



GREEN AIRPORT GUIDELINES

SUBJECT: GREEN AIRPORT GUIDELINES

DATE: 28 FEBRUARY 2026

1. PURPOSE

1.1. The purpose of this document is to:

- 1.1.1. Provide airports with a framework for promoting environmentally sustainable (green) airport operations.
- 1.1.2. Encourage the integration of environmental management, climate responsibility, and resource efficiency into airport planning, infrastructure development, and daily operations.
- 1.1.3. Support the State's international obligations under the Chicago Convention, including ICAO Annex 16 (Environmental Protection) and related ICAO policies
- 1.1.4. Promote best practice, continuous improvement, and responsible environmental sustainability across the aviation sector.

2. ABBREVIATIONS

ABBREVIATION	DESCRIPTION
ACA	Airport Carbon Accreditation
AECS	Aviation Environmental Compliance Specialist
AEP	Aviation Environmental Protection
E: ASI	Executive: Aviation Safety Infrastructure
EMS	Environmental Management System
FEGO	Fixed Electrical Ground Power
GSE	Ground Support Equipment
HVAC	Heating, Ventilation and Air Conditioning
ICAO	International Civil Aviation Organization

3. INTRODUCTION

A green airport is an airport, whether newly developed or already in operation, that is planned, managed, and operated in a manner that minimizes environmental impacts and promotes sustainable management. Environmental considerations are integrated into infrastructure design, operational procedures, and administrative practices to ensure the efficient use and management of resources and the reduction of adverse environmental effects.

A green airport implements, where feasible, intelligent, collaborative, dynamic, and automated systems that enhance operational efficiency and enable effective responsiveness to the needs of all stakeholders.

Environmental themes relating to airport operations such as air and water quality, land management, noise, and climate change, have required airports to respond with sound policies, plans and procedures. These include both voluntary and regulatory measures to achieve a balanced approach to environmental management.

To achieve green airport objectives, airports are encouraged to implement the measures outlined in these guidelines, as appropriate to their size, operational context, and stage of development.

4. GREEN AIRPORT MEASURES

4.1. Governance and Environmental Management

Airports are encouraged to ensure sustainability is embedded in airport management by:

- 4.1.1 Establishing an Environmental Management System (EMS) aligned with ISO 14001
- 4.1.2 Appointing a designated environmental manager or committee
- 4.1.3 Developing an Environmental Policy covering matters such as climate, biodiversity, water, waste and air quality etc
- 4.1.4 Integrating sustainability into master planning, procurement, and infrastructure development
- 4.1.5 Ensuring compliance with the South African Constitution (Section 24), National Environmental Legislation, ICAO Standards, South African Civil Aviation Regulations and Local Bylaws

4.2. Climate Change and Carbon Management

Airports are encouraged to reduce greenhouse gas emissions and align with global aviation climate goals by:

- 4.2.1 Measuring and reporting emissions (Scopes 1, 2, and where possible 3)
- 4.2.2 Developing a carbon management plan with reduction targets
- 4.2.3 Participating in programmes such as Airport Carbon Accreditation (ACA) or equivalent
- 4.2.4 Increasing the use of renewable energy (e.g., Solar Photovoltaic (PV))
- 4.2.5 Improving energy efficiency in terminals, lighting, Heating, Ventilation and Air Conditioning (HVAC), and airfield operations
- 4.2.6 Promoting Sustainable Aviation Fuels (SAF) infrastructure and readiness where feasible

4.3. Energy Efficiency and Infrastructure

Airports are encouraged to minimise energy consumption by:

- 4.3.1 Implementing energy-efficient lighting (LED) and smart controls
- 4.3.2 Adopting green building standards for new terminals, hangars, and offices
- 4.3.3 Transitioning to electric or low emission Ground Support Equipment (GSE) and vehicles
- 4.3.4 Install on-site renewable generation and battery storage where possible
- 4.3.5 Installing energy management and monitoring systems to track and reduce usage
- 4.3.6 Promoting behavioural change programmes for staff and tenants to reduce unnecessary energy use

4.4. Water Management

Airports are encouraged to use water responsibly and protect local water resources by:

- 4.4.1 Implementing water efficiency measures (leak detection)
- 4.4.2 Using rainwater harvesting and greywater systems where feasible
- 4.4.3 Treating and monitor stormwater runoff to prevent pollution of rivers and wetlands
- 4.4.4 Ensuring spill prevention and containment systems are in place for fuel and chemicals
- 4.4.5 Promoting water conservation awareness among staff, tenants, and passengers

4.5. Air quality and local pollution

Airports are encouraged to protect surrounding communities and workers from air pollution by:

- 4.5.1 Monitoring local air quality where appropriate
- 4.5.2 Minimising aircraft and vehicle idling
- 4.5.3 Promoting the use of fixed electrical ground power (FEGP) and pre-conditioned air instead of auxiliary power units
- 4.5.4 Encouraging public transport to access the airport
- 4.5.5 Use of SAF

- 4.5.6 Managing construction activities to minimise dust and particulate emissions
- 4.5.7 Working collaboratively with local communities and authorities to address air quality concerns and enhance transparency

4.6. Noise Management

Airports are encouraged to reduce aircraft noise impacts on neighbouring communities by:

- 4.6.1 Developing and maintaining a noise management plan
- 4.6.2 Operating noise monitoring systems and manage complaints
- 4.6.3 Supporting operational measures that reduce noise impacts (e.g., preferential runways)
- 4.6.4 Engaging with communities and local authorities to address noise concerns and improve transparency
- 4.6.5 Regularly reviewing noise management strategies to reflect operational and technological advances

4.7. Biodiversity and Land use

Airports are encouraged to protect ecosystems while ensuring aviation safety by:

- 4.7.1 Conducting biodiversity assessments
- 4.7.2 Avoiding unnecessary habitat loss and rehabilitate disturbed areas
- 4.7.3 Implementing wildlife management practices that balance ecological protection and aviation safety
- 4.7.4 Establishing of Bird and Wildlife Policy
- 4.7.5 Establishing Wildlife and Bird Strike control program
- 4.7.6 Establishing procedures for the monitoring and recording of Bird and Wildlife Strikes
- 4.7.7 Protecting sensitive ecosystems such as wetlands and river systems

4.8. Climate resilient and adaptation

Airports are encouraged to prepare airports for climate impacts by:

- 4.8.1 Assessing climate-related risks, including flooding, heat stress, storms, and sea-level rise (where applicable)
- 4.8.2 Integrating resilience measures into infrastructure design and emergency planning
- 4.8.3 Ensuring drainage, stormwater systems, and critical assets are climate- resilient
- 4.8.4 Developing emergency preparedness, business continuity, and recovery plans for climate related disruptions

- 4.8.5 Promoting nature-based solutions where feasible to enhance resilience and ecosystem protection

4.9. Stakeholder engagement and transparency

Airports are encouraged to build trust and shared responsibility by:

- 4.9.1 Engaging airlines, ground handlers, tenants and service providers in sustainability initiatives
- 4.9.2 Communicating environmental performance through sustainability reports or public disclosures
- 4.9.3 Collaborating with local authorities, communities, and environmental agencies
- 4.9.4 Providing environmental awareness and training of staff and contractors
- 4.9.5 Transparent engagement with surrounding communities (e.g. upcoming projects at airports)

4.10. Oversight and interface with other authorities:

This guidance does not replace or supersede the requirements of/or compliance with:

- 4.10.1 National Environmental Management Act 107 of 1998
- 4.10.2 Environmental Authorisations and impact assessments
- 4.10.3 Municipal planning and land use regulations (e.g. Spatial Planning and Land-Use Management Act) or the Local By-Laws.

The SACAA encourages airport operators to adopt green airport guidelines as part of their commitment to environmental sustainability, climate responsibility, and sustainable aviation development.

Furthermore, ICAO provides the Eco-Airport Toolkit e-collection. The objective of the Eco-Airport Toolkit e-collection is to provide practical and ready-to-use information to support the development of airport infrastructure projects. The themes of the publications are chosen based on immediate operational needs of States. Each publication focuses on a specific aspect of environmental planning at airports. For further information, the toolkit may be found on the ICAO website under Environment.



DEVELOPED BY:		
	PAMELA MADONDO	28/02/2026
SIGNATURE OF AECS	NAME IN BLOCK LETTERS	DATE
APPROVED BY:		
	TEMBISA MAPHIKE	27/03/2026
SIGNATURE OF E: ASI	NAME IN BLOCK LETTERS	DATE

END