

# Summary of the Environmental Report for Riga Airport Master Plan 2025- 2050

October 2025

**RIX**



LIDOSTA RĪGA



# Riga Airport Master plan 2025-2050 ENVIRONMENTAL REPORT

Prepared within the framework of a Strategic  
Environmental Impact Assessment

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# What is the Environmental Report?

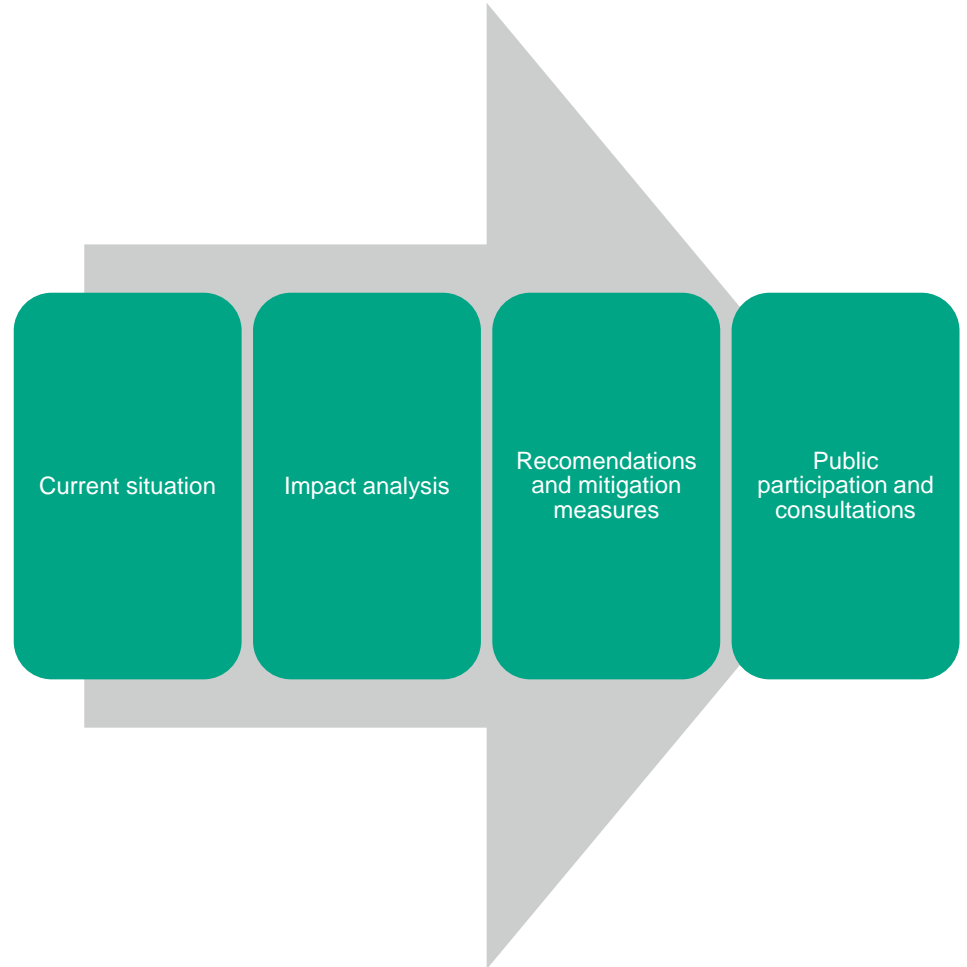
**Strategic Environmental Impact Assessment (SEIA)** is an evaluation of the potential environmental effects resulting from the implementation of a planning document.

Its purpose is to ensure sustainable development and to identify possible adverse environmental impacts at an early stage.

The SEIA is conducted in accordance with Cabinet of Ministers Regulation No.157 “Procedure for Conducting a Strategic Environmental Impact Assessment”.

## Objectives of the SEIA:

- to assess the environmental impact of implementing the Master Plan;
- to ensure compliance with national and international environmental protection objectives;
- to identify mitigation and compensation measures;
- to promote public participation and transparent decision-making processes.



# Overview of Current Situation

## Territory

Riga Airport covers an area of 621 hectares, the majority of which is occupied by the runway, aprons, passenger terminal, and cargo handling infrastructure. The total area of the airport's national interest territory is approximately 1,907 hectares.

## Passengers

In 2024, Riga Airport handled 7.12 million passengers (compared to 7.8 million in 2019 before the COVID-19). Riga Airport offers regular connections to more than 100 destinations.

## Infrastructure

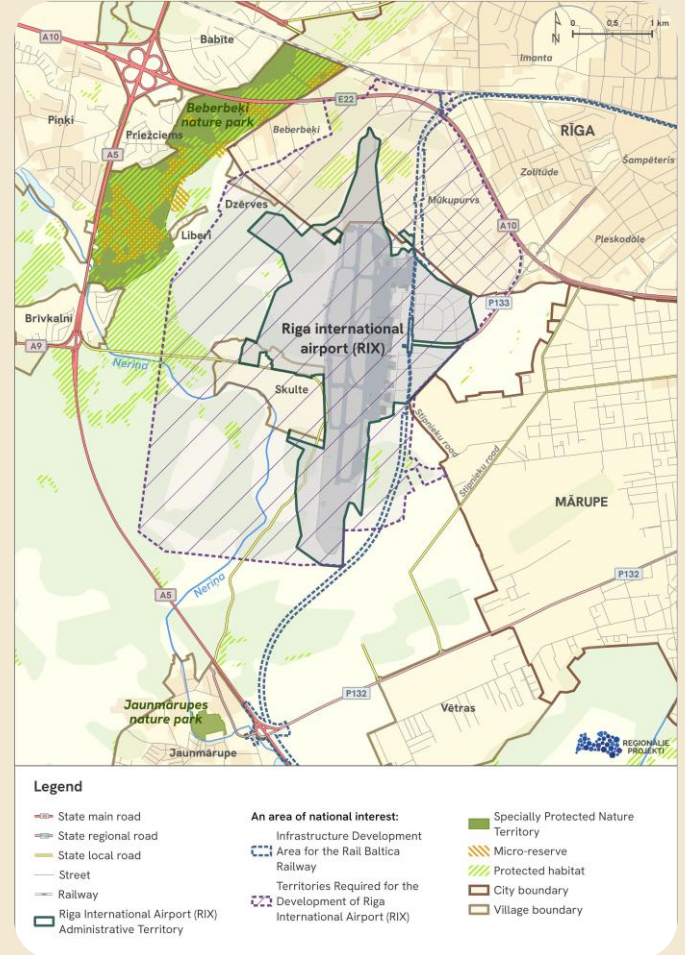
1 runway: 3,200 m × 45 m, 5 aprons, 88 aircraft parking stands, 7 maintenance hangars, 5 cargo terminals, 2 business aviation terminals

## Surroundings:

Located near to Beberbeki Nature Park, the Cenās tīrelis and Melnā ezera purvs Nature Reserves, and Lake Babīte. The surrounding areas are partly inhabited, partly forested, and partly used for agricultural purposes.

## Connectivity and mobility:

Access via regional road P133 and public transport (bus No. 22). The Rail Baltica station at RIX Riga Airport is currently under construction, which will strengthen multimodal connectivity.



# Masterplan and It's Phases



## Phase I: by 2030 or 10,5 million passengers

- Terminal Expansion – Stage 6
- Integration of the Rail Baltica rail connection
- Improvement of airport access roads
- Runway and taxiway pavement rehabilitation
- Modernisation of technical and service zones
- Initial development of the RIX Airport City



## Phase II: by 2040 or 13,6 million passengers

- Construction of new taxiways and rapid exit taxiways (RET)
- Construction of the South Pier
- Reconfiguration of Pier I and Southern expansion of Pier II
- Relocation of isolated aircraft stands
- Replanning of de-icing areas
- Development of car parking and intermodal access facilities



## Phase III: by 2050 or 17.4 million passengers

- Extension of the Western parallel taxiway
- Creation of two additional aircraft stand lanes at the Southern apron expansion
- Relocation of MRO, FBO and general aviation (GA) areas to the Western apron
- Long-term development of the RIX Airport City

# Main Environmental Aspects

Population, human health and safety, material assets (environmental noise)

Infrastructure and sustainable mobility

Quality of surface and groundwater

Air quality

Soil contamination

Climate change and climate change adaptation

Hydrological regime

Protected areas and biodiversity

Landscape diversity

Cultural, architectural and archaeological heritage

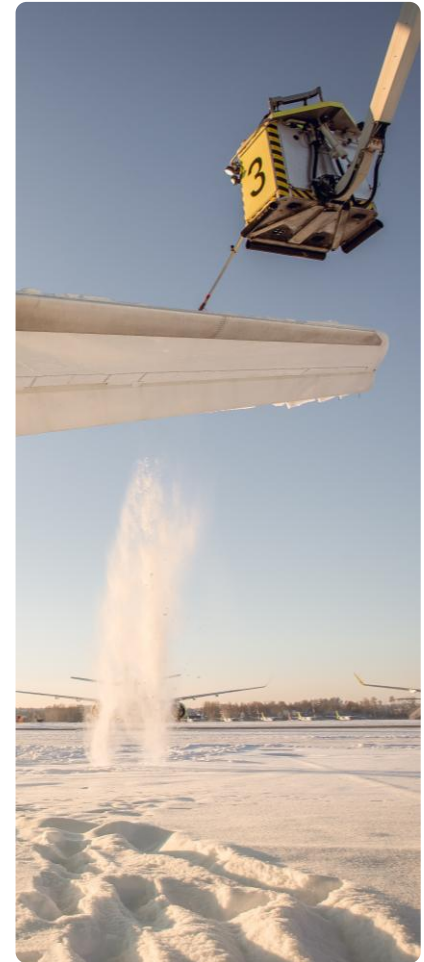
# Impact on Air Quality and Climate Change

- **Main source of impact:** aircraft engines during take-off, landing, taxiing and ground idling cycles (LTO cycle) are the primary source of emissions. Additional contributions arise from ground transport, maintenance works, and airfield operations.
- **Mitigation measures:** use of Sustainable Aviation Fuel (SAF), electrification of ground support equipment and vehicles, implementation of emission reduction technologies and energy-efficient operations
- **Conclusion:** outside the airport area, emissions are minimal and are not expected to cause any health impacts.
- **Modelling results:** Projected CO<sub>2</sub> emissions from the LTO cycle decrease from 45,283 tonnes in 2024 to 30,311 tonnes by 2050.



# Impact on Water Resources

- **Main risk:** the principal environmental risk associated with airport operations is stormwater runoff pollution, especially during the winter season, when de-icing agents (e.g. glycols, salts) are used. These substances may enter groundwater or nearby surface water bodies if not properly managed.
- **Mitigation measures:** expansion of stormwater collection and treatment systems, along with regular monitoring, is planned to enable early identification and prevention of pollution risks.
- **Key management conditions:**
  - Gradual expansion and modernisation of drainage and wastewater treatment systems;
  - improvement of oil separation systems in parking areas, aprons, cargo logistics and technical zones;
  - increase of glycol collection and treatment capacity to ensure effective removal of pollutants.



# Impact on Soil and Land Use

- The main impacts on soil and land use occur **during construction works** — primarily through earthworks, movement of heavy machinery, and potential spills of chemical substances or fuel.
- **Mitigation measures:** during both construction and operation phases, pollution prevention measures and regular monitoring are implemented to ensure a prompt response in case of any accidental spill or contamination.
- Since the planned projects are located within already developed areas, **the loss of natural habitats and agricultural land is minimal.**



# Impact on Biodiversity

- The most significant impact is related to the **southern expansion of Pier II**, which partially affects the protected habitat type 2180 “Wooded dunes of the coastal area”. This is a habitat of European importance, requiring special protection under the EU Habitats Directive.
- **Mitigation and compensation measures:** compensation measures are planned, including habitat restoration or the creation of new natural values, in cooperation with the Nature Conservation Agency.
- **Conclusions:** the airfield development will reduce bird concentrations in the surrounding area, thereby lowering the risk of bird strikes and simultaneously improving aviation safety.



# Impact on Landscape and Cultural Heritage

- The main impact on the landscape is related to **the construction of new infrastructure facilities** — including the passenger terminal, aprons, and technical buildings. These developments may alter the visual perception of the area.
- **Mitigation measures:** the new facilities are located within the existing industrial environment, where technogenic elements already dominate, thus maintaining overall landscape compatibility.
- **Conclusion:** no significant visual disharmony is expected, and no impact on cultural heritage assets has been identified.



# Environmental Noise

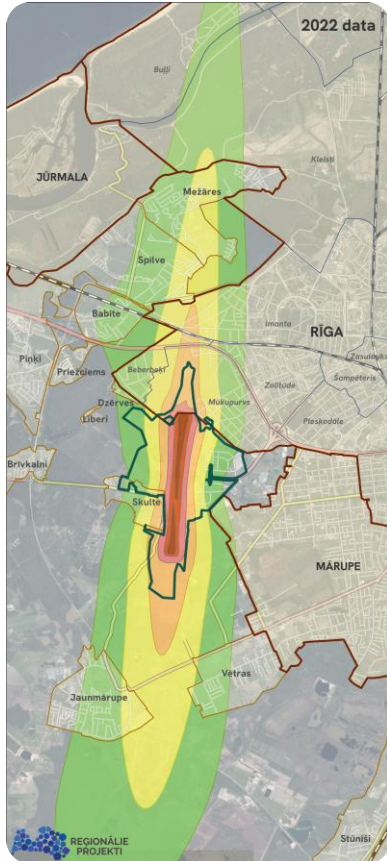
- **Main source of noise:** aircraft operations within take-off and landing corridors are the primary source of environmental noise.
- **Additional noise sources:**
  - Engine testing and operation of aircraft engines and auxiliary power units (APUs) on aprons and taxiways;
  - Ground support equipment (GSE);
  - Ground transport movements within the airfield area.
- **Assessed noise indicators:** L<sub>dvn</sub> > 55 dBA (day-evening-night equivalent level), L<sub>day</sub> > 65 dBA, L<sub>evening</sub> > 60 dBA, L<sub>night</sub> > 55 dBA.
- **Noise exceedances:** According to the Strategic Noise Map (2022 data), exceedances of the regulatory threshold values affected: 0 residents during the day and evening periods, fewer than 10 residents during the night period, 1,642 residents in total over the 24-hour period (L<sub>den</sub>). The highest cumulative impact is associated with the night-time period, due to the correction factors applied (+10 dBA for night, +5 dBA for evening), and is mainly concentrated along the aircraft take-off and landing corridors.

# Affected Areas and Population

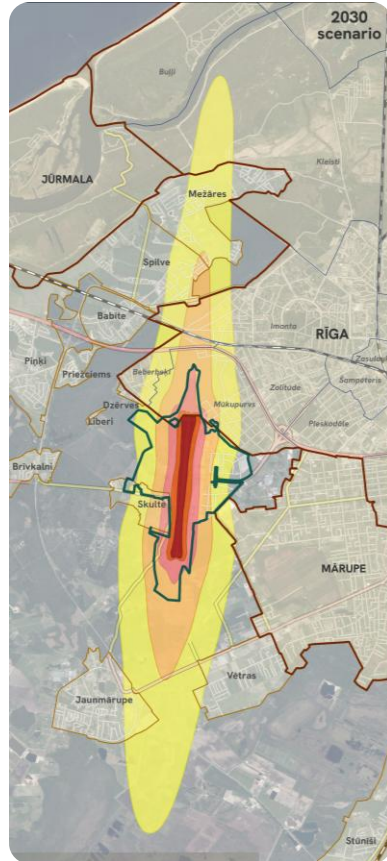
Noise Limit Exceedance (dB(A))	L <sub>day</sub> >65dBA (7.00-23.00)	L <sub>evening</sub> >60 dBA (19.00-23.00)	L <sub>night</sub> >55 dBA (23.00 – 7.00)	L <sub>dvn</sub> >55 dBA (24 stundas)
	Ietekmētās teritorijas platība (km <sup>2</sup> )			
SNM* (2022 data)	1,3	2,4	3,2	21,2
2030 scenario	2,1	4,2	5,6	30,5
2050 scenario	2,2	4,7	5,7	33,67
	Ietekmēto iedzīvotāju skaits			
SNM* (2022 data)	-	-	<10	1642
2030 scenario	-	17	51	3195
2050 scenario	-	99	199	3597

\*Strategic Noise Map

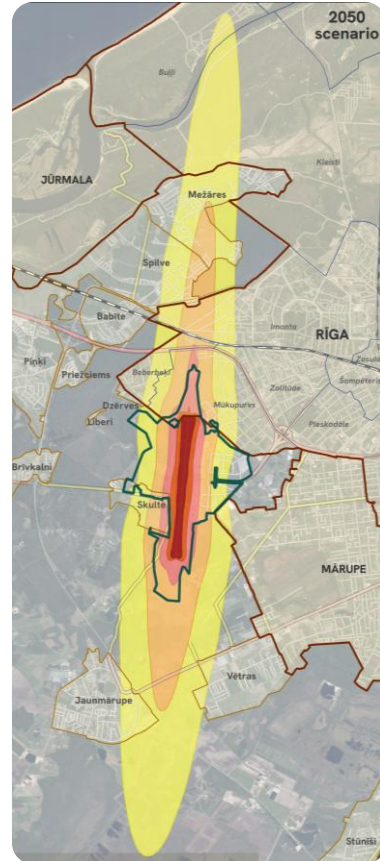
## 2022 data (SMP)



## 2030 scenario

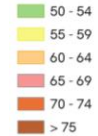


## 2050 scenario



### Legend

Day-Night Average Sound Level (DNL), dB(A):



### Other Symbols



# Affected Areas

2030 scenario



2050 scenario



## Legend

- Nighttime Noise Indicator Exceedance Limit (>55 dB(A))
- Evening Noise Indicator Exceedance Limit (>60 dB(A))
- Daytime Noise Indicator Exceedance Limit (>65 dB(A))

## Functional zones and their designations

- Private house building territory (DzS)
- Low-storey residential building territory (DzM)
- Mixed centre building territory (JC)
- Industrial building territory (R)
- Technical building territory (TA)
- Transport infrastructure territory (TR)
- Nature and greenery territory (DA)
- Agricultural territory (L)
- Forest territory (M)
- Water territory (Ū)

## Other symbols

- State main road
- State regional road
- State local road
- Railway
- Street
- Riga International Airport (RIX) Administrative Territory
- City boundary
- Village boundary
- Neighborhood boundary



# Environmental Noise: Mitigation Measures

- 2017–2024: noise levels have decreased due to fleet modernisation, with newer and quieter aircraft models (e.g. Airbus A220-300).
- Long-term trend until 2050: the increase in noise levels is not directly proportional to the growth in air traffic. Noise levels stabilize and gradually decrease per flight or per passenger.
- Main challenge: night-time noise, which requires continuous monitoring and mitigation actions.
- Planning considerations: in territorial plans and other documents, noise-sensitive areas ( $L_{dvn} > 55$  dBA) should be designated as zones with special conditions, introducing additional protection measures, such as:
  - Integration of quiet façade design solutions;
  - Window replacement or improved sound insulation;
  - Restrictions on new noise-sensitive developments within these zones.

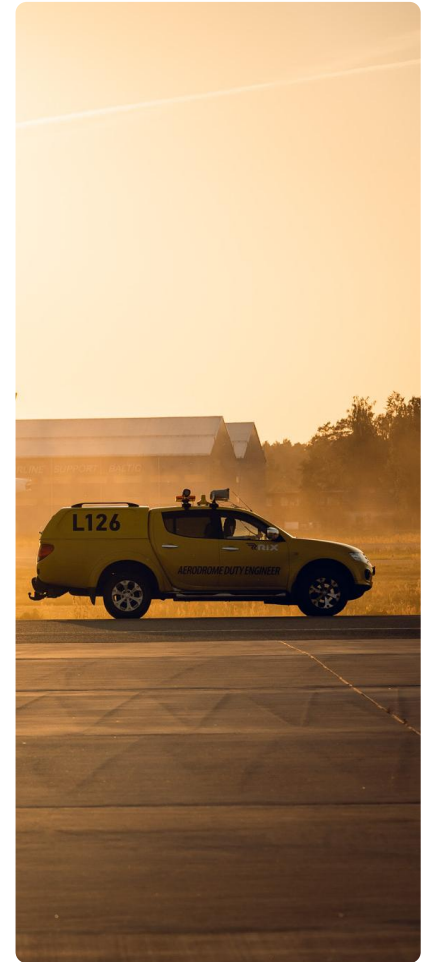
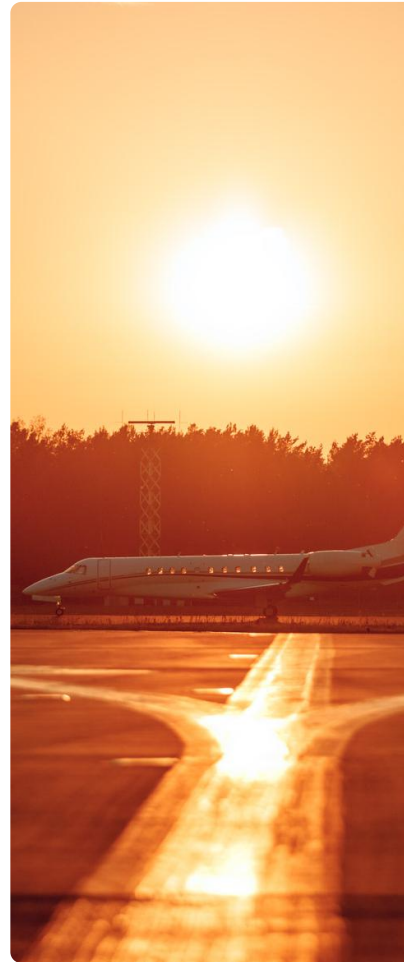


# Assessment of Development Alternatives

- The selected development scenario — retaining the existing runway and taxiway system with operational optimization, alongside the gradual expansion of the terminal and apron towards the southeast (including a southern dual pier) and integrated access via the Rail Baltica railway connection and improved access roads — ensures a balanced approach between capacity growth, operational safety, sustainable mobility, and environmental impact management.
- The approach is based on the maximum use of existing infrastructure, limiting additional land take, reducing transport and noise burdens on nearby residents, and decreasing pollutant emissions.
- Overall conclusion: the planned development is proportionate, manageable, and compliant with international environmental and climate objectives.

# Compensatory Measures and Transboundary Impact

- Riga Airport Master Plan 2025-2050 **does not foresee any direct impact on Natura 2000 sites**, and therefore no compensatory measures are required. Potential indirect effects are expected to be prevented or mitigated through the environmental protection measures integrated into the Master Plan.
- All Riga Airport development projects are **located within the territory of Latvia**, and no transboundary environmental impact is anticipated. The planned actions — terminal and apron expansion, access hub development, and the RIX Airport City — are local in scale and **do not affect foreign territories or water bodies**.



# Detailed Information is Available on



Riga Airport website

[www.riga-airport.com](http://www.riga-airport.com)

Section About the Airport /  
Development Plan



AS "Ventko" website

[www.venteko.lv](http://www.venteko.lv)

Section Aktuāli



SIA "Reģionālie projekti"  
website

[www.rp.lv](http://www.rp.lv)

Section Jaunami

Thank you!

**RIX**