

# Comprehensive Wildlife Hazard Management at Incheon Airport

for ICAO AOPSG8





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WE CONNECT LIVES, CULTURES AND THE FUTURE

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# 1 Status

# Organizational Structure

## TEAM

Team	Members
Control Team 1	7
Control Team 2	8
Control Team 3	7
Control Team 4	8
Support Team	6

- fixed number  
: 46
- Present number  
: 36

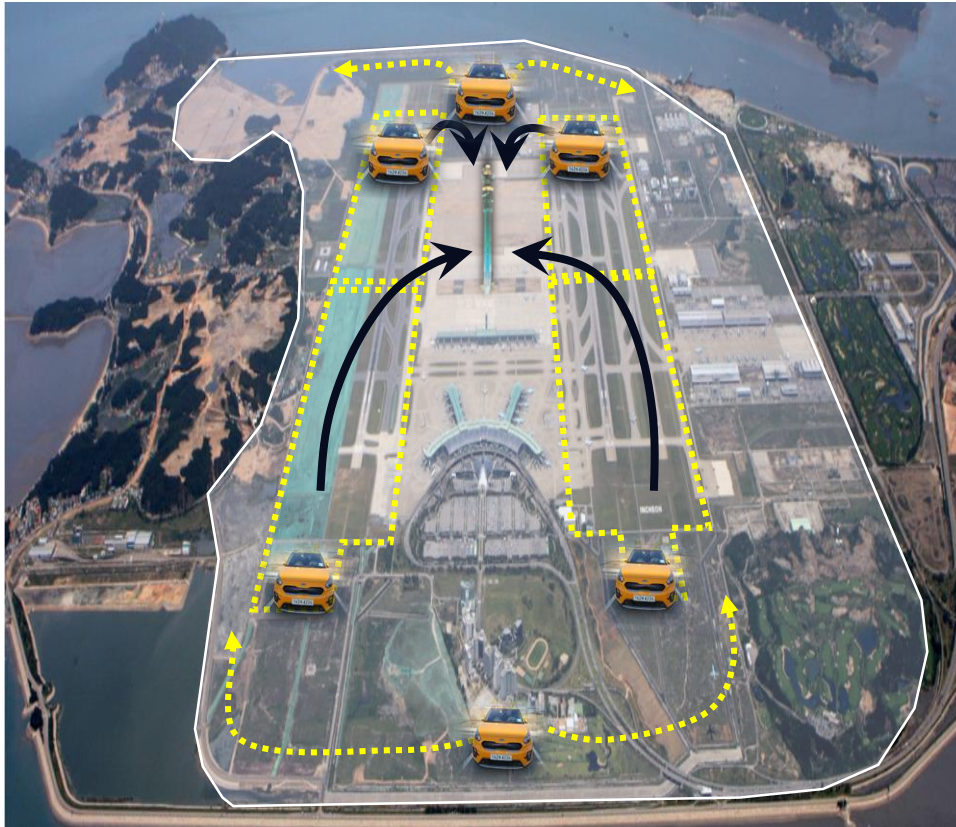
## Experienced Team



A team of 26 personnel with over 5 years of experience, making up 68% of the workforce, divided into specialized control and support teams.



# Risk Management Inspections



AIRSIDE	Movement area	6 inspections per day	4 vehicles (8members)
	Maneuvering Area	4 inspections per day	
LANDSIDE	North / South	4 inspections per day	2 vehicles (4members)
	Ecological Surveys	monthly	

Our vehicles are equipped with GPS, which shows up on the control tower's ground surveillance radar, enabling quick on-site responses. We use 4 vehicles for airside and 2 vehicles for landside operations.

# Ecological Surveys and Attractant Inspections

## • Monthly Survey

### Comprehensive Monitoring

Identify over 123,000 birds of 89 species around the airport.

### Attractant Inspections

Conduct monthly inspections to identify and remove wildlife attractants.





# Control Equipment

## Vehicles

- 6 Vehicles



## Firearms

- 34 shotguns



## Shells

- 3 types of shells (7½, 4, and blank shells)



## Paintball guns

- 4 guns  
for controlling protected birds



## sonic controllers

- 2 sonic controllers  
playing bird deterrent  
sounds via MP3



## thermal cameras

- 4 thermal imaging  
cameras for night  
monitoring



# Animal Capture Equipment

## Net guns

■4



## Protective clothings

■2set



## Capture tongs

■6



## Capture net, trap

■2, 3



## Tranquilizer gun

■1



## Blowguns

■2set



## Cage

■2



## Net

■7







2

## BirdStrike Prevention Activities

# Recent Wildlife Strike Incidents

## • Wildlife Strike Incidents

Years	ON	NEAR	OFF	Unknown	Damage	합 계
'23	22	13	23	81	15	139
'22	20	5	7	24	5	56
'21	10	4	5	44	6	63
'20	6	8	10	1	3	25
'19	17	8	29	6	6	60

IBIS(ICAO Birdstrike Information System)

- ON : takeoff 500ft , landing 200ft
- NEAR : takeoff 1,500ft , landing 1,000ft
- OFF : takeoff 1,500ft , landing 1,000ft (greater than)

## • Return flight

1

### 2019-2023 Overview

Various airlines experienced bird strike incidents from 2019 to 2023.

2

### April 22, 2019

A white-cheeked pintail collided with the cockpit upper part

3

### April 21, 2022

An unidentified bird was ingested into the engine.

# Birdstrike Incidents Overview

- Incident Locations

Bird strike incidents occur at various locations such as within the airport, near the airport, and outside the airport.

- January 2024 Statistics

As of January 2024, there have been 13 reported bird strike incidents, including 1 case of aircraft returning to the airport.

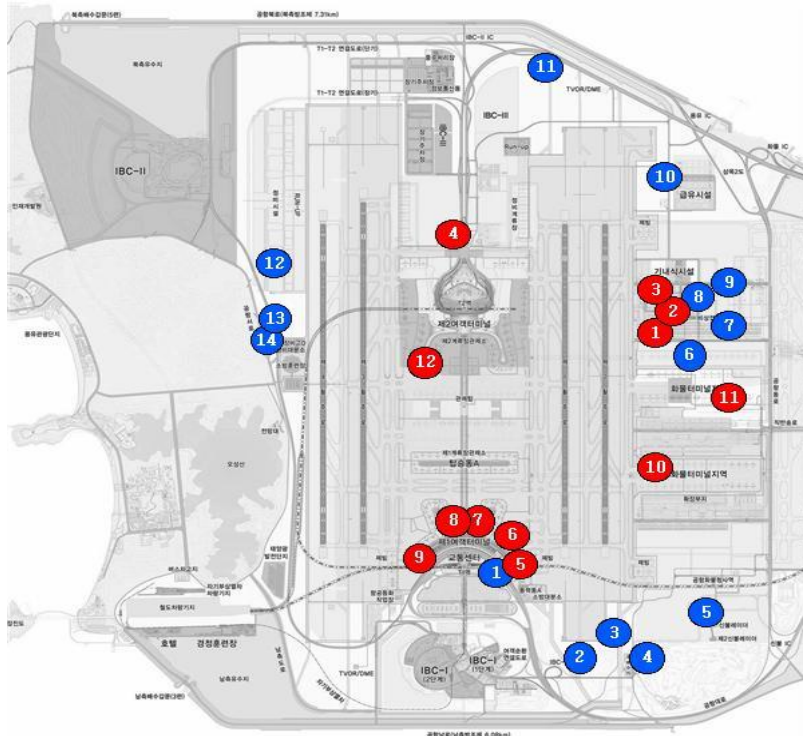
- Impact

Such collisions can significantly impact airport operations.

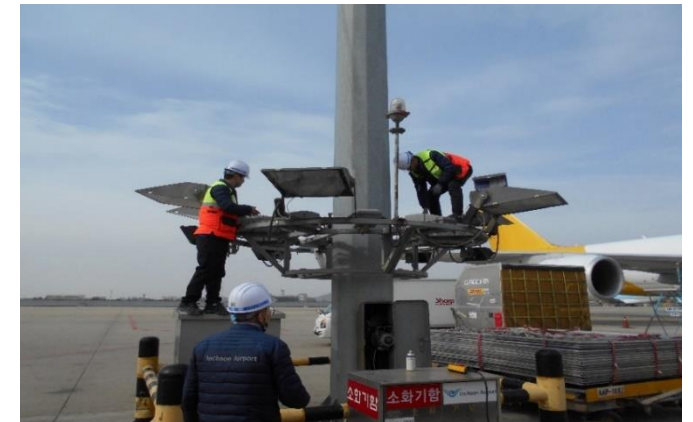
# Nest Removal Activities

## • '2024. 40Nests Removed

● Landside
 ● Airside



During the breeding season from March to April, nest removal activities are conducted within and around the airport.





# Installation of Bird Deterrents on Lighting Towers

- In 2023, deterrents were installed at 15 locations.
- In 2024, deterrents were installed at 02 locations.



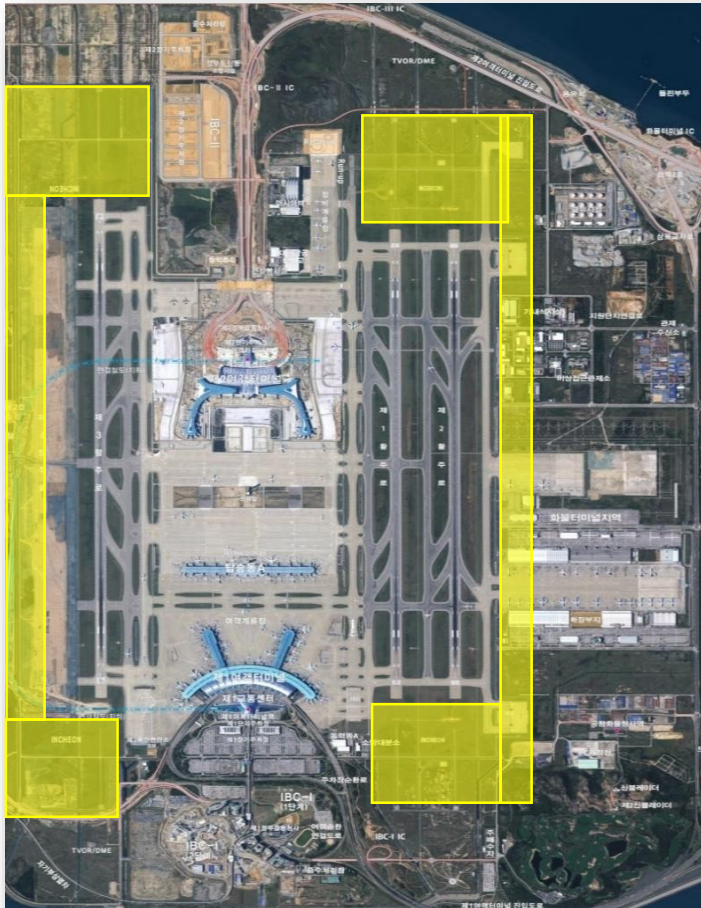
Bird deterrents are installed on lighting towers within the airport to prevent the annual formation of magpie nests.





# Spraying Bird Deterrents in Green Area

- This measure targets habitual bird entry areas to prevent birdstrikes.
- From March to October, bird deterrents are sprayed in green areas within the airport and on the landside security road reed fields.



Air  
side



Land  
side





# Runway Rodenticide Application

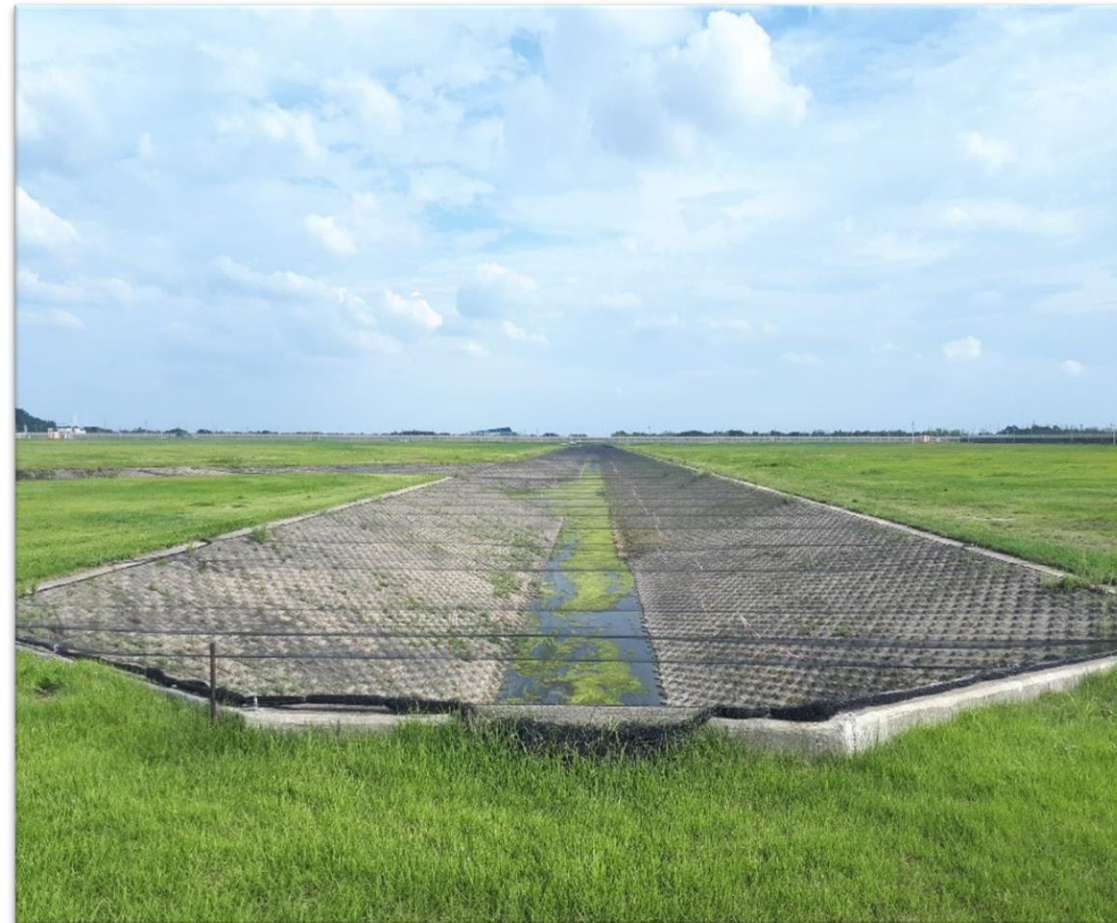
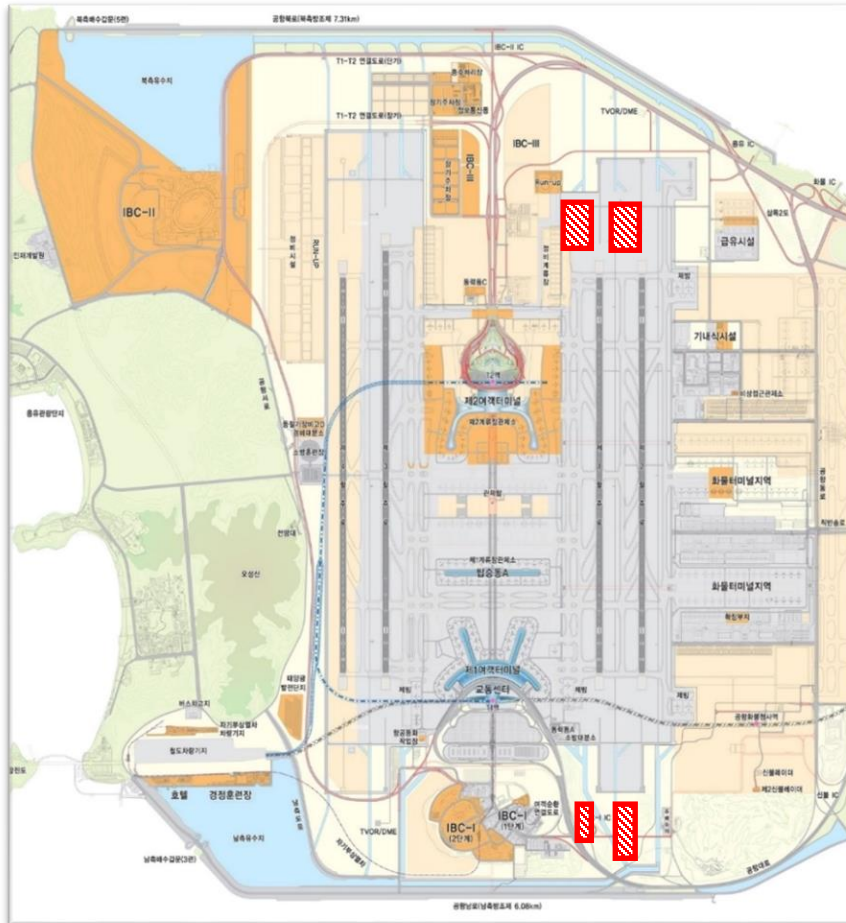
- From June to September, rodenticides are applied around the runway to control the habitat of rodents, which are prey for raptors.
- This is an important measure to prevent raptors from entering the airport, thus reducing the risk of bird strikes.





# Installation of Bird Netting

- Bird netting is installed and maintained at four locations within and around the airport to prevent bird entry through drainage channels.
- This method effectively reduces the risk of collisions by blocking birds from entering the airport through various access points.





# Removal of Attraction Factors

- Habitat management and ecological surveys are conducted on landside security roads and wetland reed fields to remove attraction factors for birds.



# Flexible Control Personnel Deployment



1

## Daytime Deployment

During the day, the airport deploys 4 vehicles for airside (A/S) and 2 vehicles for landside (L/S) control activities, ensuring a strong presence and effective management of wildlife hazards.

2

## Evening Deployment

In the evening, the airport increases the number of airside vehicles to 4, recognizing the heightened activity of birds during this time.

3

## Overnight Deployment

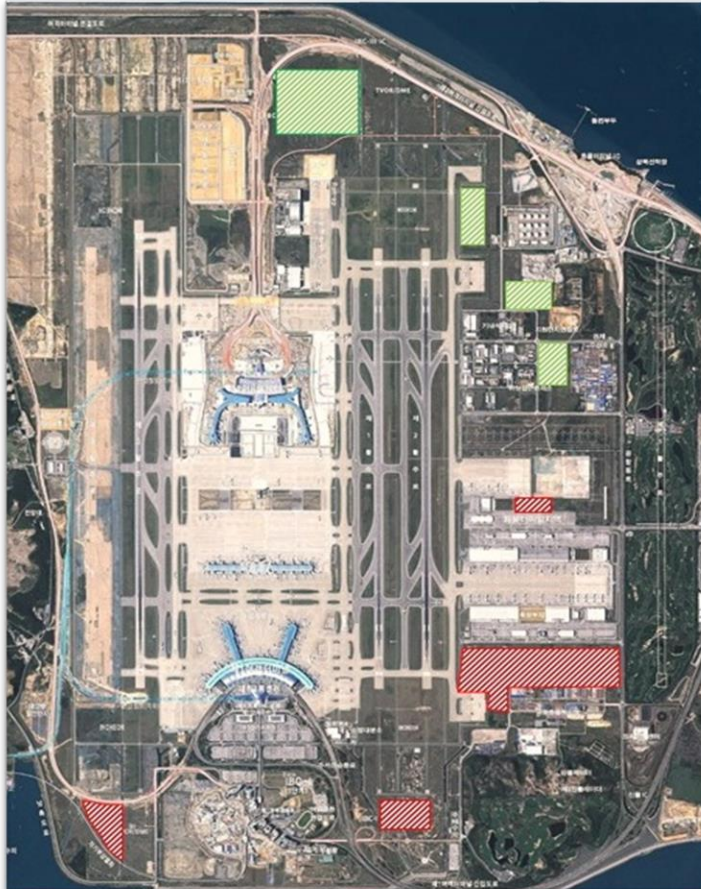
At night, the airport maintains a reduced presence of 2 airside vehicles, as the geese are less active, but still maintains a vigilant watch to address any emerging issues.





# Joint Capture of Harmful Animals

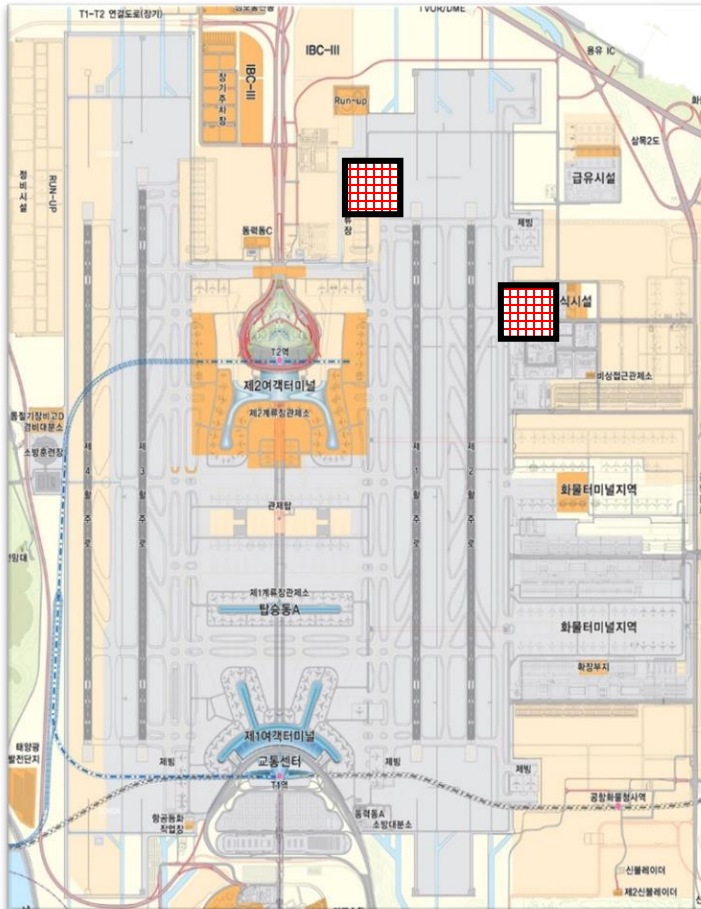
- The water deer are captured twice a year in collaboration with the Wildlife Management Association.
- Hunting dogs are used to capture the animals, and areas with frequent sightings are selected for the operation.





# Operation of Deer Grating

- Wildlife intrusion prevention facilities are installed around security posts to environmentally prevent wild animals from entering airport protected areas.



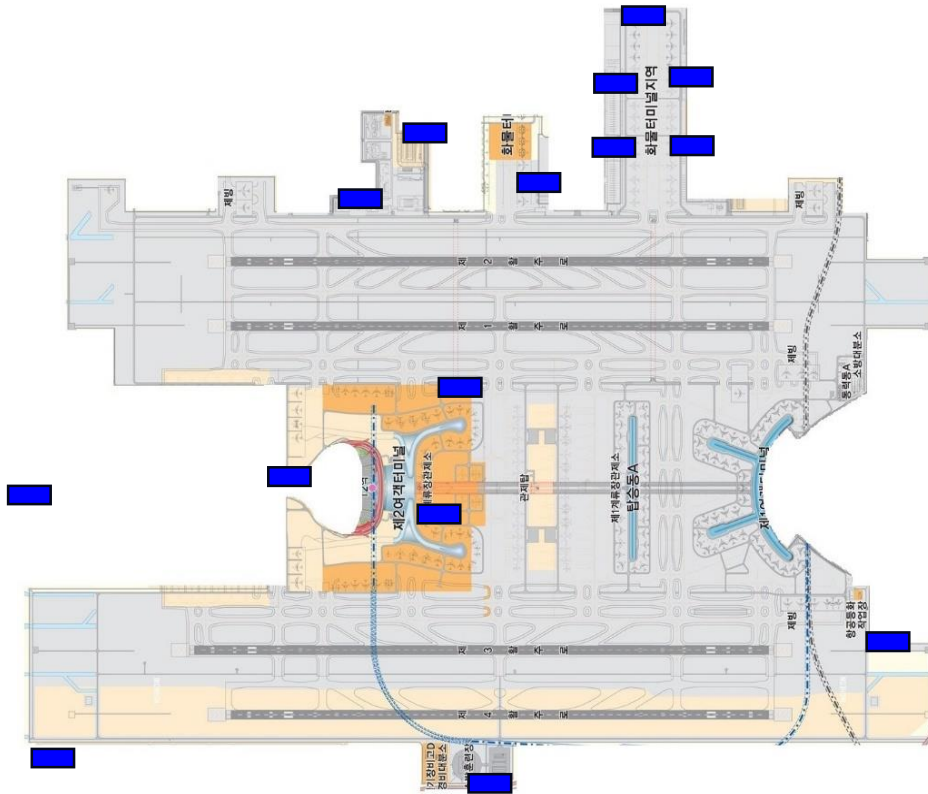
TG1 guard post



G2 guard post

# Installation of Cat Capture Cages

- The airport has installed 15 cat capture cages within its premises to safely remove any stray or abandoned cats that may pose a risk to airport operations.
- In 2023, the airport successfully captured and handed over 14 cats to designated animal hospitals, demonstrating the effectiveness of this targeted approach to wildlife management.





# Preventing Animal Intrusion

- Intrusion Prevention Measures : Security posts, fences, drainage channels, storm-water drains.





# THANK YOU

In conclusion, Incheon International Airport's comprehensive wildlife hazard management approach involves a range of strategies, including ecological surveys, advanced equipment, and dedicated personnel.

By continuously monitoring and adapting to the evolving challenges posed by wildlife, the airport's team ensures the safety of aircraft operations and the well-being of the surrounding ecosystem.

This multifaceted approach serves as a model for other airports in their efforts to mitigate the risks associated with wildlife hazards.

