlined.**

- Wastewater generated from the project will be completely reused within the complex for landscaping, flushing and chiller & cooling tower make-up purposes. The airport will be “Zero-liquid Discharge” complex.
- The proposed terminal building will adopt latest GRIHA measures to achieve 4-star rating GRIHA V-2015.

### **3.8 Availability of water its source, energy/power requirement and source should be given**

#### **3.8.1 Water Source**

**Construction Phase:** Approx. 5 KLD water will be used for domestic purposes for construction workers while 5 KLD will be used for construction works. Freshwater will be used only for domestic purposes. 4 KLD of domestic sewage generated from labours will be disposed off in septic tanks attached with soak pits.

**Operational Phase:** Total water requirement of the project will be 74.8 KLD. Out of total, freshwater requirement will be 58.5 KLD and rest will be sufficed by recycling STP treated water. Freshwater will be sourced by Borewell. Total wastewater generation from airport will be 17.4 KLD that will be sent to Sewage Treatment Plant (Capacity-25 KLD). 16.3 KLD of STP treated water will be completely reused in the premises for purposes like landscaping, flushing and miscellaneous works. Water Management & Water Balance details of Airport are given in **Table 6** and **Figure 4** respectively.

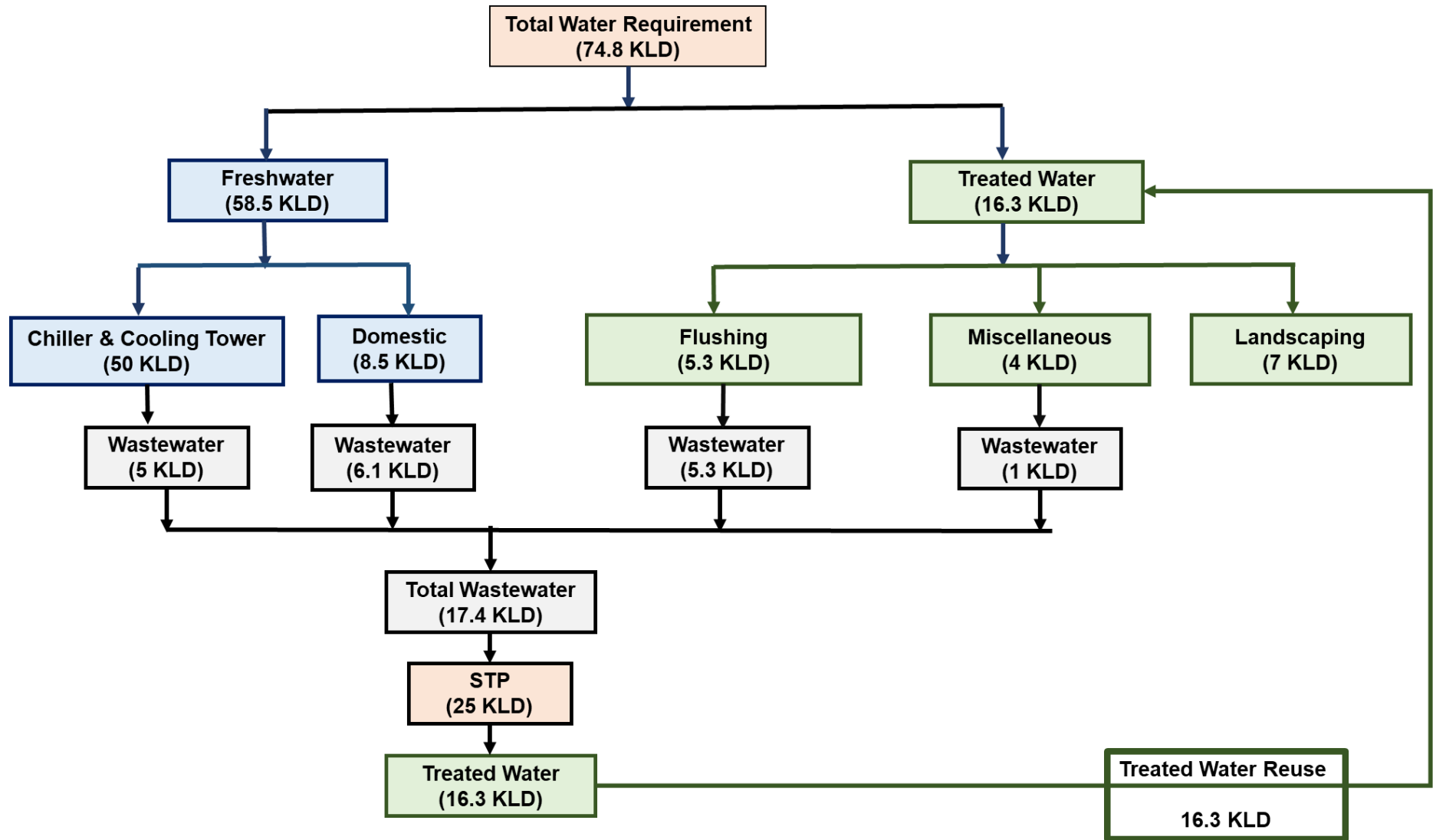
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**Table 6: Water Requirement & Wastewater Generation (KLD)**

Parameter	Quantity	Standard	Water Requirement			Wastewater Generation		
			Total	Domestic	Flushing	Total	Domestic	Flushing
Passenger	150	15	2.30	1.30	1	2	1	1
Staff	100	70	7	4	3	6	3	3
Visitor	30	15	0.5	0.2	0.3	0.4	0.1	0.3
Food Court	50	70	4	3	1	3	2	1
Sub-total	330		13.8	8.5	5.3	11.4	6.1	5.3
Miscellaneous				4			1	
Chiller & Cooling Tower				50			5	
Landscaping				7			0	
<b>Total</b>				<b>74.8</b>			<b>17.4</b>	
<b>STP</b>						<b>25</b>		
<b>Treated water Available</b>						16.3		

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**Figure 4: Water Balance of Proposed Project**

### 3.8.2 Electricity & Fuel Requirements

**Construction Phase:** DG Set of capacity 1x250 kVA will be used for construction purposes.

**Operational Phase:** The power requirement of the project will be 2000 kVA. For backup purposes, 2 no. of DG Sets of capacity 750 kVA (each) will be installed.

*Source:* Electricity will be sourced by Uttar Pradesh Rajya Vidyut Utpadan Nigam.

The details of Power and fuel requirement are given in **Table 8**.

**Table 8: Power and Fuel Requirement**

Particular	Unit	Details
Power Requirement	kVA	2000
Power Backup-DG Set	kVA	2x750
Fuel Requirement	kL/hr	0.3

### 3.9 Quantity of waste to be generated (liquid and solid) and scheme for their management /disposal

#### 3.9.1 Wastewater generation & Management plan

**Construction Phase:** 4 KLD of domestic sewage generated from labours will be disposed off in septic tanks attached with soak pits.

**Operational Phase:** Total wastewater generation from airport will be 17.4 KLD that will be treated into inhouse Sewage Treatment Plant (Capacity-25 KLD). 16.3 KLD of STP treated water will be completely reused in the premises for purposes like landscaping, flushing and miscellaneous works.

#### 3.9.1.1 Process Description for Different Wastewater Treatment Schemes

##### Sewage Treatment Plant Scheme- MBBR Technology

The treatment process shall comprise the following stages

- i. Physical treatment: Coarse & Fine bar-screening
- ii. Primary treatment: Oil & Grease Trap & Grit Chamber
- iii. Equalization tank: Flow equalization with air mixing
- iv. Biological treatment: Anoxic With MBBR
- v. Disinfection: UV unit followed by pressure sand filters and activated carbon filters
- vi. Digester: Aerobic digestion with diffused air system
- vii. Sludge disposal: Sludge chemical conditioning and dewatering

➤ Process Description

The outfall sewer main from the collection sump, will be let into a screening chamber by gravity flow. Large solids particles shall be intercepted by a bar screen, preceded by a grease trap. The primary clarified wastewater is then further pre-treated by fine screening before entering the bioreactor portion of the anoxic MBBR process. Fine screening shall be done by proposed fine bar screen. Schematic Diagram of STP is given in **Figure 6**.

- I. The sewage collected in collection sump and after screening is collected in oil & grease trap after that goes in to grit chamber & finally to the equalization sump for smoothing out peak flows. The provision of aeration shall be made in this tank to break the solids in suspension and to homogenize the sewage.
- II. The homogenized effluent is then pumped into the Anoxic Tank which is like aerobic MBBR tanks except that no oxygen is supplied. The tank contains no diffusers, and the media is kept in suspension in the reactor through submersible mixers.
- III. From the Anoxic Tank, then effluent is then sucked in MBBR tanks through the Bio-Media which shall be in PVC/PP/ suitable plastic media, having shape and design such that there is uniform and continuous distribution of air and water throughout with self-supporting shape. The surface area shall be for effective attached growth of bacteria & shall increase the contact time of wastewater within media, providing high efficiency with minimum recirculation. The media shall have low resistance to air flow to provide better aeration & shall have excellent wetting so that there should be zero fly nuisance. The treated water derived from media is then passed through tube settler.
- IV. Depending on the MLSS to be retained in the biological reactor, the sludge is wasted. The wasted sludge is collected in sludge thickener and aerated with diffused aeration. The sludge is then fed to filter press/centrifuge and dewatered. The dewatered, semi-dry sludge shall be collected in the form of Cake for manure use & primate shall be sent back to equalization tank.
- V. The treated water from tube settler will be passed into the clarified water tanks followed by ozonation. Then the treated water will be passed through pressure sand filter and activated carbon filter followed by the U.V system for disinfection purpose before recycling in Flushing and horticulture purposes.
- VI. To avoid the membrane pores to get clogged due to bacterial generation in membrane & organic substance, chemical cleaning shall be carried out once in two to three months for removing substances polluting and clogging the membranes. Normal cleaners used are sodium hypochloride and citric acid. However, the backwashing activity shall be carried out frequently during the day.

➤ **ELECTROMECHANICAL EQUIPMENTS**

The following give the minimum requirements of the different components of the system. The figures indicated are for General Contractor's references. It shall be the General Contractor's responsibility to select equipment for the plant proposed by them so that the capacities and performance of the Sewage Treatment Plant meet with the criteria set out in this specification.

All equipment and components of the system shall be of top-quality construction and shall be corrosion resistant

- **Collection sump Sewage Pumps:** The pump sets shall be supplied with required accessories, valves, fittings, cables etc. & as per specification.
- **Equalization Tank Sewage Pumps:** The pump sets shall be supplied with required accessories, valves, fittings, cables etc. & as per specification.
- **Air Blower:** Air Blowers of twin-lobe type (air cooled) for continuous service with construction in cast iron casing, supply complete with testing and commissioning etc.as specified and as required.
- **Air Diffusers:** Membrane diffusers in High Grade Silicon material (Coarse & Fine Bubble as per requirements) with connections to air piping by threaded means, of tube/disc type as required as per process requirements complete with testing and commissioning etc.as specified and as required consisting of Disc Type for coarse bubbles with approx. 5 m<sup>3</sup> / hr. Minimum Air capacity / throughput per Diffuser and Tube Type for fine bubbles with 9 m<sup>3</sup> / hr. Minimum Air capacity / throughput per Diffuser
- **Sludge Return / Relift Pump:** Centrifugal Sludge Return / Re-lift pumps for the transfer of sludge from secondary clarifier complete in all respects and as per specifications.
- **Sludge Loading/Disposal Pump:** Screw Type Sludge loading / Disposal pump, complete in all respects and as per specifications.
- **Filter Feed Pumps:** In-line vertical multistage centrifugal clear water pump set of approved make, complete in all respects and as per specifications.
- **Hydropneumatics Pumping System with Variable Frequency Drive:** Supply, Installation, Testing and Commissioning of compact packaged type skid mounted, self-contained variable frequency drive hydropneumatics system complete as required & as per specifications.
  - (i) Flushing Water Supply Pumps
  - (ii) Garden Water Pumps
- **Dual media Filter:** Providing and fixing vertical Dual Media Pressure Filter with suitable foundation bolts & other accessories, mounting frame, complete with testing and commissioning etc.as required & as specified.
- **Activated Carbon Filter:** Providing and Fixing of Activated carbon filter as per Manufacturer's standard and testing & commissioning complete.
- **Dosing System:** Providing and fixing chemical dosing system of approved make with all standard accessories & structural arrangement including suitable foundation bolts & other accessories etc. complete as required and as specified.
- **Ozonation system** at the clarified water tank complete as per specifications
- **Agitator/Hydraulic Mixture for Anoxic tank** complete as per specifications
- **Drainage Sump Pumps:** Providing and fixing compact dry motor submersible pumps of suitable rating. The pump sets shall be supplied with required accessories & as per specifications with all accessories and control system.

- **Sludge Handling Mechanism (Centrifuge):** Providing and fixing of sludge handling arrangement (Centrifuge bowl type) complete with testing & commissioning as required and as specified.
- **UV for Supply to Flushing/Garden Line:** Providing and installation of Online UV system complete with testing & commissioning as required and as specified.
- **Sludge Trolley:** Fabrication and supply of sludge trolley for transport of sludge complete as per requirements as specified.
- **Bio media for MBBR tank and Tube settler** complete as per specifications
- **Bar Screens:** Providing and fixing manually cleaned Bar Screens, to remove coarse and fine material in the water made up of FRP complete as required and as specified, consisting of coarse screen & fine screen.

### 3.9.2 Solid & Hazardous Waste Generation & Management Plan

The primary source of waste at airport are from aircrafts, airport, airlines, retail outlets, restaurants, restrooms, flights catering centers, air cargo terminals, GSE maintenance facilities, landscaping, etc. Each of these creates various types of waste including municipal solid waste (MSW), construction and demolition waste (C&D), green waste, deplane waste (waste from aircrafts), lavatory waste, hazardous and industrial waste, e-waste, spill cleanup and remediation waste, biomedical waste, etc. Estimated Waste generation from Proposed Terminal Building & Airport is given in **Table 9 & 10**.

**Table 9: Solid Waste Generation (Existing)**

Type	Standards Waste Generation per Capita	Population	Total Waste Generation (kg/day)	Compostable Waste (kg/day)	Recyclable waste (kg/day)
Passenger	0.3	150	45	23	22
Staff	0.3	100	30	15	15
Visitor	0.15	30	5	3	2
<b>Total Waste</b>	--	--	<b>80</b>	<b>41</b>	<b>39</b>
STP Sludge			1	1	0
<b>Total</b>			<b>81</b>	<b>42</b>	<b>39</b>

**Table 10: Waste Management Practices**

S. No	Particulars	Waste (kg/day)	Disposal Method
1	Biodegradable Waste	41	Waste will be treated in Organic Waste Convertor to get converted to manure.
2	Recyclable	39	Approved Recycler
3	STP Sludge	1	Landscaping
	<b>Total</b>	<b>81 kg/day</b>	

#### ❖ Other Wastes

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- Inert waste disposed through the local agency
- Used oil from machineries will be sold to approved Vendor as per Hazardous & Other Waste (Management & Transboundary Movement) Amended Rules, 2021.
- E-waste will be stored in separate room and sold to authorized recycler as per E-waste (Management) Rules, 2016
- Battery waste will be handled as per Batteries (Management and Handling) Rules, 2001.
- There will be C&D waste generation during construction phase, which will be managed as per the C&D Waste Management Rules, 2016.

❖ **Collection and Segregation of waste**

- Three color dustbins will be provided in the common area for collection of compostable waste (green), recyclable waste (blue) and inert waste (black).
- Deplane waste will be collected in HDPE bags and sent to the in-house solid waste management area for treatment/disposal.
- Training will be provided to the workers.
- No use of plastic will be promoted.
- Waste management and reduction plan will be made.
- Standard Signage will be provided.
- Separate room for waste storage, segregation and organic waste converter will be provided.
- STP sludge will be used as manure in landscaping.
- Waste oil, lubricant from machineries, equipment, maintenance yard, DG set shall be stored in HDPE containers and stored in isolated paved areas.

**3.9.3 Air Emission and Management**

**Construction Phase:** The main sources of air emissions will be construction machinery like drills, cranes etc. and vehicular movement. To control air emissions during construction, following measures will be implemented: -

- Barricading will be done around the project boundary to control limit dust dispersion into the surroundings.
- Construction material vehicles will be covered during transportation.
- Dust suppression will be done by regular water sprinkling in and around the project site.

**Operational Phase:** The different source of Air Pollution in an Airport is given below in **Table 11**.

**Table 11: Sources of Air Pollution at Airport**

Source Category	Specific Source
Aircraft and APU	Ground (reflecting taxi-idle, delay)
	Ground to 3,000 ft (reflecting takeoff, climb out, and approach)
	Above 3,000 ft
	Aircraft engine tests

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Source Category	Specific Source
GSE	Emissions may be reported in aggregate, but data collection requires knowledge of different types of GSE used by airport operators (snow removal, maintenance equipment, etc.) versus tenants (baggage tractors, belt loaders, cabin service trucks, etc.)
Parking Facilities and Roadways (GAV)	Vehicles transporting passengers (private autos, taxis, vans, shuttles, rental cars, etc.), and vehicles using airport parking
	Vehicles transporting airport and tenant employees, including vehicles in employee parking lots
	Vehicles transporting cargo
	Airport-owned vehicles
Stationary Sources/Facility Power	Airport facility boilers, heaters, and generators
	Fuels used by food concessions
	Maintenance activities
	Electrical consumption
Training Fires	Fuel usage for planned training activities
Construction	Vehicles consuming fuels during the construction process
Waste Management	Waste recycled, waste landfilled, etc.
Other	All other sources such as local on-airport companies with industrial processes, farming activities, etc.

To control such impacts, the following mitigation measures will be followed:

- ICAO emission standards will be maintained at the airport
- Efforts will be done to reduce the use of fuel to save money and reduce emission
- Airport will be designed in order to reduce the taxing length of aircraft
- CNG or electric operated vehicles will be prioritized in ground support facility.
- Proper signage will be displayed at the airside for movement of vehicles and aircraft
- Low Sulphur Diesel will be used in DG set
- Regular Vehicle pollution check will be done for vehicle used in airside.
- Proper traffic management plan will be prepared to ensure no traffic congestion at internal terminal road and National Highway
- Green Area will be developed around the parking area and roads to reduce vehicular emissions.
- Stack height to the DG set as per CPCB guideline will be provided

### 3.9.4 Noise Pollution and Management

**Construction Phase:** -The main sources of noise pollution will be construction machinery, DG sets and vehicular movement.

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Mitigation Measures: -

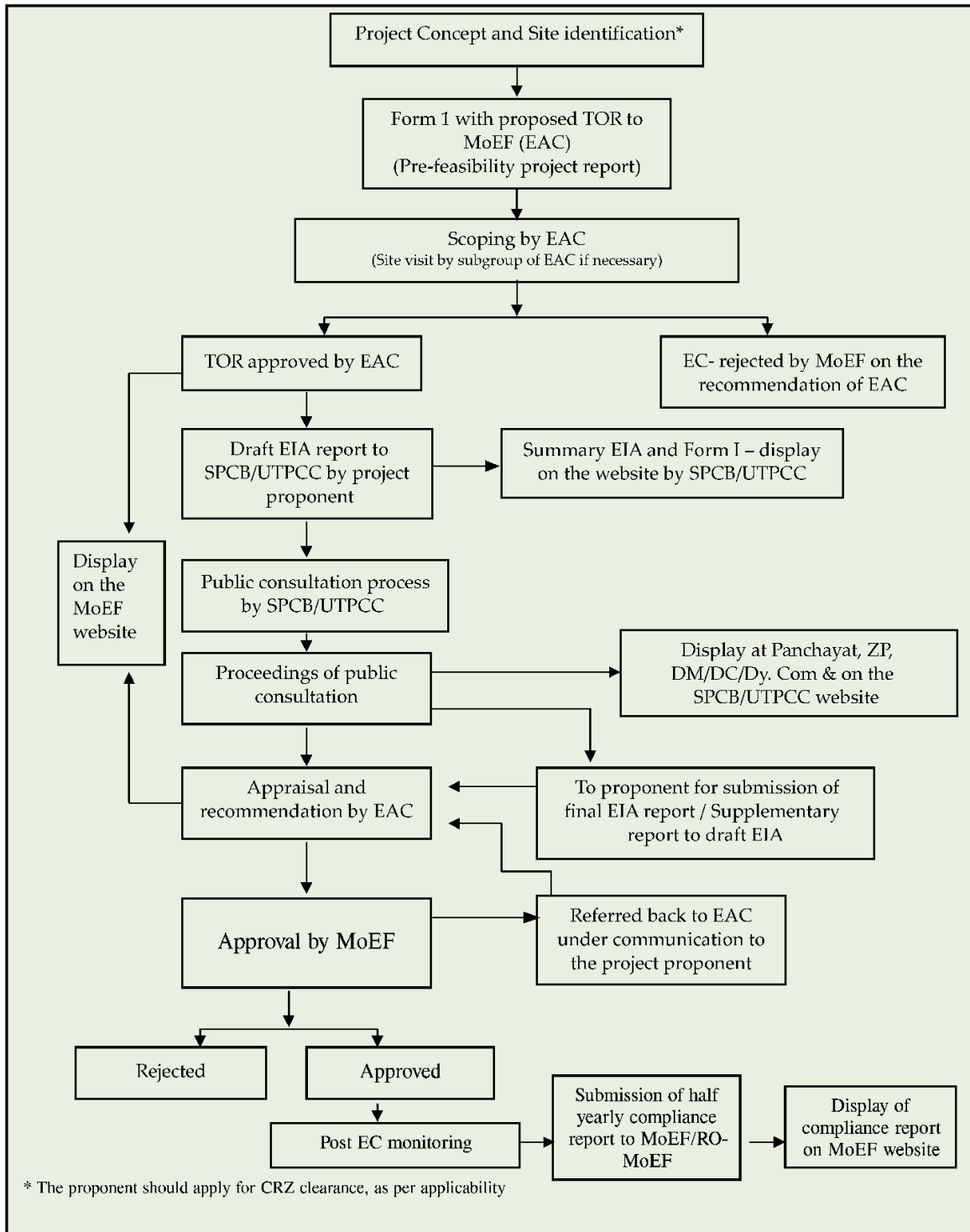
- Acoustic enclosures will be installed for DG sets in accordance with CPCB norms.
- Construction machineries will be provided with acoustic pads for noise reduction during operation.
- The construction activity will be carried out mostly during daytime.
- Proper maintenance of noise generating transport vehicles.

**Operation Phase:** Major sources of noise pollution from the airport are movement of aircraft and vehicles and operation of machineries like DG Sets, motors etc.

**Mitigation Measures**

- DGCA/MOEF&CC/ICAO standards and procedure will be followed.
- Restriction to the noisy aircrafts will be made.
- Proper scheduling of the aircraft will be done to minimize the noise level.
- DG set will be placed in acoustic enclosure with anti-vibration pads to reduce noise and vibration from DG sets.
- Ear plugs/mufflers will be given for workers, working in noisy areas.
- Double Glazed glass will be used in Terminal building to reduce noise.
- Sufficient oiling and lubrication will be done to all the parts of the machineries to ensure that minimal noise is generated.
- Green Area will be developed around the parking area and roads to reduce noise.
- Signage for no honking will be displayed.
- Noise adsorption material will be used for construction of terminal building and other development area.
- Noise barrier will be installed wherever possible and required.

**3.10 Schematic representations of the feasibility drawing which give information of EIA purpose.**



**Figure 5: Prior Environmental Clearance Process for Category A Projects**

## 4 SITE ANALYSIS

### 4.1 Connectivity

Nearest Railway Station: Sarsawa Railway Station (3.14 km, N)

Nearest Highway: NH-73 (1.04 km, NE)

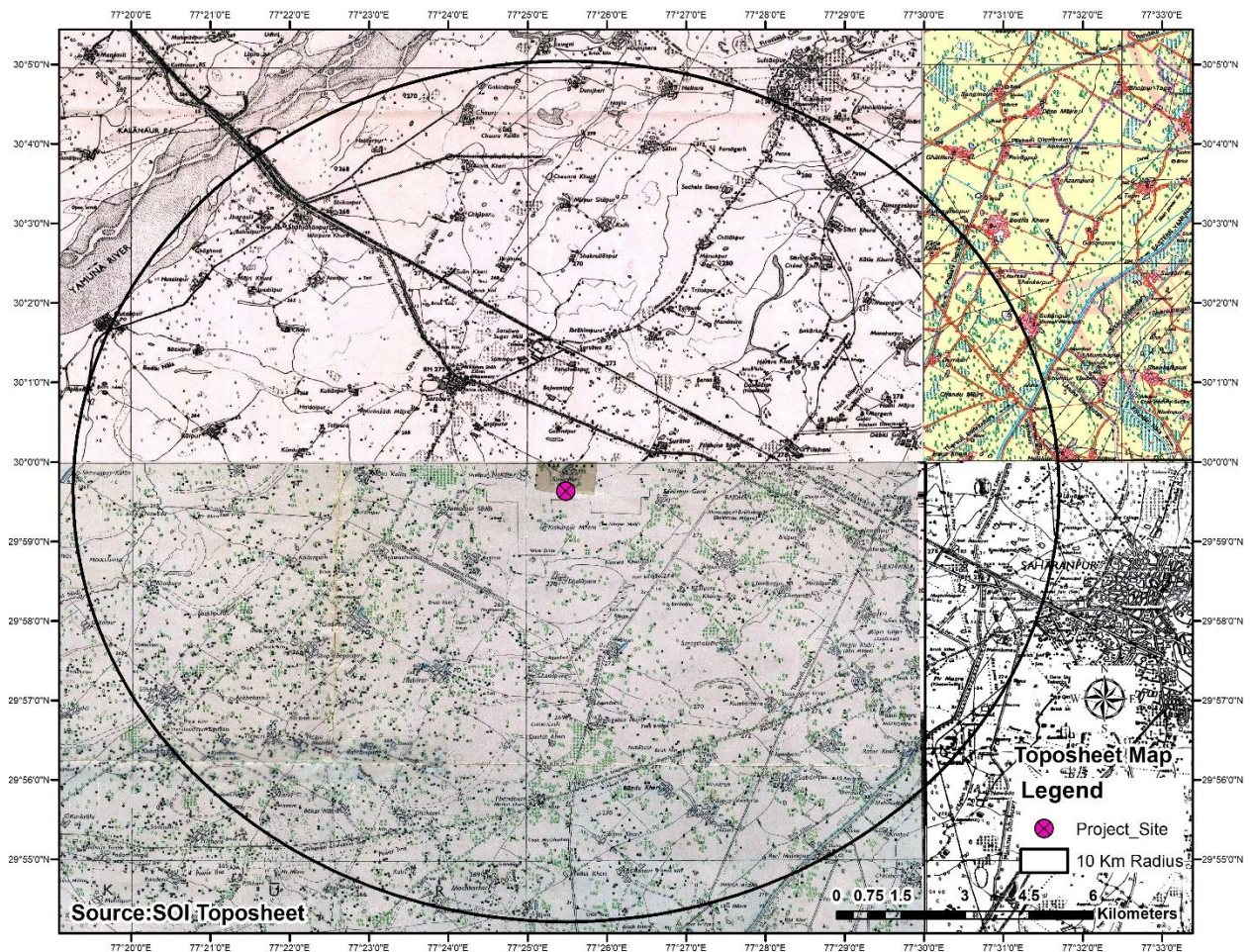
Nearest Airport: Dehradun (Jolly Grant) Airport (74 km, NE)

### 4.2 Landform, Land Use and Land Ownership

Total 65.04 Acres of land has been handed over by State Government of Uttar Pradesh to Airports Authority of India for development of Terminal Building and allied activities besides Sarsawa Airstrip. Presently, the land use is agricultural that will be changed to airport.

### 4.3 Topography

Topographically the area is flat terrain, and the elevation of the plant site is between 273-279 amsl. Topographical map is shown below as **Figure 7**.



**Figure 6: Topographical Map of Study Area**

#### 4.4 Existing land use pattern

The existing land-use and land cover pattern of the site is agricultural that will be converted to airport. The CRZ Clearance is not applicable to the premises.

#### 4.5 Existing Infrastructure

The project is 2.44 km away from Sarsawa. There will be development of connecting road to be constructed by State Government from outer ring road to connect the airport. The nearest highway to the project is NH-73 located at 1.04 km, NE from the site. Internal roads and other infrastructure will be developed in the area. Air Traffic Control Tower of Indian Air Force will be used. Apart from Airport utility and operational area, Admin, AAI office, drinking water, Wastewater treatment, etc. facilities will be provided within the airport boundary.

#### 4.6 Climatic data from secondary sources

Historical meteorological data are obtained from climatological tables pertaining to Dehradun (as per the nearest representative IMD station) for the period of 1981-2010, are given below in **Table 12**.

**Table 12: Climatological Data (IMD, Dehradun)**

Month	Temperature		Relative Humidity		Rainfall (mm)	Rainy Days	Predominant Wind Direction (From)	Wind Speed Km/hr
	(°C) Daily		(%)					
	Max	Min	8:30	17:30				
January	24.3	2.5	85	65	41.5	2.9	NE	2.4
February	26.9	4.6	77	56	58.2	3.9	NE	2.9
March	31.5	7.7	64	45	53.1	3.6	NE	3.3
April	36.8	11.4	51	34	34.5	2.9	NW	3.6
May	39	15.8	51	37	61.5	4.5	NW	3.6
June	38.6	18.7	65	53	231.7	9.6	NW	3.2
July	34.5	20.5	86	78	642.5	20.5	NW	2.6
August	32.9	20.2	89	82	686.4	21.5	NW	2.4
September	32.5	17.6	84	76	298.3	11.9	NW	2.6
October	31.4	11.5	71	65	44.4	2.2	NE	3
November	28.3	7.1	76	67	7.7	0.5	NE	2.7
December	24.9	3.7	83	69	23.8	1.5	NE	2.3
<b>Annual</b>	<b>20</b>	<b>2.3</b>	<b>73</b>	<b>61</b>	<b>2183.5</b>	<b>85.7</b>	<b>NW</b>	<b>2.9</b>

#### 4.7 Social Infrastructure available

The Social infrastructure is available near the site, details are given below in **Table 13**.

**PRE-FEASIBILITY REPORT**  
**DEVELOPMENT OF SARSAWA AIRPORT**  
**(INTEGRATION OF TERMINAL BUILDING & ALLIED FACILITIES IN SARSAWA AIRSTRIP)**  
**AIRPORTS AUTHORITY OF INDIA**



**Table 13: Social Infrastructure around the Project Site**

Features	Description
Near-by Residential Area	<ul style="list-style-type: none"> <li>• Sherpur Naqeebpur (0.3 km, N)</li> <li>• Dholapda (1.90 km, S)</li> <li>• Sarsawa (2.44 km, NW)</li> </ul>
Nearest Educational Institute	<ul style="list-style-type: none"> <li>• Primary School &amp; UPS Sarsoheri (0.21 km, N)</li> <li>• Kendriya Vidyalaya, Saraswa (0.69 km, N)</li> <li>• Balaji Public School (1.34 km, N)</li> <li>• Gurukul Education World (1.49 km, NW)</li> <li>• AK Public School (2.20 km, NW)</li> <li>• Mother Teresa Public School (3.50 km, NW)</li> <li>• Navgurukulam School (6.78 km, S)</li> </ul>
Nearest Hospital	<ul style="list-style-type: none"> <li>• Sarsawa Government Hospital (2.43 km, NW)</li> </ul>
Temples	<ul style="list-style-type: none"> <li>• Shiv Mandir (2.79 km, N)</li> <li>• Ravidas Mandir (2.18 km, SW)</li> </ul>



## 5 PLANNING BRIEF

### 5.1 Planning Concept (type of industries, facilities, transportation etc) Town and Country Planning/Development authority classification.

The proposed project is integration of terminal building and allied facilities besides Sarsawa Airstrip. Project conforms to the T&CP and other authority classification.

### 5.2 Population Projection

**Construction Phase:** Approx. 100 no. of temporary employees will be required for construction purposes.

**Operational Phase:** The total population of airport will be 280 no. including passengers, staff, visitors and food court. The details of population projection have been provided in following **Table 14**.

**Table 14: Details of Population Projection**

Particulars	Unit	Quantity
Passenger	No.	150
Staff	No.	100
Visitor	No.	30
<b>Total</b>	<b>No.</b>	<b>280</b>

### 5.3 Land use Planning (breakup along with green belt etc.)

Total 65.04 Acres of land has been handed over by State Government of Uttar Pradesh to Airports Authority of India for development of Terminal Building and allied activities besides Sarsawa Airstrip. Presently, the land use is agricultural that will be changed to airport.

### 5.4 Assessment of Infrastructure Demand (Physical & Social)

Airports Authority has planned the proposed development with a view to accelerate the integrated development of air traffic services, passenger terminals, operational areas at the airports.

The facilities planned in project includes New Passenger Departure Terminal Building, taxiway, 1 no. of aprons. Related facilities include airport support facilities, utilities and infrastructure including roads, new car parking, power supply system, storm water drainage system, landscaping etc., and aircraft support facilities like refueling, repairs and overhaul, ground support, and catering etc.



## **5.5 Amenities/Facilities**

All facilities will be provided at the airport for passengers and staff. Various additional facilities like toilets with drinking facility, suitable ramps for differently abled persons, security hold area, bus lounge, isolated smoking area, childcare room, retails islands/shops, airline offices & ticket selling counters, ATM/Bank counters, Meet & Greet Area, First Aid Room, Facilitation Counters, Caretaker room with store, Airport terminal Manager Office and other facilities, infrastructure for advertisements and artwork at suitable locations will be provided.

## **6 PROPOSED INFRASTRUCTURE**

### **6.1 Industrial Area (processing area)**

As the project is Airport, no industrial area is proposed.

### **6.2 Residential Area (non-processing area)**

No Residential Area is proposed.

### **6.3 Green belt**

Landscaping will be developed along the airside, landside, roads, and parking area. Unpaved areas will be developed as Lawn area for beautification of surrounding areas. For the proposed project, 6679.00 m<sup>2</sup> of area will be developed as green. Along with tree plantation, lawn will be developed in front of the Terminal Building. Green area will be provided on either side of terminal access roads. Landscaping will be maintained with strong avenue planting and lower-level shrubs with grass cover and hedges on all sides.

### **6.4 Social Infrastructure**

Details of Social Infrastructure have been provided at **Section 4.7** above.

### **6.5 Connectivity**

Details of Social Infrastructure have been provided at **Section 4.1** above.

### **6.6 Drinking water management (source & supply of water)**

Drinking water supply will be provided by Borewell.

### **6.7 Sewerage system**

Total wastewater generation from airport will be 17.4 KLD that will be treated in inhouse Sewage Treatment Plant (Capacity-25 KLD). 16.3 KLD STP treated water will be completely reused in the premises for purposes like landscaping, flushing and miscellaneous works.

### **6.8 Industrial waste management**

Used oil from machineries will be sold to approved vendor as per Hazardous & Other Waste (Management & Transboundary Movement) Amended Rules, 2021.

## **6.9 Solid Waste Management**

**Construction Phase:** 15 kg/day solid waste generated from construction labours will be disposed off by authorized agency to Municipal Waste Disposal Site.

**Operation Phase:** The total solid waste generation from the project will be 81 kg/day. Out of total, 41 kg/day Biodegradable waste will be treated in Organic Waste Converter to get converted to manure. Manure will be used for landscaping purposes. 1 kg/day STP Sludge will also be used as manure in green area. 39 kg/day of recyclable waste will be given to authorized vendors. Solid Waste Management Rules,2016 will be followed.

## **6.10 Power requirement & supply/ source**

Details have been provided in **Section 3.8.2 above**.

## **7 REHABILITATION AND RESETTLEMENTS (R&R) PLAN**

### **7.1 Policy to be adopted (central/state) in respect of the project affected persons including home oustees, land oustees and landless labourers (a brief outline to be given)**

Total 65.04 Acres of land has been handed over by State Government of Uttar Pradesh to Airports Authority of India for development of Terminal Building and allied activities besides Sarsawa Airstrip. Hence, there will be no Rehabilitation & Resettlement Plan provided.

## **8 PROJECT SCHEDULE AND COST ESTIMATE**

### **8.1 Likely date of start of construction and likely data of completion (time schedule for the project to be given)**

Construction will be started after getting all approval from concern department. Construction will be completed in two years after getting all approval.

### **8.2 Estimated project cost along with analysis in terms of economic viability of the project.**

Total cost for proposed project is **Rs 146.62 Crores**.

## **9 ANALYSIS OF PROPOSAL (FINAL RECOMMENDATIONS)**

### **9.1 Financial and social benefits with special emphasis on the benefit to be local people including tribal population, if any, in the area.**

Air transport is one of the world's most important industries. Its development and its technical and service achievements make it one of the greatest contributors to the advancement of modern society. Air transport improves quality of life by broadening people's leisure and cultural experiences. It helps to improve living standards and alleviate poverty, for instance, through tourism.

Demand for air services increases the influence of air transport on the global economy, making possible the rapid movement of millions of people and billions of dollars' worth of goods to markets around the world. These cover employment and activity within the air transport industry including airline and airport operations, aircraft maintenance, air traffic control and regulation, and activities directly serving air passengers, such as check-in, baggage-handling, on-site retail and catering facilities. Not all of these activities necessarily take place at an airport, with some taking place at head office.

**ENCLOSURES**

***ENCLOSURE-1: LAND DOCUMENTS***

(129)

(139)

Date :- 11/08/2020

**HANDING OVER TAKING OVER NOTE**

**Subject: Handing over of 26.3304 Hectares (65.04 Acres) of land by State Govt. of Uttar Pradesh to Airports Authority of India for Development of Civil Enclave at Sarsawa Airbase station (Saharanpur) Uttar Pradesh.**

As per enclosed copies of MoU dt. 29.12.2016, letter no. 620 / छप्पन-2020-06 / 2001 दिनांक: 30 मार्च 2020 and Director, State Civil Aviation, UP, Lucknow letter no 407/RCS/S-1/2020 Lucknow dt. 06.08.2020, State Government of Uttar Pradesh is pleased to hand over and Airports Authority is taking over of 26.3304 hectares (65.04 acres) of land on as it "where is basis" and "free from all encumbrances" for the development of Civil Enclave at Sarsawa Airbase station (Saharanpur) Uttar Pradesh and authorize Airports Authority of India to use this land in the manner it wants for the activities as decided by Airports Authority of India. In addition to the obligations set forth in the above referred letter, following obligations which are related to land transfer is also agreed between AAI & State Govt. on the eve of this land handing over/taking over of occasion.

1. That State Government shall be providing/carrying out free of charge to/for AAI the following:
  - a) 4 certified copies (A0 size) of revenue Map (having demarcation of AAI land on Revenue Map) with certified by Tehsildaar/Patwari – within 15 days.
  - b) Lattha (Cotton cloth sheet) with tarmeen of AAI land duly signed/Certified/Stamped by State Govt. Revenue Deptt. – within 15 days.
  - c) Certified list of Khasra/survey numbers and Sale deed – provided 01 set (sale deed checked and revenue records yet to be checked).
  - d) Non Encumbrance Certificate - provided.
  - e) Mutation work which is presently in the name of State Civil Aviation and to be mutated in the name of AAI in due course of time for the above said land and Certified Copy of Mutation/Dakhila khariz will be provided with the consent of State Civil Aviation and State Revenue Authority.
  - f) Measurement of land by State Govt. with Total Station Machine or any other suitable means within one month at its own cost and AAI shall not be paying anything.
  - g) At the time of mutation in the name of AAI, the necessary certified copies of Mutation/Dakhila khariz will be provided by State Govt. Revenue Authority.
  - h) Works to be carried out by State Govt.:
    - Construction of approach road from proposed outer ring road/NH/State Highway to Airport.
    - Diversion of existing chakroad, Naali, Raasta in the above said land.
    - Shifting of all live electrical lines & poles and all trees in the above said land within agreed period of 01 month.

*[Signature]*  
11/08/20

*[Signature]*  
11/8/20  
AGM (F-4)

- Removal of any other encroachment and obstruction in land being handed over to AAI.
  - Bearing all the expenditure in respect of claims or liabilities arising out of rehabilitation and resettlement of affected people and claims of liabilities arising out of any litigation, present or future in the matter of existing and additional land acquisition.
  - To take up future development works, as notified by the AAI, the GoUP shall acquire minimal additional land and transfer the same to AAI free of cost and free from encumbrance.
2. Any Court Case/legal matter (if any), pertaining to this land before the date of handing over this land shall be the responsibility of State Government and AAI shall not be party to it.
  3. Director, State Civil Aviation, UP, Lucknow vide letter no 407/RCS/S-1/2020 Lucknow dt. 06.08.2020 has nominated ADM (F&R), Saharanpur for handing over the said land to AAI on behalf of State Civil Aviation.
  4. State Government shall be appointing/nominating a Nodal Officer to facilitate above compliances and will provide necessary assistance & support during physical execution of property wall and related works on above said land.
  5. Out of above mentioned 26.3304 Hectares of land, 25.3856 Hectares of Land has been mutated in the name of State Civil Aviation and record of which have been provided.
  6. Out of above mentioned 26.3304 Hectares of land, the land of chakroad, naali, raasta which is 0.4338 Hectares and is under consideration of District Magistrate/Commissioner Saharanpur and will be cleared shortly.
  7. Out of above mentioned 26.3304 Hectares of land, 0.511 Hectares of Land dispute matter is under consideration of Honourable Board of Revenue, Allahabad and will be cleared in due course time as per the decision of Revenue Board.
  8. Any compensation if pending or arises out of status mentioned in 5 to 7 in future will be borne by state govt. and AAI will have no liabilities.

Amrinder  
11/08/20

Amrinder  
ADM (F-4)  
11/08/20

9. The Details of 26.3304 Hectares (65.04 Acres) as referred is enclosed as Annex – 1.

26.3304 HECTARES (65.04 acres) LAND IS HANDED OVER UNDER THE ABOVE CONDITIONS

BY:

*[Signature]*  
11/08/20

(ADDITIONAL DISTRICT MAGISTRATE)- (FINANCE & REVENUE)  
SAHARANPUR – UTTAR PRADESH  
ON BEHALF OF STATE GOVT. OF UTTAR PRADESH)

26.3304 HECTARES (65.04 acres) LAND IS TAKEN OVER UNDER THE ABOVE CONDITIONS BY:

*[Signature]*  
11/8/2020

ASSTT. GEN. MANAGER (E-C)/LM  
AAI, DEHRADUN AIRPORT  
ON BEHALF OF AIRPORT DIRECTOR, DEHRADUN  
AIRPORTS AUTHORITY OF INDIA

WITNESS:

*[Signature]*  
11/8/2020

*[Signature]*  
11/8/2020

Name/Designation/ Department	Name/Design/ Department
Devendra Singh Tehsildar Revenue Department.	Rajiv Kumar Singh Manager (E-C) AAI, Dehradun.

126

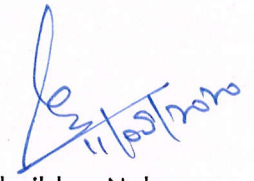
136

Date :- 11/08/2020

**Non-Encumbrance Certificate**

**Subject: Handing over of 26.3304 Hectares (65.04 Acres) of land by State Govt. of Uttar Pradesh to Airports Authority of India for Development of Civil Enclave at Sarsawa Airbase station (Saharanpur), Uttar Pradesh**

This is to Certify that the land of 26.3304 Hectares (65.04 acres) as per Annex-1 which is being handed over to AAI on 11.08.2020 is free from all compensation, disputes and encroachments.

A handwritten signature in blue ink, followed by the date '11/08/2020' written below it.

Tehsildar, Nakur

Saharanpur (U.P.)

***ENCLOSURE-2: PROPOSED TERMS OF  
REFERENCE***

**7(a):STANDARD TERMS OF REFERENCE FOR CONDUCTING  
ENVIRONMENT IMPACT ASSESSMENT STUDY FOR AIRPORTS  
AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT**

- 1) Reasons for selecting the site with details of alternate sites examined/rejected/selected on merit with comparative statement and reason/basis for selection. The examination should justify site suitability in terms of environmental angle, resources sustainability associated with selected site as compared to rejected sites. The analysis should include parameters considered along with weightage criteria for short-listing selected site.
- 2) Details of the land use break-up for the proposed project. Details of land use around 10 km radius of the project site. Examine and submit detail of land use around 10 km radius of the project site and map of the project area and 10 km area from boundary of the proposed/existing project area, delineating project areas notified under the wild life (Protection) Act, 1972/critically polluted areas as identified by the CPCB from time to time/notified eco-sensitive areas/inter state boundaries and international boundaries.. Analysis should be made based on latest satellite imagery for land use with raw images.
- 3) Submit the present land use and permission required for any conversion such as forest, agriculture etc. land acquisition status, rehabilitation of communities/ villages and present status of such activities. Check on flood plain of any river.
- 4) Examine and submit the water bodies including the seasonal ones within the corridor of impacts along with their status, volumetric capacity, quality likely impacts on them due to the project.
- 5) Submit a copy of the contour plan with slopes, drainage pattern of the site and surrounding area, any obstruction of the same by the airport.
- 6) Submit details of environmentally sensitive places, land acquisition status, rehabilitation of communities/ villages and present status of such activities.
- 7) Examine the impact of proposed project on the nearest settlements.
- 8) Examine baseline environmental quality along with projected incremental load due to the proposed project/activities
- 9) Examine and submit details of levels, quantity required for filling, source of filling material and transportation details etc. Submit details of a comprehensive Risk Assessment and Disaster Management Plan including emergency evacuation during natural and man-made disaster integrating with existing airport
- 10) Examine road/rail connectivity to the project site and impact on the existing traffic network due to the proposed project/activities. A detailed traffic and transportation study should be made for existing and projected passenger and cargo traffic.
- 11) Submit details regarding R&R involved in the project
- 12) Examine the details of water requirement, use of treated waste water and prepare a water balance chart. Source of water vis-à-vis waste water to be generated along with treatment facilities to be proposed.

## STANDARD TERMS OF REFERENCE (TOR) FOR EIA/EMP REPORT FOR PROJECTS/ACTIVITIES REQUIRING ENVIRONMENT CLEARANCE

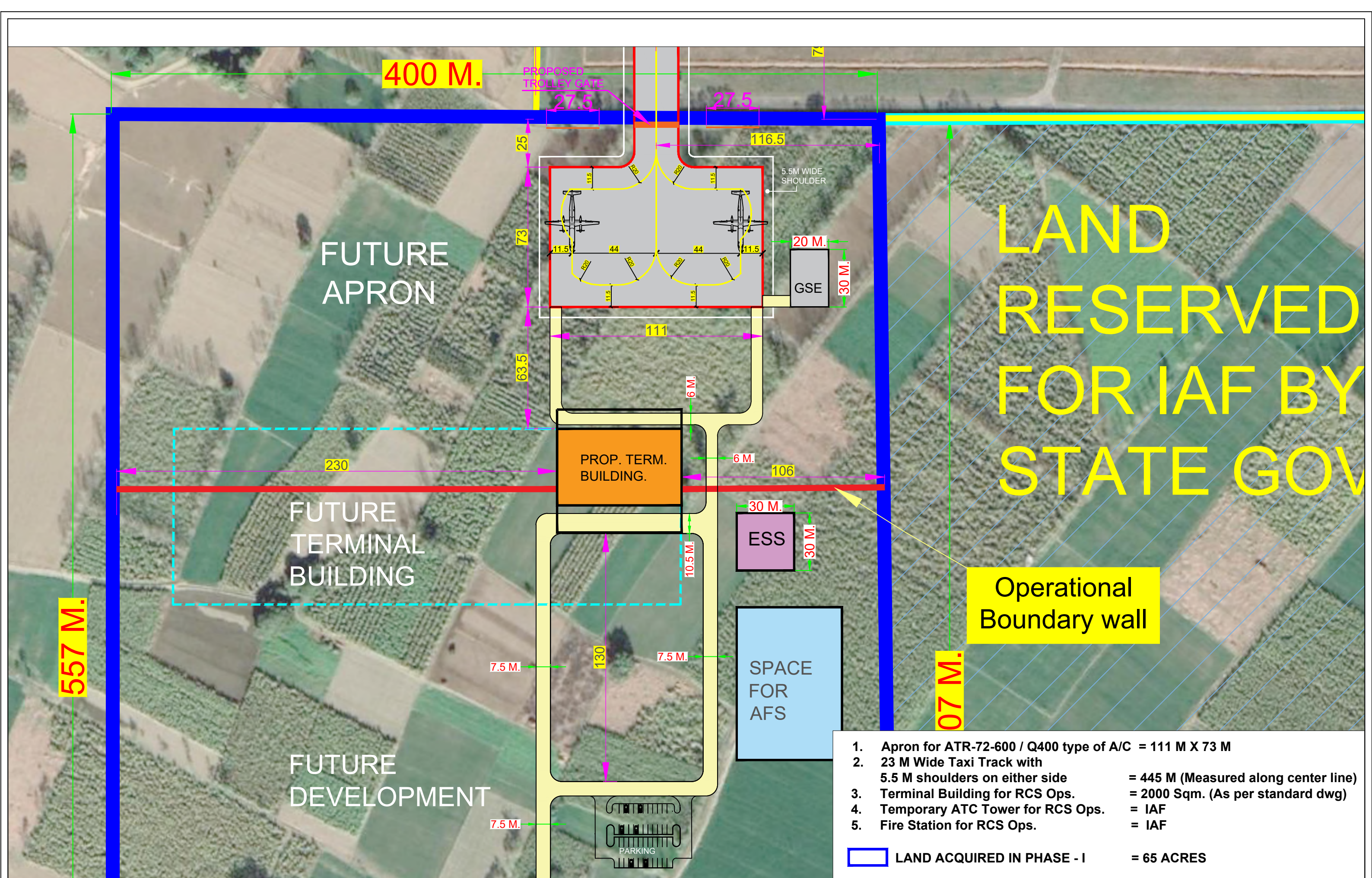
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- 13) Rain water harvesting proposals should be made with due safeguards for ground water quality. Maximize recycling of water and utilization of rain water.
- 14) Examine details of Solid waste generation treatment and its disposal.
- 15) Submit the present land use and permission required for any conversion such as forest, agriculture etc.
- 16) Examine separately the details for construction and operation phases both for Environmental Management Plan and Environmental Monitoring Plan with cost and parameters.
- 17) Submit details of a comprehensive Disaster Management Plan including emergency evacuation during natural and man-made disaster.
- 18) Examine baseline environmental quality along with projected incremental load due to the proposed project/activities.
- 19) The air quality monitoring should be carried out as per the notification issued on 16th November, 2009.
- 20) Examine separately the details for construction and operation phases both for Environmental Management Plan and Environmental Monitoring Plan with cost and parameters.
- 21) Submit details of corporate social responsibilities (CSR)
- 22) Submit details of the trees to be cut including their species and whether it also involves any protected or endangered species. Measures taken to reduce the number of the trees to be removed should be explained in detail. Submit the details of compensatory plantation. Explore the possibilities of relocating the existing trees.
- 23) Examine the details of afforestation measures indicating land and financial outlay. Landscape plan, green belts and open spaces may be described. A thick green belt should be planned all around the nearest settlement to mitigate noise and vibrations. The identification of species/ plants should be made based on the botanical studies.
- 24) Public hearing to be conducted for the project in accordance with provisions of Environmental Impact Assessment Notification, 2006 and the issues raised by the public should be addressed in the Environmental Management Plan. The Public Hearing should be conducted based on the ToR letter issued by the Ministry and not on the basis of Minutes of the Meeting available on the web-site.
- 25) A detailed draft EIA/EMP report should be prepared in accordance with the above additional TOR and should be submitted to the Ministry in accordance with the Notification.
- 26) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 27) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 28) Any further clarification on carrying out the above studies including anticipated impacts due to the project and mitigative measure, project proponent can refer to the model ToR available on Ministry website "<http://moef.nic.in/Manual/Airport>".

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***ENCLOSURE-3: LAYOUT PLAN***

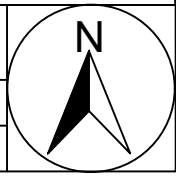




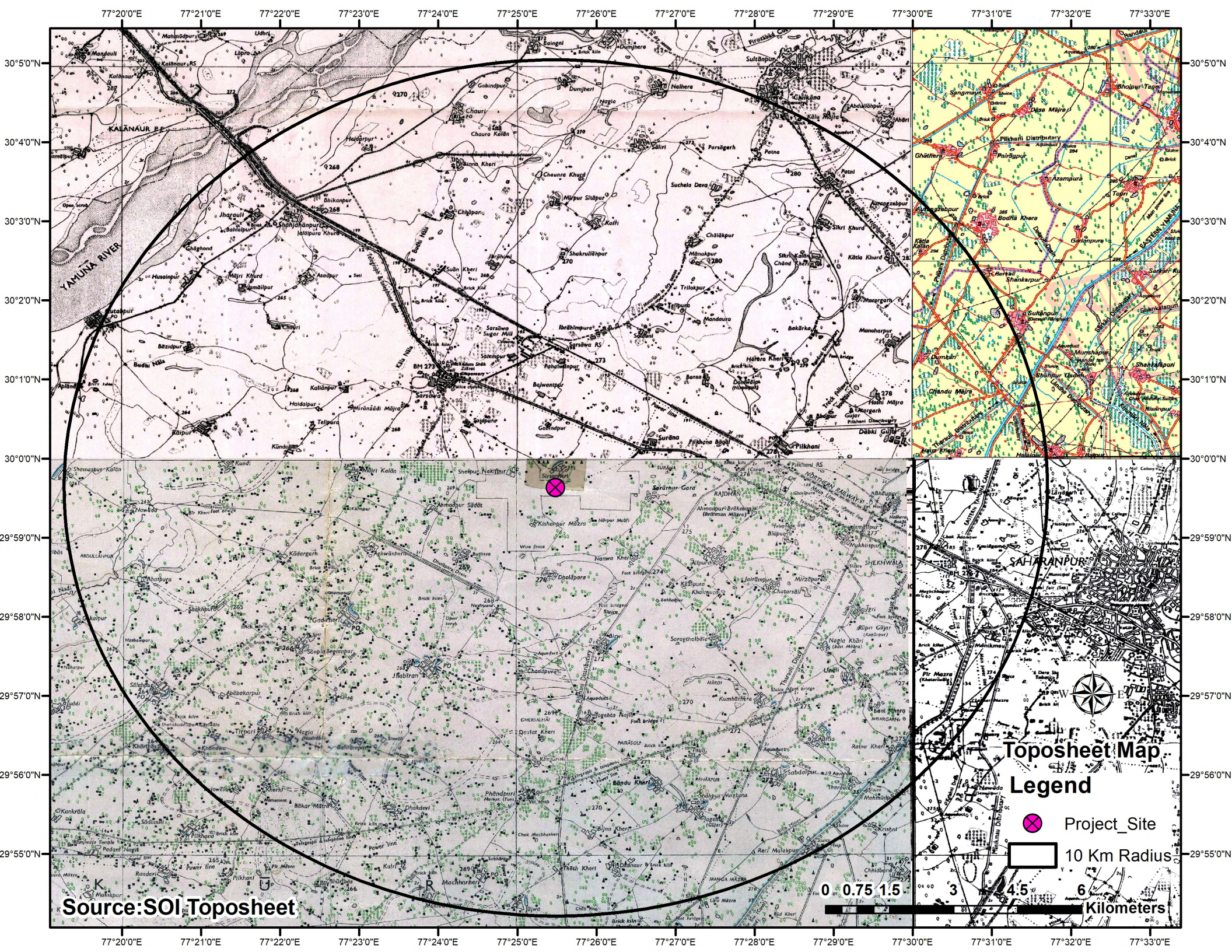
**LAND  
RESERVED  
FOR IAF BY  
STATE GOV**

**Operational  
Boundary wall**

1. Apron for ATR-72-600 / Q400 type of A/C = 111 M X 73 M
  2. 23 M Wide Taxi Track with 5.5 M shoulders on either side = 445 M (Measured along center line)
  3. Terminal Building for RCS Ops. = 2000 Sqm. (As per standard dwg)
  4. Temporary ATC Tower for RCS Ops. = IAF
  5. Fire Station for RCS Ops. = IAF
- LAND ACQUIRED IN PHASE - I = 65 ACRES**



***ENCLOSURE-4: TOPOGRAPHICAL MAP***



Source: SOI Toposheet

Project\_Site  
10 Km Radius

0 0.75 1.5 3 4.5 6  
Kilometers

Toposheet Map  
Legend