

Reference year 2024

# ENVIRONMENTAL BULLETIN OF THESSALONIKI “MAKEDONIA” AIRPORT (SKG)

Issue Year: 2025

Fraport Regional Airports of Greece A S.A.

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# 1. INTRODUCTION

## 1.1 Location

“Makedonia” airport of Thessaloniki (SKG) is located in the coastal area of Mikra, to the south east, and at a distance of 16 Km from the center of the city of Thessaloniki. It is 2 km away from the old National Road Thessaloniki - Chalkidiki, in the broader area that is known as “Livadi”. The airport occupies approximately 1408 acres (5,700 stremmas) and is surrounded to the north-east by the Anthemoundas stream, to the south - south east by the National Road Thessaloniki - Michaniona, to the west - south west by areas of rural and semi-urban use and finally to the north - north west by the sea.

## 1.2 Administration

The airport administratively belongs to the Municipality of Thermi of the Regional Unit of Thessaloniki and more specifically to the community of Neo Rysio of the Department of Thessaloniki.

## 1.3 Environmental licensing

### Approved Environmental Terms

<i>E.T. Decision Reference number</i>	105214/17.11.2000
	125887/08.05.2007
	204012/05.10.2011
	12763/10.03.2016
<i>E.T. Amendment Decision Reference Number</i>	9322/9.05.2018
	80002/5297/30.08.2021
	82165/5432/01.08.2023
<i>Other</i>	75255/4754/17.07.2025

## 1.4 Airport Basic Data

<i>Airport name IATA / ICAO</i>	SKG / LGTS
<i>Airport location – Airport Reference Point (ARP)</i>	Latitude: 40° 31' 11" N Longitude: 22° 58' 15" E
<i>Altitude</i>	7m
<i>Number of runways</i>	2
<i>Operation hours (summer &amp; winter)</i>	00:00 – 23:59



<i>Runways</i>	<i>Length/Width</i>	<i>Code</i>
Runway	3,440m x 50m	10/28
Runway	2,410m x 60 m	16/34
Full length of parallel taxiway	(ALPHA) 2,410m, (FOXTROT) 2,440m	
Number of taxiways	12	
Apron capacity	A B C D E	
	- - 16 2 1	



<i>Terminal</i>	
Total area (m <sup>2</sup> )	60.680



<i>Other buildings and service/storage areas</i>	
RFF Station (m <sup>2</sup> )	1.470



<i>Parking Areas</i>	
Car parking spaces	2.062
Bus parking spaces	107
Taxi parking spaces	185



<i>Employees</i>	<i>High season (31.08.2024)</i>	<i>Low season (30.11.2024)</i>
Fraport Greece (FG) employees	94	97
Employees of other companies	3.267	2.694

## 1.5 Airport facilities

### 1.5.1 Fuel Handlers

<i>Number of fuel handler companies</i>			
<i>Number of fuel handler companies operating at the Airport</i>			3
<i>Installations inside the airport</i>	<i>EKO</i>	<i>GISSCO</i>	<i>HAFCO</i>
<i>Environmental Management System (EMS)</i>	YES	YES	YES

### 1.5.2 Ground Handlers

<i>Number of ground handler companies</i>			
<i>Number of ground handler companies operating at the Airport</i>			3
<i>Installations inside the airport</i>	<i>SKYSERV</i>	<i>SWISSPORT</i>	<i>GOLDAIR</i>
<i>Environmental Management System (EMS)</i>	YES	YES	YES

## 2. TRAFFIC DATA STATISTICS

### 2.1 Annual Traffic Data

#### Annual Traffic Data for the year 2024



Overall Annual Air Traffic Movements<sup>1</sup>  
**57.080**



Annual passenger traffic  
**7.381.064**



Annual cargo transferred (tn)  
**4.951**

Percent of increase or decrease in relation to the previous year



**4,4%**



**5,0%**



**5%**

<sup>1</sup> Military and training flights not included.

#### Aircraft types

##### Prevailing aircraft types for domestic flights

Aircraft type	No. of flights
A320	7.870
AT76	5.446
A20N	4.015
B738	1.041
A21N	878
E120	565
SW4	435
A321	426
B734	170
PA31	132
Other	1.575

##### Prevailing aircraft types for international flights

Aircraft type	No. of flights
B738	13.316
A320	9.872
A21N	2.119
A20N	1.722
A319	1.598
A321	1.560
AT76	546
BCS3	522
E190	270
B734	216
Other	2.786

### 2.2 High season traffic data

#### High season traffic data (June-September)

Highest traffic month	August
Air traffic movements during the month with highest traffic	6.531
Air traffic movements daily average number during the month with highest traffic	211

### 2.3 Low season traffic data

#### Low season traffic data (October-May)

Lowest traffic month	February
Air traffic movements during the month with lowest traffic	3.033
Air traffic movements daily average number during the month with lowest traffic	105

# 3. AIRCRAFT NOISE

## 3.1 Noise measurements during the reference year

### Noise Monitoring Stations



### Summary of measurement results

Noise levels are monitored according to the airport's monitoring program.

No exceedance of the noise indicators levels  $L_{den}=70$  dB (A) and  $L_{night}=60$  dB (A) was observed.

MP01:  $L_{den} = 54,4$  dB(A) &  $L_{night} = 47,2$ dB(A)

MP02:  $L_{den} = 53,2$ dB(A) &  $L_{night} = 44,4$ dB(A)

MP03:  $L_{den} = 46,6$ dB(A) &  $L_{night} = 38,3$  dB(A)

MP04:  $L_{den} = 32,1$ dB(A) &  $L_{night} = 19,2$ dB(A)

Have noise measurements at the airport's surrounding area been performed during the reference year? **YES**

Measurement points coordinates	Measurement points description
MP01: 40° 30' 35.51" N 22° 59' 27.86" E	Gym Hall Neo Rysio area
MP02: 40° 51' 54.10" N 23° 00' 5.48" E	Skafotechniki
MP03: 40° 29' 37.10" N 22° 59' 17.32" E	Cultural center Neo Rysio area
MP04: 40° 34' 22.18" N 22° 58' 13.57" E	Cleaning building Municipality Kalamaria
Measurement period	01.01.2024 – 17.11.2024*
Noise indicators	$L_{den}$ , $L_{night}$

\*The operation of the noise monitoring stations was suspended on November 15, 2024, in order to send the sound level meters to an accredited laboratory for calibration. Calibration is carried out every two years in accordance with the requirements of Joint Ministerial Decision 211773/2012. Both stations resumed operation in January 2025.

### Noise complaints: 2

Two complaint from residents for aircraft noise was received in Kalamaria and Tagarades area. There are no exceedances in noise limits.

### 3.2 Noise levels calculation based on noise simulation software

Aircraft noise levels calculation based on noise simulation software NO

#### Summary of results

According to EU & GR legislation, Strategic Noise Map is performed every 5 years.

### 3.3 Vibration measurements during the reference year

#### Measurement points



Have noise measurements at the airport's surrounding area been performed during the reference year? YES

Measurement points coordinates	Measurement points description
Position 1	Archaeological site "Toumba Livadaki". It is located in the south of the Airport and east of runway 16-34.
Περίοδος μετρήσεων	06.11.2024 – 14.11.2024
Indicators	$V_v$

#### Summary of measurement results

The values are considering the aircraft landings and takeoffs on runway 16–34 because these processes cause the greatest impact on the archaeological site. The maximum value due to takeoff is 0.74mm/sec at 16.5 Hz and 0.15 mm/sec at 63 Hz. For landings, the maximum value is 0.05 mm/sec at 16.5 Hz and 0.08 mm/sec at 63 Hz. These values are considerably lower than the regulatory limits of 6 mm/sec and 8 mm/sec, respectively.

## 4. AIR QUALITY

### 4.1 Air quality measurements during the reference year

#### Measurement points



Have air quality measurements at the airport's surrounding area been performed during the reference year? **YES**

Measurement points	Measurement points description
Position: 40° 30' 35.7" N 22° 59' 28" E	Gym Hall Neo Rysio area
Measurement period	01.01.2024 – 31.12.2024
Pollutants measured	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> , SO <sub>2</sub> , C <sub>6</sub> H <sub>6</sub> , O <sub>3</sub>

#### Summary of results

Air quality is monitored according to the airport's monitoring program.

No exceedance of the air quality limits was observed.

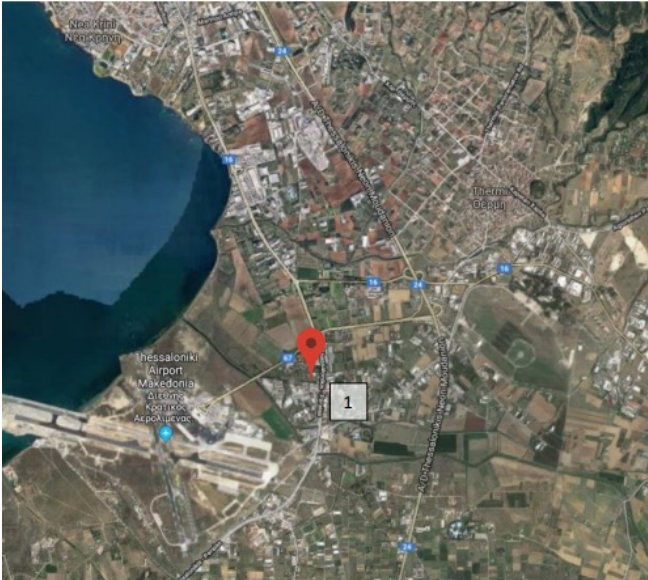
### 4.2 Air pollutants emission and dispersion modelling

Calculation of air pollutants concentrations based on an emission and dispersion modelling software **NO\***

\* According to approved environmental terms, there is no obligation for emission and dispersion modeling for this year.

## 4.3 Air quality measurements during the reference year

### Measurement points



Have air quality measurements at the airport's surrounding area been performed during the reference year? **YES**

Measurement points	Measurement points description
Position: 40° 30' 35.7" N 22° 59' 28" E	Parking area, around 2 km away from the airport
Measurement period	02.05.2024 – 12.05.2024 18.12.2024 – 27.12.2024
Pollutants measured	$PM_{10}$ , $PM_{2.5}$ , $NO_x$ , $SO_x$ , $C_6H_6$ , $O_3$

### Summary of results

Air quality is monitored according to the airport's monitoring program and the approved environmental terms.

No exceedance of the air quality limits was observed.

## 5. WASTE MANAGEMENT

<i>Waste</i>	<i>Collection</i>	<i>Management/Disposal</i>
<i>Recyclables (paper, plastic, metals, glass)</i>	<i>Separate collection by the Municipality of Themi</i>	<i>Disposal at material recovery facility or transshipment for recycling</i>
<i>Residues (Mixed Waste) and Bulky Waste</i>	<i>Collection by the Municipality of Themi</i>	<i>Disposal in landfill</i>

### Notes:

1. Regarding the different categories of the MSW (recyclables, mixed waste, bulky waste), the Airport Users handle their waste together with Fraport Greece A in most cases (central management), while in a few other cases they handled them autonomously. The implementation of a fully central system by Fraport Greece A is expected.

2. Regarding the "alternative management" waste categories (Waste lubricant oil WLO, WEEE, etc.):

i. Waste Lubricant Oil (WLO): Collection and management by authorized collector "CYTOP S.A."

ii. Waste Electrical & Electronic Equipment (WEEE): Collection and management by alternative management system "Appliances Recycling S.A."

iii. Accumulators: Collection and management by alternative management system "Re-Battery S.A."

iv. Small batteries: Collection and management by alternative management system "AFIS S.A."

v. Used tires: Collection and management by alternative management system "ECOELASTIKA S.A."

3. The total quantities of the hazardous waste further to the above-mentioned and produced at the airport, are managed by licensed private companies which have a contract with Fraport Greece A, after a Tender process according to the provisions of the legislation in force.

4. In the year 2024, Fraport Greece A in SKG managed a total of 258,09 tons of Hazardous waste (SKG FG A 243,33 tn, third parties 14,66 tn.

5. The total quantities of the produced waste by category resulting from all activities of the airport, the collectors and final recipients, are recorded by Fraport Greece A and submitted in the Electronic Waste Registry of the Ministry for Environment and Energy via the Annual Waste Producer Report according to the provisions of the legislation in force.

## 6. ECOSYSTEM AROUND THE AIRPORT

### 6.1 Flora – Fauna



#### Flora

Are there protected zones of vegetation/habitats in the broader airport area?

YES

(if YES) Short description:

Thessaloniki Airport "Makedonia" is close to the Natura 2000 site:

- GR1220002 Delta Axiou - Loudia - Aliakmona - Evryteri Periochi - Axioupoli (Area: 41.495,69 ha)



#### Fauna

Are there protected species of fauna/birds in the broader airport area?

YES

(if YES) Short description:

Thessaloniki Airport "Makedonia" is near to the Important Bird Areas:

- GR029 Gallikos estuary and Kalochori lagoon (Area: 1.848,48 ha)

- GR028 Axios, Loudias and Aliakmonas rivers' deltas (Area: 17.911,12 ha)

- GR030 Alyki Aggelochoriou Lagoon (Megalou Emvolou) (Area: 377,19 ha)

The protected bird species (listed under Annex I of Directive 2009/147/EC) that have been observed at Thessaloniki broader airport area since April 2017 are presented below:

Avocet (*Recurvirostra avosetta*), Audouin's gull (*Ichthyaeus audouinii*), Black kite (*Milvus migrans*), Black stork (*Ciconia nigra*), Black tern (*Chlidonias niger*), Black-crowned night heron (*Nycticorax nycticorax*), Black-winged stilt (*Himantopus himantopus*), Caspian tern (*Hydroprogne caspia*), Collared pratincole (*Glareola pratincola*), Common gull-billed tern (*Gelochelidon nilotica*), Common tern (*Sterna hirundo*), Dalmatian pelican (*Pelecanus crispus*), Eurasian bittern (*Botaurus stellaris*), Eurasian eagle owl (*Bubo bubo*), Eurasian nightjar (*Caprimulgus europaeus*), Eurasian sparrowhawk (*Accipiter nisus*), Eurasian stone-curlew (*Burhinus oedipnemus*), European kingfisher (*Alcedo atthis*), European roller (*Coracias garrulus*), European shag (*Phalacrocorax aristotelis*), Ferruginous duck (*Aythya nyroca*), Flamingo (*Phoenicopterus roseus*), Glossy ibis (*Plegadis falcinellus*), Golden plover (*Pluvialis apricaria*), Great egret (*Casmerodius albus*), Great short-toed lark (*Calandrella brachydactyla*), Great white pelican (*Pelecanus onocrotalus*), Hen harrier (*Circus cyaneus*), Horned grebe (*Podiceps auritus*), Kentish plover (*Charadrius alexandrinus*), Lesser grey shrike (*Lanius minor*), Lesser kestrel (*Falco naumanni*), Little bustard (*Tetrax tetrax*), Little egret (*Egretta garzetta*), Little gull (*Hydrocoloeus minutus*), Long-legged buzzard (*Buteo rufinus*), Marsh harrier (*Circus aeruginosus*), Mediterranean gull (*Larus melanocephalus*), Merlin (*Falco columbarius*), Montagu's harrier (*Circus pygargus*), Moustached warbler (*Acrocephalus melanopogon*), Peregrine falcon (*Falco peregrinus*), Purple heron (*Ardea purpurea*), Pygmy cormorant (*Phalacrocorax pygmeus*), Red-backed shrike (*Lanius collurio*), Red-footed falcon (*Falco vespertinus*), Ruff (*Philomachus pugnax*), Short-toed snake eagle (*Circaetus gallicus*), Slender-billed gull (*Chroicocephalus genei*), Spur-winged lapwing (*Vanellus spinosus*), Squacco heron (*Ardeola ralloides*), Tawny pipit (*Anthus campestris*), White stork (*Ciconia ciconia*), White-headed duck (*Oxyura leucocephala*), White-throated loon (*Gavia arctica*), Wood sandpiper (*Tringa glareola*), Yelkouan shearwater (*Puffinus yelkouan*).

## 7. WILDLIFE HAZARD MANAGEMENT

### Wildlife strikes and wildlife hazard management measures

Wildlife species that suffered a strike	Strikes (%)
<i>Birds of prey</i>	29%
<i>Small passerines</i>	25%
<i>Gulls and Terns</i>	18%
<i>Pigeons</i>	13%
<i>Ducks</i>	7%
<i>Hérons and Storks</i>	4%
<i>Partridges</i>	4%

### Wildlife strike risk mitigation measures

The presence and behavior of wildlife species at Thessaloniki airport is monitored in regular intervals, daily, from dawn to dusk. Some of the wildlife control methods applied at Thessaloniki airport are: distress calls (bioacoustics), digital sounds, anti-bird laser, selective culling using firearms (only after the application of the previous measures), pyrotechnics, etc. Preventive long-term actions that are mainly related to habitat management measures (e.g. grass cutting, water body management) are also taken to further reduce the presence of hazardous wildlife species constituting a risk to flight safety. In addition, a NOTAM is published and regularly updated.

## 8. CULTURAL HERITAGE

*Have new cultural heritage properties been discovered during the reporting period?*

NO

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## 9. RESOURCES CONSUMPTION



### 9.1 Energy consumption

#### Energy consumption (monthly electric energy consumption, in Kwh)

Total annual electric energy consumption (in Kwh)	15.456.806,80*
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\*Third parties' consumption is excluded.



### 9.4 Fuel consumption for generator

#### Fuel consumption

Total annual consumption (lt)	10.589,07
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### 9.5 Water consumption

#### Water consumption

Total annual consumption (m <sup>3</sup> )	153.931,00
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### 9.2 Fuel consumption

#### Fuel consumption

Number of FG vehicles at the airport	40	
Total annual fuel consumption	Diesel (lt)	77.278,50
	Unleaded gasoline (lt)	15.710,73



### 9.3 Heating oil or natural gas consumption

#### Heating oil or natural gas consumption

Total annual heating oil consumption (lt)	4.947,00
Total annual heating natural gas consumption (m <sup>3</sup> )	2.173.719

\*Heating and air conditioning is performed via heat pumps.

# 10. GREENHOUSE GAS EMISSIONS & CARBON FOOTPRINT

Greenhouse gas emissions that were included in the carbon footprint calculation are the CO<sub>2</sub>, CH<sub>4</sub> & N<sub>2</sub>O emissions included in scope 1 & 2 of the GHG protocol:

- Scope 1: Direct GHG emissions that occur from sources that are owned and/or controlled by the airport,
- Scope 2: Indirect GHG emissions from the generation of purchased electricity, steam, heat or cooling consumed by the airport.

Source Flows	Total CO <sub>2</sub> e Emissions (t) 2024	
	Location based	Market based
Direct emissions from heating fuel (scope 1)	450,0	450,0
Direct emissions from fuel used for fleet vehicles (scope 1)	242,9	242,9
Direct emissions from fuel from refrigerants (scope 1)	45,5	45,5
Direct emissions from fuel used for generators (scope 1)	27,9	27,9
Indirect emissions from electricity consumption (scope 2)	7.738,0	5.652,7
<b>Total (t)</b>	<b>8.504,4</b>	<b>6.419,0</b>
<b>Kg CO<sub>2</sub>e /passenger</b>	<b>1,15</b>	<b>0,87</b>

## Notes

Fraport Greece A is committed to the monitoring, management and reduction of its airports carbon footprint.

In order for this target to be achieved:

- Direct and indirect carbon emissions from all the emission sources in the airports' boundaries are calculated and reported, based on the GHG Protocol (scope 1 & 2)
- The airport is certified according to ACA (Airport Carbon Accreditation), Level-1.

# 11. HUMAN CONSUMPTION WATER MONITORING PROGRAM

## *Human consumption water quality*

<i>Water supply (public water network or airport's boreholes)</i>	<i>Airport boreholes</i>
<i>Is sampling of the airport's water network performed?</i>	<i>YES</i>
<i>(if YES) Sampling frequency</i>	<i>Monthly</i>

## Summary of results

The results of the microbiological and chemical analyses show that the parameters analyzed as regards the airport's water network are within the legislative limits defined by the Ministerial Decision Δ1 (δ)/ΓΠ οικ. 27829/2023 (GG 3525/B` 25.5.2023) regarding the quality of human consumption water.

## 12. RAINWATER

### RAINWATER (collection, treatment disposal and recipient)

Area	Collection/treatment/disposal	[YES/ NO]
Apron and manoeuvring area	Collected in drainage ditches leading to the sea	YES
Other runoffs (runway etc.)	Collected in drainage ditches leading to the sea	YES
Treatment of rainwater by oil-separator		YES
<b>Rainwater quality</b>		
Is sampling of the airport's rainwater performed?	YES	
(if YES) Sampling frequency	Every 4 months and Every 6 months	
Parameters analyzed: pH, conductivity, TSS, DO, NO <sub>3</sub> , NO <sub>2</sub> , Oil & grease, BOD, COD, Total Petroleum Hydrocarbons (TPH), PAHs, BTEX, Heavy metals, Detergents		

### Summary of results

Surface rainwater quality is monitored according to the airport's monitoring program. Due to the absence of relevant national quality limits for surface rainwater, the specifications of ref. num. 30/4942οικ./1.10.2001 treated wastewater disposal permit issued by the Prefectural Authority of Thessaloniki and the Environmental Health & Safety Guidelines of the International Finance Corporation (IFC) are adopted. For the year 2024, the monitoring program was performed. According to FG's analyses results and based on the abovementioned specifications, the monitoring will continue, as there is recorded presence of pathogens and hydrocarbons (C<sub>10</sub>-C<sub>40</sub>) (µg/lt).

# 13. GROUNDWATER AND/OR SOIL AND/OR SOIL GAS MONITORING

## Groundwater and/or soil and/or soil gas quality

Is sampling of the airport's groundwater and/or soil and/or soil gas performed?	YES
(if YES) Sampling frequency	Annual
Parameters analyzed: TPH, BTEX, MTBE	

## Summary of results

### Groundwater monitoring within airport boundary - Fraport Greece

Groundwater and soil quality is monitored according to the airport's monitoring program in boreholes managed by Fraport Greece. Groundwater and soil monitoring for 2024 was performed. The results show no exceedances.

In the groundwater, the presence of hydrocarbons (C<sub>10</sub>-C<sub>40</sub> mg/l) recorded in two places, and the monitoring of the phenomenon will continue.

Soil monitoring was carried out only superficially (in the unsaturated zone), due to the impossibility of drilling deeper (in the saturated zone). The results do not show exceedances. An exception is a point where it shows an exceedance in Nickel. This is a phenomenon of geogenic origin due to the composition of the clay material. This fact is also supported by the data from the Geochemical Atlas of Europe (2006), where the natural mean concentration of Ni for Greece is estimated at 190mg/kg.

### Groundwater and/or soil and/or soil gas monitoring at fuel farms – Fuel Handlers

According to the approved environmental terms, groundwater and soil from the Fuel Handlers for reference year 2024 was performed by EKO, GISSCO and HAFCO. Groundwater, soil and underground air tested showed no exceedances.

# 14. SEWAGE TREATMENT AND DISPOSAL



## Sewage

<i>Sewage network to the municipal wastewater treatment plant (WWTP)</i>	<i>YES*</i>
<i>Autonomous airport's wastewater treatment plant (WWTP)</i>	<i>NO</i>

\*The Airport has been connected to the sewerage network of EYATH S.A. and the wastewater is discharged to the network after pre-treatment (Decision with Protocol No. 13119/16.07.2020"Approval of the permit for the disposal of urban wastewater and wastewater from the aircraft sanitation facilities of Thessaloniki Airport "MAKEDONIA").

### Note:

In the context of the monitoring of the pre-treatment unit effluent quality parameters before its disposal to the EYATH network, certain exceedances were observed regarding BOD5, TN and TSS and corrective actions were taken to address them.

## Blue water

*Collection and disposal:  
Collection in watertight tank and disposal for pretreatment along with other airport's sewerage in the airport's pretreatment unit. Then the wastewater disposed to the municipal sewage network.*

Contact

[environmental@fraport-greece.com](mailto:environmental@fraport-greece.com)