

# Environmental Bulletin of Mikonos Airport (JMK)

## Reference year 2019

Fraport Greece

May 2020



## Version Control

Version	Revision	Description of Revision	Date
0	0		27/05/2020



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## 1. INTRODUCTION

### Location

The airport of Mykonos, with an IATA code JMK, has been operating since 1971 and is located at 1.2 km to the south-east from the Town of Mykonos and at a very short distance of approximately 1.5km from the coastline of the island.

### Administration

The airport administratively belongs to the Municipal Community of Mykonos, of the Municipality of Mykonos of the homonym Regional Unit that belongs to the Region of South Aegean.

### Environmental licensing

Approved Environmental Terms	
E.T. Decision Reference number	JMD 32650/04.11.1994
E.T. Amendment Decision Reference number	Ref. No. οικ. 103324/18.04.2016
	Ref. No. οικ. 175511/15.10.2014
	Ref. No οικ. 39773/26.09.2017
	Ref. No οικ. 2976/02.02.2018

### 1.1. Airport Basic Data

Airport Basic Data					
Airport name IATA / ICAO	JMK / LGMK				
Airport position – Airport Reference Point (ARP)	Latitude: 37° 26' 14" N Longitude: 25° 20' 50" E				
Altitude:	123.45m				
Number of runways	1				
Operation hours (winter)	Monday-Thursday & Saturday 09:30 - 17:30 Friday/Sunday 09:30 - 19:00				
Operation hours (summer)	0:01-24:00				
Runways	Length / Width			Code	
Runway	1,902m x 30m			16/34	
Full length of parallel taxiway	N/A				
Number of taxiways	2				
Apron capacity	A	B	C	D	E
	-	-	5	-	-
Employees	High season		Low season		
Fraport Greece (FG) employees	37		28		
Employees of other companies	515		243		
Terminal					
➤ Total area (m <sup>2</sup> )	9,000				
Other buildings and service/storage areas					
➤ RFF (m <sup>2</sup> )	Temporarily housed in ISOBOX until completion of new RFF				

Parking Areas	
Car parking spaces	100
Bus parking spaces	12
Taxi parking spaces	10

## 1.2. Airport Facilities

### 1.2.1. Fuel Handlers

Number of fuel handler companies	
Number of fuel handler companies operating at the Airport	2

Installations inside the airport		EKO	GISCO	HAFCO
Environmental Management System (EMS)	(YES/NO)	YES	YES	Not operating at the airport

### 1.2.2. Ground Handlers

Ground Handlers				
Number of ground handler companies operating at the airport				3
Installations inside the airport		SKYSERV	SWISSPORT	GOLDAIR
Vehicles (total number)		10	21	72
Environmental Management System (EMS)	(YES/NO)	YES	YES	YES

## 2. TRAFFIC DATA STATISTICS

### 2.1. Annual Traffic Data

Annual Traffic Data for the year 2019	
Overall Annual Air Traffic Movements <sup>1</sup>	18,801
Percent of increase or decrease in relation to the previous year	8.8%
Annual passenger traffic	1,520,145
Percent of increase or decrease in relation to the previous year	8.9%
Annual cargo transferred (tn)	89
Percent of increase or decrease in relation to the previous year	-4.48%
Aircraft types	
Prevailing aircraft types for domestic flights	
Aircraft type	No. of flights
DH8D	1.508
A320	1.377
B712	1.203

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

AT75	406
EC35	363
A32A	280
AT72	274
EC20	197
AS55	163
A109	126
Other	1,997
<b>Prevailing aircraft types for international flights</b>	
<b>Aircraft type</b>	<b>No. of flights</b>
A320	1,902
A32A	1,286
B73H	1,154
B712	703
A319	620
B738	474
C56X	472
E190	346
CL60	288
A20N	270
Other	3,392

**2.2. High season traffic data**

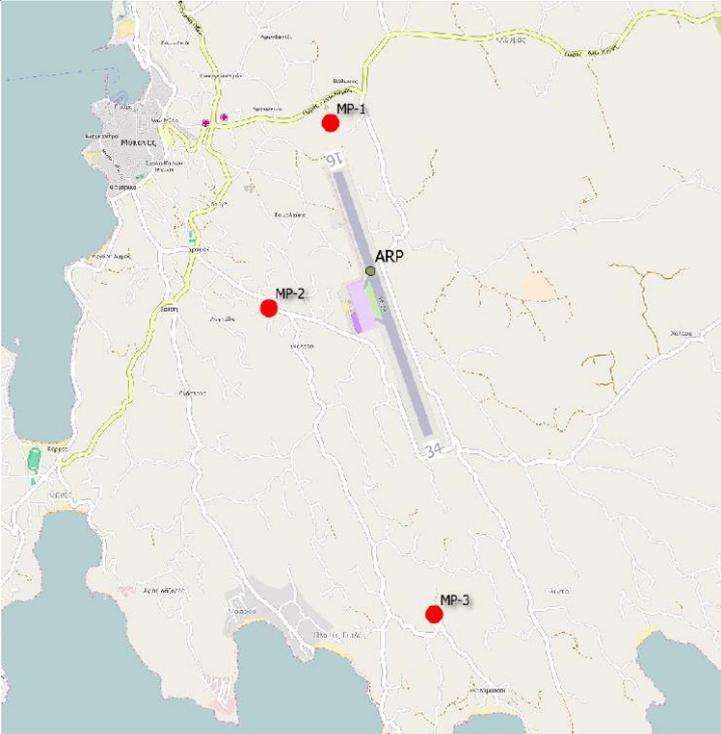
<b>High season traffic data (June-September)</b>	
Highest traffic month	July
Air traffic movements during the month with highest traffic	4,756
Air traffic movements daily average number during the month with highest traffic	153

**2.3. Low season traffic data**

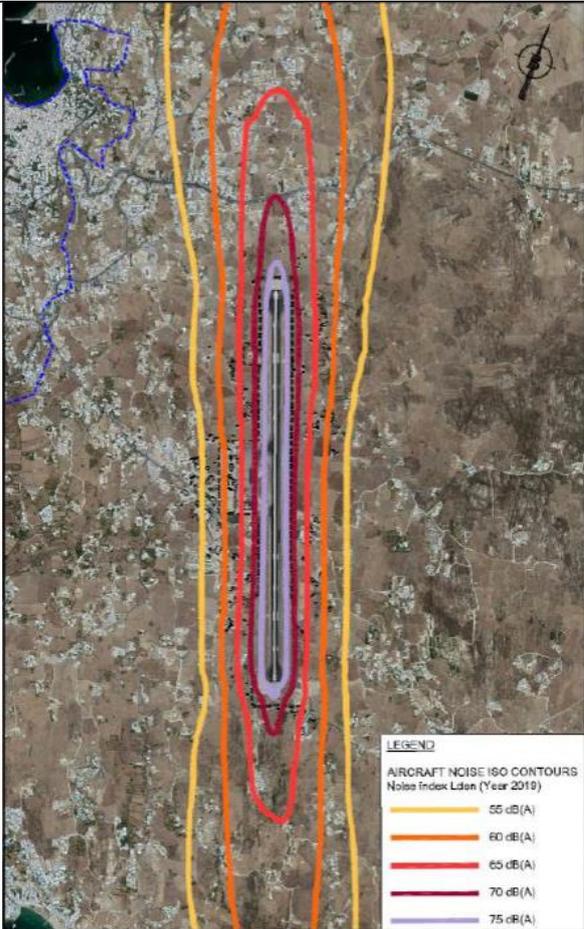
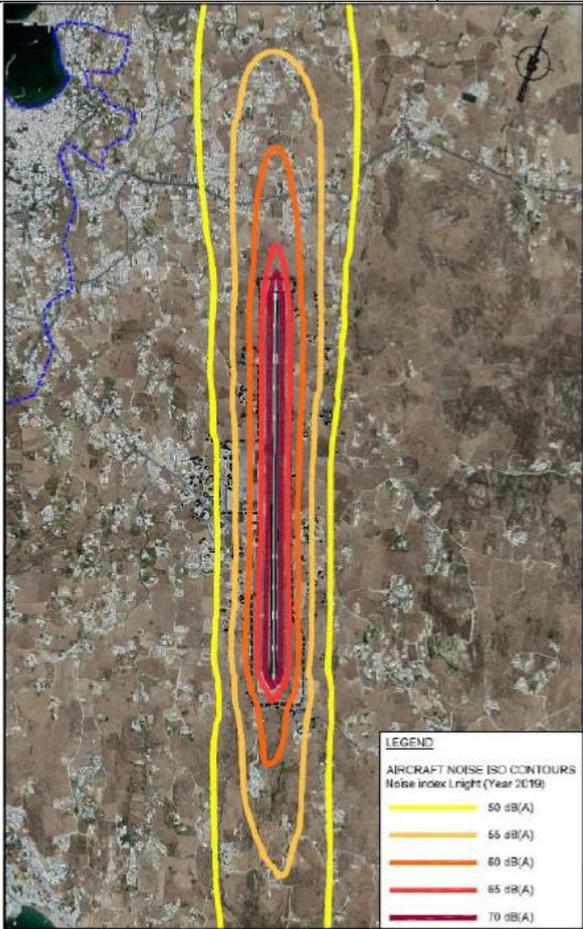
<b>Low season traffic data (October-May)</b>	
Lowest traffic month	February
Air traffic movements during the month with lowest traffic	121
Air traffic movements daily average number during the month with lowest traffic	4

### 3. AIRCRAFT NOISE

#### 3.1. Noise measurements during the reference year

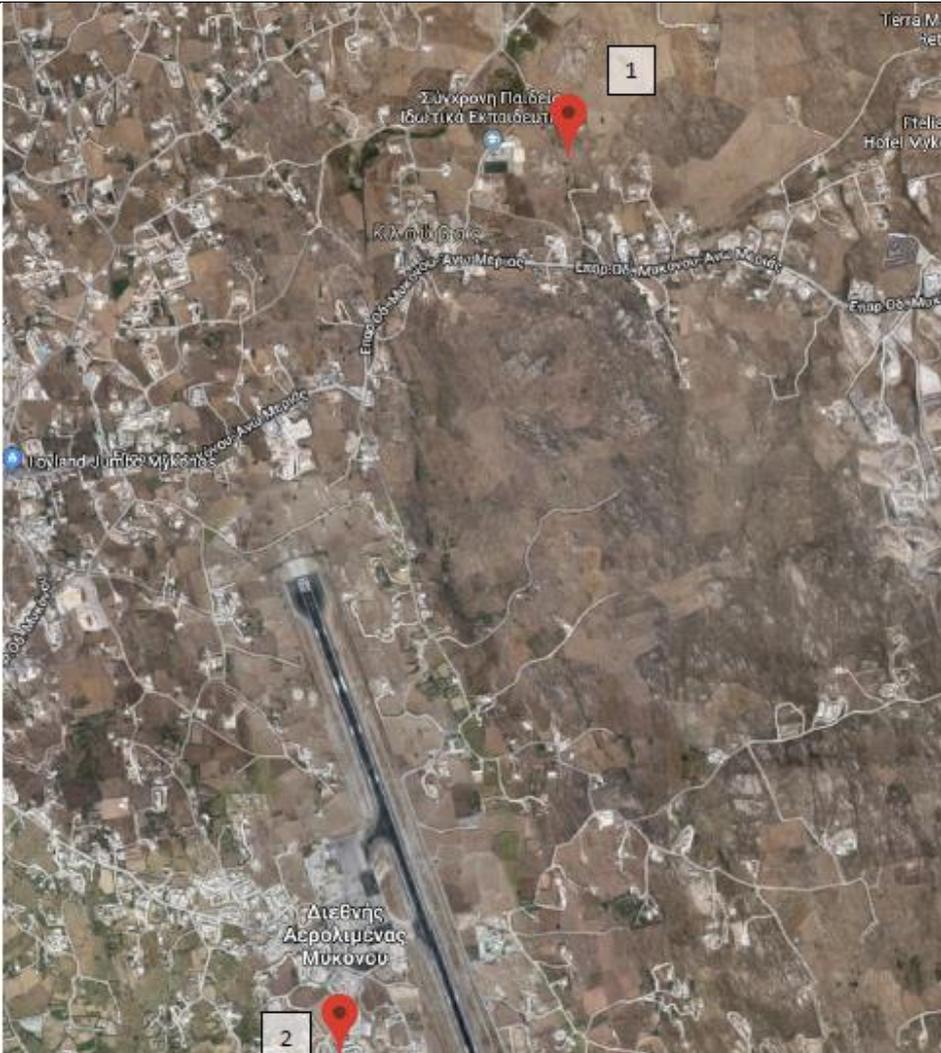
Have noise measurements at the airport's surrounding area been performed during the reference year? [YES/NO]		YES
<b>Measurement points</b>		
		
<b>Measurement points coordinates</b>	<b>Measurement points description</b>	
1) Position: 37° 26' 46" N 25° 20' 39" E	West of Mykonos city, north of the runway on a house roof. Affected by arrivals RWY 16 and departures RWY 34.	
2) Position: 37° 26' 06" N 25° 20' 21" E	In the north west section of Mykonos city, west of the runway on a hotel roof. Affected by arrivals and departures to and from all directions	
3) Position: 37° 24' 58" N 25° 21' 07" E	Platis Gialos area, south of the runway in a hotel's yard. Affected by arrivals RWY 34 and departures RWY 16.	
<b>Measurement period</b>	05.08.2019 – 06.08.2019	
<b>Noise indicators</b>	Lden, Lnight	
<b>Summary of measurement results:</b>		
Noise levels are monitored according to the airport's monitoring program. No exceedance of noise indicators levels Lden = 70 dB(A) and Lnight = 60 dB(A) was observed. .		

3.2. Noise levels calculation based on noise simulation software

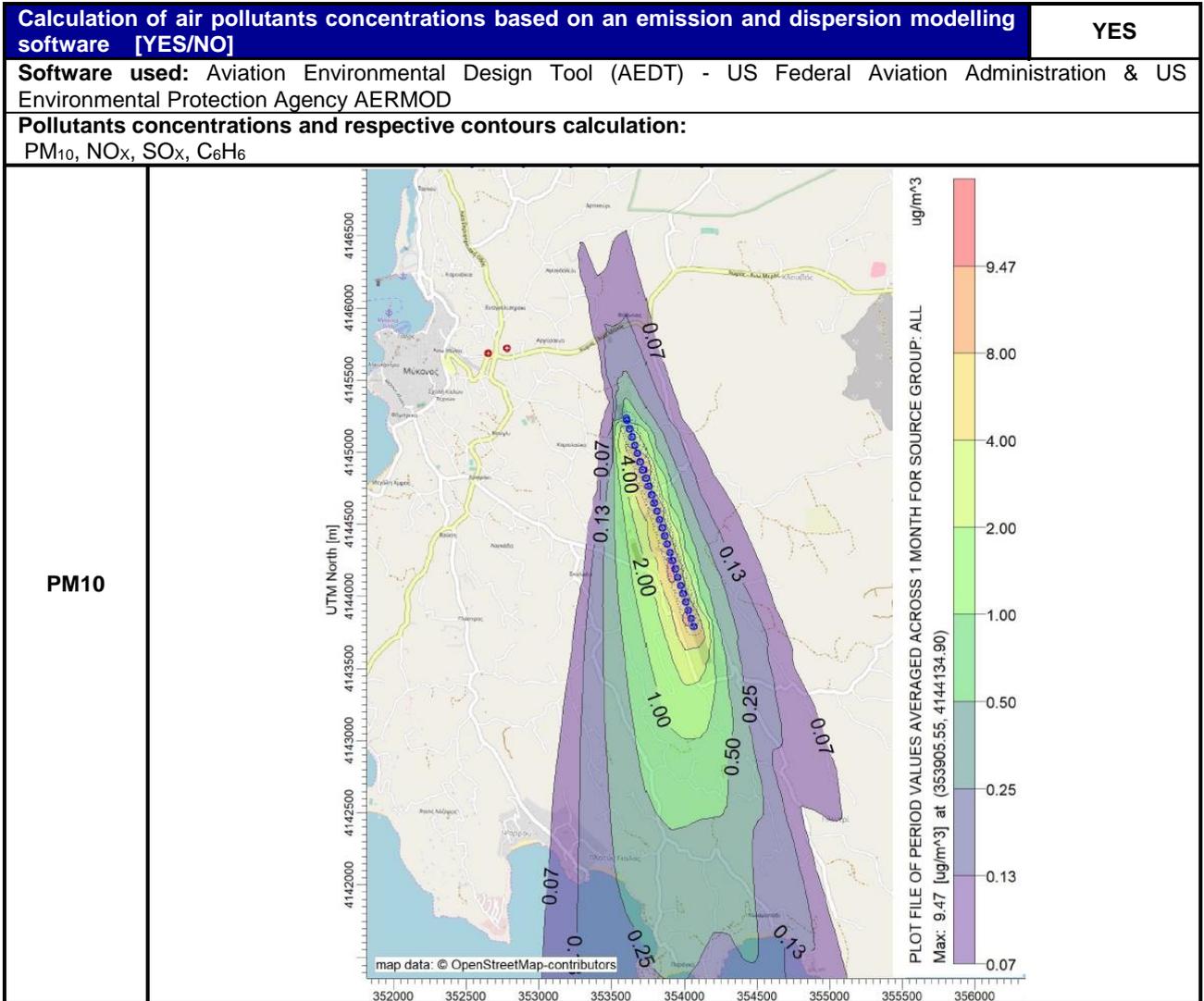
<b>Aircraft noise levels calculation based on simulation software [YES/NO]</b>		<b>YES</b>
<b>Software used:</b> IMMI Noise Prediction Software (CNOSSOS EU assessment method based on Directive 2015/996/EU)		
<b>Noise indicators and respective contours calculation:</b>		L <sub>den</sub> , L <sub>night</sub>
 <p style="text-align: center;"><b>L<sub>den</sub></b></p>	 <p style="text-align: center;"><b>L<sub>night</sub></b></p>	
<b>Summary of results:</b>		
For the year 2019 no populations or buildings inside official settlement boundaries were found to be exposed to noise levels higher than the limits L <sub>den</sub> = 70 dB(A) and L <sub>night</sub> = 60 dB(A).		

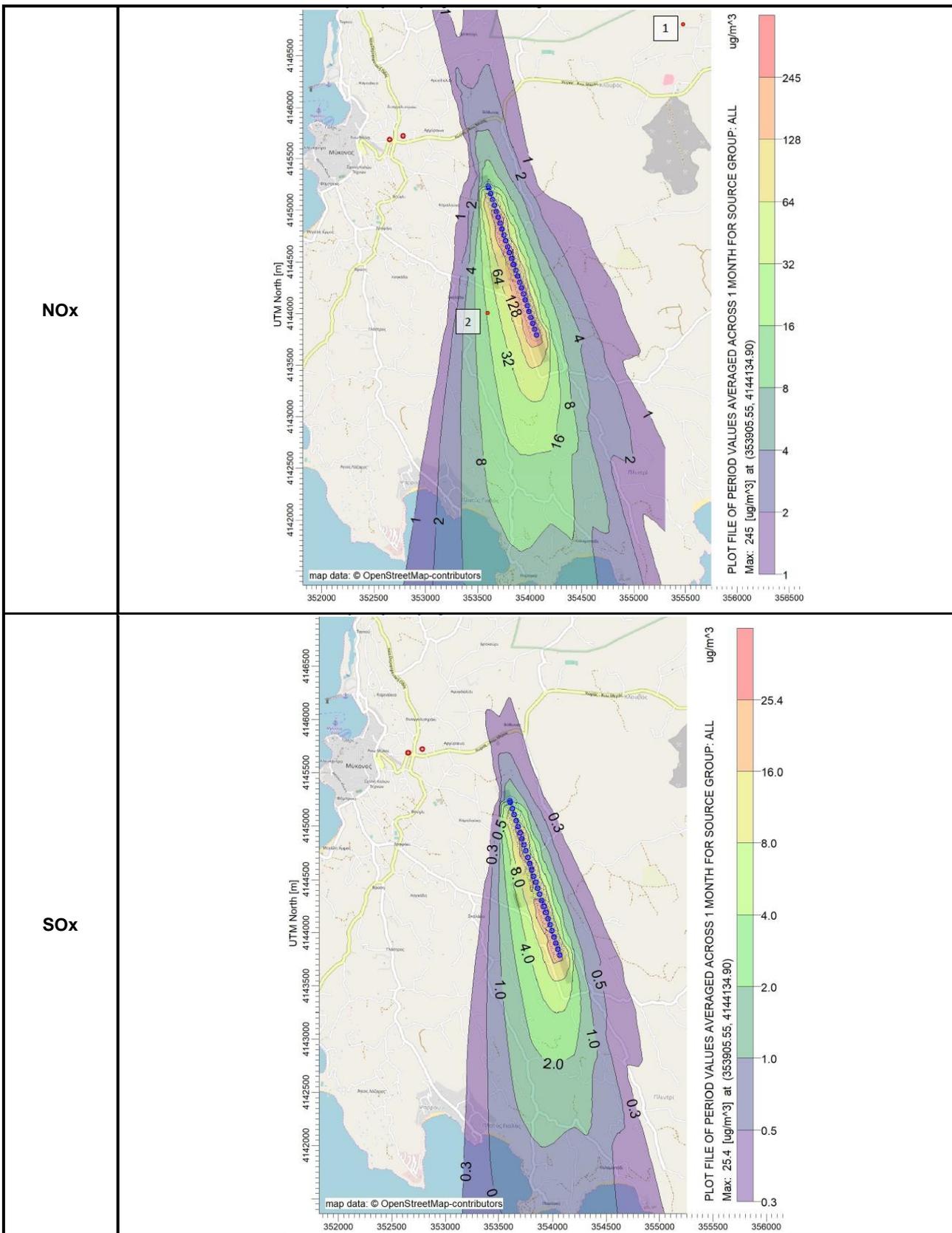
## 4. AIR QUALITY

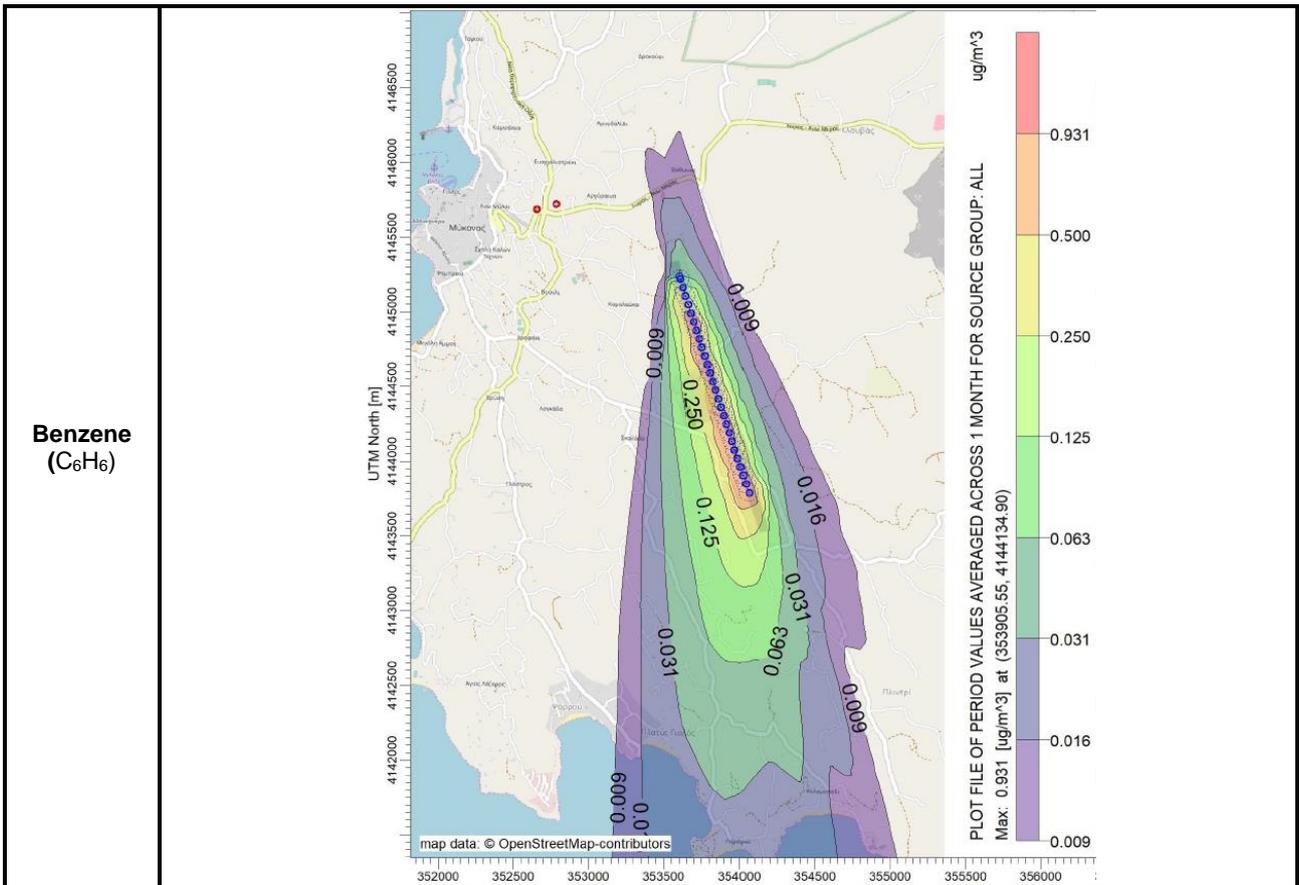
### 4.1. Air quality measurements during the reference year

Have air quality measurements at the airport's surrounding area been performed during the reference year? [YES/NO]		YES
<b>Measurement points</b>		
		
<b>Measurement points coordinates</b>	<b>Measurement points description</b>	
1) Position: --° --' --" N --° --' --" E	At a distance of approximately 1.6km, to the north of the airport in the area of the Modern Education Private Schools.	
2) Position: --° --' --" N --° --' --" E	Airport parking area at a distance less than 500 meters.	
<b>Measurement period</b>	02.08.2019 – 09.08.2019.	
<b>Pollutants measured:</b> 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>		
<b>Summary of measurement results:</b>		
Air quality is monitored according to the airport's monitoring program. No exceedance of the air quality limits was observed for 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> .		

4.2. Air pollutants emission and dispersion modelling







**Summary of results:**

Air quality is monitored according to the airport’s monitoring program.  
 No exceedance of the air quality limits was observed.

**5. WASTE MANAGEMENT**

Waste management		
Waste	Collection	Management/Disposal
Recyclables (paper, plastic, metals, glass)	Separate collection by the Municipality of Mikonos	Disposal at material recovery facility for recycling
Residues (Mixed Waste) and Bulky Waste	Collection by the Municipality of Mikonos	Disposal in landfill

**Σημειώσεις:**

- Regarding the different categories of the MSW (recyclables, mixed waste), Airport Users handle their waste autonomously. The implementation of a central system by Fraport Greece is expected.
- Regarding the “alternative management’ waste categories (Waste lubricant oil WLO, WEEE, etc.):
  - Waste Lubricant Oil (WLO): Collection and management by authorized collector “CYTOP S.A.”
  - Waste Electrical & Electronic Equipment (WEEE): Collection and management by alternative management system “Appliances Recycling S.A.”

Waste management		
Waste	Collection	Management/Disposal
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 produced waste by category resulting from all activities of the airport are recorded by Fraport Greece A and submitted in the Electronic Waste Registry via the Annual Waste Producer Report as provided for by the applicable legislation.		

## 6. ECOSYSTEM AROUND THE AIRPORT

### 6.1. Flora-Fauna

ECOSYSTEM AROUND THE AIRPORT	
<b>Flora</b>	
Are there protected zones of vegetation/habitats in the broader airport area? [YES/NO]	NO
<i>(If YES)</i> Short description:	
<b>Fauna</b>	
Are there protected zones of fauna/birds in the broader airport area? [YES/NO]	NO
<i>(If YES)</i> Short description:	

### 6.2. Ecologically fragile areas

The airport of Mykonos is outside the limits of protected areas included in the National Network of Protected Areas, at long distances from them.

In Mykonos there are no areas included in the NATURA 2000 network. The Natura 2000 network area which is closest to the airport is the area called "Nisides Mykonou" (Rineia, Chtapodia, Tragonisi)" with code GR4220027 which is listed as SPA, based on Directive 2009/147/EC on birds.

The "Wildlife Sanctuary" which is nearest to the airport is "Marathi (of Mykonos)" (K463) (GG 687/B/1995), which is to the north of the airport at a distance of approximately 1.2Km.

## 7. WILDLIFE HAZARD MANAGEMENT

Wildlife hazard management	
Extent of the problem (animal species):	Strikes (%)
<i>Larus michahellis</i> (Yellow-legged gull)	62%
<i>Columba livia</i> (Pigeon)	15%
<i>Athene noctua</i> (Little owl)	8%
Hedgehog	8%
Not identified*	8%
<b>Adopted measures :</b>	

- Drainage ditches are periodically checked and if necessary cleaned, to ensure efficient water run-off and, thus, reducing the attractiveness of the airside to the wildlife
- Systematic grass cutting at the airside
- Fence maintenance
- Trapping of mammals (mainly stray cats and dogs) that may be found at the manoeuvring area by the use of trap and under the permit received by the ministry of Environment & Energy “Monitoring and trapping birds and mammals population at the 14 regional airports operated by Fraport Greece” (Permit: 165654/142, 12/2/2018)
- Systematic monitoring and census of bird species populations on and off-airport (in a distance of 13km from the airport) and mapping of their habitat and the areas that are attractive to birds
- Seminar awareness video on the identification and safe removal of reptiles and information about the snake species at Mikonos, under the collaboration with the Lalitsa Non-Profit Association
- Awareness video on the safe handling of stray dogs

**Reference year summary results:**

Hellenic Civil Aviation Authority receives annual reports referring to the risk assessment of the wildlife hazard as well as to the wildlife hazard management at the 12 regional airports operating by Fraport Greece. Aktion Airport and Chania Airport “Ioannis Daskalogiannis” are excluded, in accordance with the Concession Agreement, Annex 20, paragraph 6.3.3 & 6.3.4.

\*“Not identified” refers to birdstrikes evidence (e.g. blood or part of feathers) that does not allow the bird species identification

## 8. CULTURAL HERITAGE

Have new cultural heritage properties been discovered during the reporting period? [YES/NO]				NO
<i>(if YES)</i> Details provided in the table below:				
Location	Date of discovery	Type of discovery	Additional protection measures taken	

## 9. RESOURCES CONSUMPTION

### 9.1. Energy consumption

Energy consumption (monthly electric energy consumption, in Kwh)	
MONTH	Kwh
Total annual electric energy consumption (in Kwh)	1,741,891

### 9.2. Fuel consumption

Fuel consumption		
Number of FG vehicles at the airport	10	
Number of firefighting vehicles at the airport	3	
Total annual fuel consumption	Diesel (lt)	13,023
	Unleaded gasoline (lt)	17,886

**9.3. Heating oil or natural gas consumption**

Heating oil or natural gas consumption	
Total annual heating oil consumption (lt)	-*
Total annual heating natural gas consumption (m <sup>3</sup> )	N/A

\*Heating and cooling is achieved via heat pumps

**9.4. Water consumption**

Water consumption	
Period	Consumption [m <sup>3</sup> ]
Total annual consumption	10,404

**10. GREENHOUSE GAS EMISSIONS & CARBON FOOTPRINT**

Greenhouse gas emissions that were included in the carbon footprint calculation are the CO<sub>2</sub> 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> EMISSIONS (t)
	2019
Direct emissions from heating fuel (scope 1)	0.0
Direct emissions from fuel used for fleet vehicles (scope 1)	62.4
Direct emissions from fuel used for firefighting vehicles (scope 1)	11.4
Direct emissions from fuel used for generators (scope 1)	4.3
Indirect emissions from electricity consumption (scope 2)	1,111.3
<b>Total (t)</b>	<b>1,189.5</b>
<b>Kilos CO<sub>2</sub>/ passenger</b>	0.78

**Notes:**

Fraport Greece B 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 was certified during the reference year according to ISO 14064 regarding greenhouse gas emission by an independent certification body

## 11. HUMAN CONSUMPTION WATER MONITORING PROGRAM

Human consumption water quality	
Water supply (public water network or airport's boreholes)	Private borehole
Is sampling of the airport's water network performed? <b>[YES/NO]</b>	YES
<b>(if YES)</b> Sampling frequency:	Quarterly
<b>Summary of results:</b> The results of the chemical analyses show that the water supplied from the private drilling <b>is not potable</b> due to the existence of high concentrations of Sodium and Chlorine (brackish water). The results of the microbiological and chemical analyses show that the rest of parameters analysed as regards the airport's water network are <b>within the legislative limits</b> defined by the Ministerial Decision Γ1 (δ)/ΓΠ οικ. 67322/ GG 3282 B/19-9-2017 regarding the quality of human consumption water.	

## 12. RAINWATER

RAINWATER (collection, treatment disposal and recipient)		[YES/NO]
<b>Area</b>	<b>Collection/treatment/disposal</b>	
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		NO*
Rainwater quality		
Is sampling of the airport's rainwater performed? <b>[YES/NO]</b>		YES
<b>(if YES)</b> Sampling frequency::		Yearly
<b>Parameters analyzed:</b> pH, conductivity, TSS, DO, NO <sub>3</sub> , NO <sub>2</sub> , Oil & grease, BOD, COD, Total Petroleum Hydrocarbons (TPH), PAHs, BTEX, Heavy metals, PCBs, Detergents		
<b>Summary of results:</b> Surface rainwater quality is monitored according to the airport's monitoring program. Due to the absence of designated recipients and relevant national quality limits for surface rainwater, the Environmental Health & Safety Guidelines of the International Finance Corporation (IFC) are adopted. According to FG's analyses results and based on the abovementioned specifications, the airport's rainwater environmental condition is adequate and no further treatment measure is necessary		

\*Oil separators installation is planned by the end of Imminent Works

### 13. GROUNDWATER MONITORING PROGRAM

Groundwater quality	
Is sampling of the airport's groundwater performed? [YES/NO]	YES
(if YES) Sampling frequency::	Yearly
<b>Parameters analyzed:</b> pH, conductivity, TSS, DO, NO <sub>3</sub> , NO <sub>2</sub> , Oil & grease, BOD, COD, Total Petroleum Hydrocarbons (TPH), PAHs, BTEX, Heavy metals, PCBs, Detergents	
<b>Summary of results:</b> Groundwater quality is monitored according to the airport's monitoring program. The results of the analyses from the airport's borehole indicate that no pollution is present. Due to the high depth of the aquifer it was not possible to take water samples from the fuel handler's monitoring boreholes. According to the fuel handler's environmental monitoring reports and based on the limits set in various European countries in the absence of legislative EU limits and relevant national specifications/limits, the environmental condition of soil-gas is adequate and no remediation measures are necessary. It is noted that the remediation process at EKO installation has been successfully completed during the reference year.	

### 14. SEWAGE TREATMENT & DISPOSAL

Sewage	
Sewage network to the municipal waste water treatment plant (WWTP)	YES
Autonomous airport's waste water treatment plant (WWTP)	NO
<b>Short description:</b>	
<b>Blue water</b>	
<b>Collection and disposal:</b> Collection in septic tank and disposal to the municipal sewage network.	

Waste water treatment plant description (where applicable)	
<i>Description of characteristics and condition of the airport's WWTP including possible problems. Type and frequency of the effluent quality measurements</i>	
Degree of treatment of airport's WWTP	N/A
Treatment method	N/A
Disposal of treated wastewater	N/A
Sludge disposal	N/A
Sampling frequency of WWTP effluent	N/A
Parameters analysed	N/A
Summary of quality of WWTP effluent	N/A