Airport Regulations

Bromma Stockholm Airport

Common and standardised requirements for
Stockholm Arlanda Airport
Bromma Stockholm Airport
Göteborg Landvetter Airport
Malmö Airport

Swedavia Airports

Bromma Stockholm Airport
Valid from 6 May 2026
Edition 5.0

Airport Regulations

Part 0. Introduction and changes

Swedavia Airports

Edition 5.0
Valid from 6 May 2026

Content

Part 0. Introduction and changes

1. Introduction

1.1 Airport Regulations (AR)

Airport Regulations are Swedavia's decided application of regulations, which include both national and international requirements that an airport must regulate and ensure that activities at the airport comply with. Airport Regulations also include requirements for operational and technical issues at our airports as well as general order and safety regulations.

Airport Regulations applies to all employees of public authorities, companies and other organisations that operate at the airport (we call them operators below). Some activities require special permits, authorisations or agreements. It is the responsibility of those concerned to identify and obtain the necessary permits, authorisations or agreements, in order to fulfil the requirements of European and Swedish legislation, as well as Swedavia’s AR.

1.1.1 Language of Airport Regulations

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The airport is an international environment with its own language usage that is different from use in other contexts. We have chosen to use those words that we use in our daily work to the greatest extent possible in the text in order to avoid misunderstandings, for example *photo badge* instead of *pass card*.

We have also chosen to make the language simpler and more direct. Even legal requirements can be expressed in simpler and more “common” language. The main purpose of the document is to communicate what applies within specific areas at the airport.

1.2 Document structure

1.2.1 Themes

Airport Regulations consist of five parts and an introduction. Airport Regulations have been standardised and apply to all of Swedavia's international airports (Arlanda, Bromma, Landvetter, and Malmö). Each airport has its own edition, with both common and some location-specific text, and is published according to a common management plan.

Each part contains, in addition to the requirement pattern, **References** to other types of information, as well as **Applicable requirements**.

1.2.1.1 Part 0 – Introduction and changes

This describes how the content of the Airport Regulations is structured and updated.

AR

1.2.1.2 Part 1 – General information about the airport

This describes general requirements for those who work or have operations at the airport.

1.2.1.3 Part 2 – Security

This describes the security rules for aviation security and the handling of authorisation documents.

1.2.1.4 Part 3 – Climate and environment

This describes the environmental requirements that Swedavia specifies for compliance with selected areas of environmental legislation and the airport's environmental permits, as well as the fossil-free airport agreement. Environmental requirements outside this area are also integrated in other sections of AR, similar to previous governance within AR.

In this part, Swedavia has brought together the requirements that can be found in, Handling of Chemicals, Clean-up, Discharges to Water, Waste and Fossil-Free Airport.

1.2.1.5 Part 4 – Passengers

This describes the rules for managing resources in the terminal as well as passenger flows at the airport.

1.2.1.6 Part 5 – Aerodrome Manual for operators at airports

This is the part of the Aerodrome Manual that is communicated to external operators. This describes the rules for aircraft movements, parking stands, vehicles and other matters relating to the Flight Operations process.

1.2.2 Types of information

The content of Swedavia's common and standardised Airport Regulations has been tightened up to include regulations, while other types of information have been removed.

1.2.2.1 Site specific

As a general rule, the information is common and standardised, unless it is explicitly marked as site-specific for a particular airport.

1.2.2.2 Routine

A routine is a description of how an activity in a process should be carried out. The routine describes the order in which the various steps should be performed, what needs to be done in the different steps, who should perform the routine, and when.

1.2.2.3 Standard Operating Procedure (SOP)

A Standard Operating Procedure provides a step-by-step description of how a task is to be performed. SOPs must be followed in the same way every time to ensure the efficiency and quality of delivery, contribute to standardised working methods, reduce misunderstandings and ensure that we comply with regulations.

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1.2.2.4 Checklist

A checklist is a tickable list that is used as a tool to ensure that all the necessary tasks are completed. A completed checklist represents verification/a reporting document for the tasks performed**.**

1.2.2.5 Plan

An internal governing document, requirement-based plans such as the Snowplan, which the airport presents externally for informational purposes or for compliance.

1.2.2.6 Handbook

A compilation of informative texts, such as a contractor's manual or a manual for those who work at an airport. Manuals are used in communication and training to assist with applying the regulations.

1.2.2.7 Guide

An informative text on a defined topic that assists with applying the regulations.

1.2.2.8 Direction

A text that provides advice on a specific issue, such as reporting or accounting.

1.2.2.9 Forms

Forms and templates for applications, notifications, reporting or accounting.

1.2.2.10 Maps

Geographic information describing the different types of areas at the airport. The maps are currently being migrated to Swedavia's digital map platform – Swedavia Maps. Maps can form part of the regulatory governing specifications or can provide supporting information for more illustrative purposes.

1.2.3 Use of Icons

Icon	Description	Comments:
	The Location icon is used to mark site-specific AR text. The Location icon is used together with light grey baseplate (Part 0-4) or light grey bar (Part 5).	As a general rule, the text is common and standardised. Site-specific information is marked or added to the appendix.
	The Read More icon is used to mark a reference to text in another part of the AR.	
	The Link icon is used to mark a reference to linked information on the extranet	

Colour bars are used to indicate the origin of the text. A light blue colour bar marks text from the Aerodrome Manual in Part 5 (or the County Administrative Board in Part 1). A light yellow colour bar marks generic AR text (with the text AR). A light grey colour bar marks location-specific text (with the airport's IATA code).

2. Change management

2.1 Summary of changes

The previous local Airport Regulations for Arlanda and its appendices will be replaced in 2025 by a first edition of common and standardised Airport Regulations for Swedavia's international airports (Arlanda, Bromma, Landvetter and Malmö). The airport's edition will contain, in addition to the requirement pattern, both common texts and site-specific information, as well as references to other types of information (routine, checklists, guides and maps).

In future editions, sections that have changed will be indicated by yellow highlighting.

Minor changes are communicated by publishing **summary of changes** on the extranet and in Airport Information (AI) two weeks before they take effect. Major changes will be presented to the Airport User Committee (AUC).

2.2 Edition management

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Changes to the Airport Regulations are handled according to a common annual cycle where a new edition is planned every quarter.

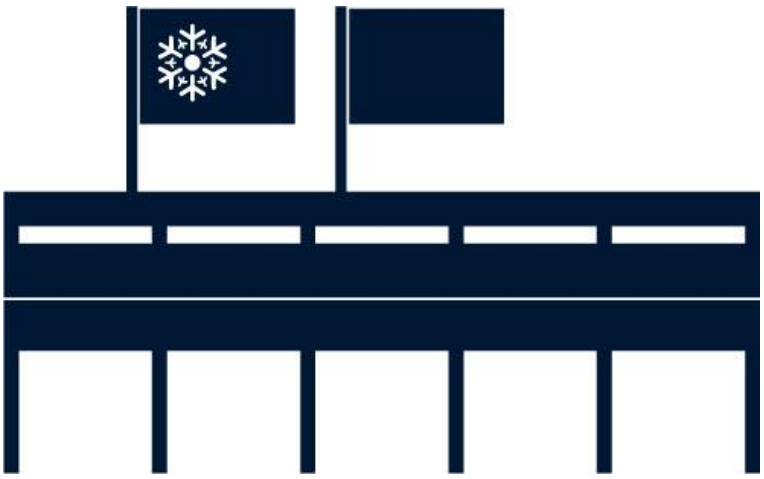
3. References

Summary of changes

Terminology list (Upcoming)

Airport Regulations

Part 1. General at the airport



Swedavia Airports

Edition 5.0
Valid from 6 May 2026

Contents

Part 1. General at the airport

1. Basic assignment of responsibilities

1.1 Introduction

1.1.1 Purpose

The purpose of this section is to describe the basic relationship of responsibilities between Swedavia and the companies, authorities or other organisations that operate some form of business at the airport, in relation to basic legislation. The overall regulatory framework is also applied through the airport's local regulations, Airport Regulations (AR). and the Aerodrome Manual for external operators.

In the following, we will refer to all business practitioners with the collective name "**operator**".

1.1.2 Applicable regulations

The Swedish Work Environment Act (1977:1160)

Commission Regulation (EU) No 139/2014 laying down requirements and administrative procedures related to aerodromes (EASA), as well as Acceptable Means of Compliance (AMC) and Guidance Material (GM) for government agencies, organisations and airport operations.

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Aviation Security (EC) 300/2008 and Regulation (EU) 2015/1998.

The Swedish Aviation Ordinance (2010:770)

The Swedish Environmental Code SFS (1998:808)

The Swedish Protection Act (2010:305)

The Swedish Transport Agency Regulations, Series Sec, TSFA (2020:80)

1.2 Responsibilities of the airport

1.2.1 Aviation safety certificate

In order to operate an airport, both the airport and its operators must comply with the applicable regulations, Commission Regulation (EU) No 139/2014, and as broken down into detailed requirements in AMC and guidance documents in GM. On this basis, the Swedish Transport Agency issues a permit to operate the airport.

The Accountable Manager for Swedavia International Airports has overall responsibility for the airports forming part of Swedavia International Airports and is responsible for ensuring that internal and external operators and suppliers comply with the applicable rules and regulations, based on the requirements outlined above.

AR

1.2.2 Aviation security approval

The airport's security approval is dependent on the airport operations meeting the Swedish Transport Agency's requirements. The airport therefore has a Local Security Programme (LSP), which describes the objectives, targets and security standards for aviation security, based on the regulations in the Swedish Transport Agency's statutes.

1.2.3 Operational permit under the Swedish Environmental Code

The airport's operations are covered by an **environmental permit** as provided by the Swedish Environmental Code. A number of conditions are attached to the permit in addition to what is specified in the application. The provisions and conditions in the permit cover all operations at the airport that do not have their own regulatory permit or decision as provided in the Environmental Code.

1.2.4 Coordination responsibility under the Swedish Work Environment Act

Swedavia has coordination responsibility in areas at the airport that have a shared workplace and where Swedavia carries out its own operations.

Swedavia's workplace coordinator and that person's agents shall, in consultation with the relevant stakeholders and to the extent necessary, work to

- coordinate the work to prevent risks of poor health and accidents in the shared workplace
- schedule the work in the requisite way in order to prevent risks of poor health and accidents as a result of different operations under way in the workplace
- establish and maintain general protective facilities and issue general safety rules for the workplace
- clearly assign the responsibility for the special protective facilities that may be needed for a given job or jobs
- set up employee areas and sanitary facilities in the workplace.

1.3 Operator's responsibilities

1.3.1 Application of Airport Regulations (AR)

Each operator in the airport area is responsible for identifying the basic regulations and sections of the AR that are applicable to operations and for addressing and implementing them in their own operating manuals. The operating manuals shall, as a minimum requirement, contain clear and documented responsibilities and describe how the requirements specified are addressed in their own operations. These operating manuals must be made available to the airport management.

Each operator is responsible for informing its employees about the content of the AR and ensuring that its employees understand the content of the regulations and comply with them.

Operators are responsible for informing/training their own subcontractors and sub-suppliers about the regulations and specific procedures that apply to their task and for monitoring compliance with these. Operators are also responsible for ensuring that this is documented, and such documentation can be provided upon request from the airport.

Operators shall ensure that changes in AR are communicated to those affected. Employees of an operator with operations at the airport who have authorisation documents that grant access to an authorisation area are themselves responsible for learning about and understanding the regulations in the AR.

1.3.2 Agreement

Operators that are to carry out operations at the airport must have a written agreement with the airport. Among other things, the agreement regulates the operator's duties, the requirements entailed by these duties, and an obligation to comply with AR, i.e. the provisions in effect with respect to aviation safety, aviation security and the environment, but also what happens if the provisions are not complied with. The operator may only begin to operate at the airport after they have completed the airport's compulsory introductory training for new operators and/or if they have successfully completed an audit allowing them to do so. The agreements are valid until further notice with the exception of Security Agreements, which are valid for two years unless otherwise stated.

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Contractors working on behalf of another company with an agreement must enter into a separate security agreement with the security unit at each airport where they are working.

1.3.3 Audits

Swedavia is entitled to carry out audits to check compliance with agreements and all AR. Each operator is responsible for providing resources to ensure that the audit can be carried out and for presenting the necessary documentation.

1.4 Requirements for operators

1.4.1 Safety

Operators that carry out operations that can affect aviation safety must ensure that their systematic work described in their operating manual complies with the airport's *Aerodrome Manual for operators:*

AR Part 5 Chapter 2.1, Safety Management System (SMS), in other words:

- ensure that aviation safety always has priority, and that aviation safety work has a preventive approach
- have the permits needed for conducting operations and carrying out their tasks
- have the resources and skills needed for carrying out their tasks

- ensure that procedures and regulations contribute to minimising the risk of accidents and incidents
- encourage occurrence and incident reporting and investigate occurrences in which their own operations were involved, to prevent similar occurrences from happening again
- prior to changes being made in operations (for instance, concerning procedures, organisations/people, or technology), identify and document potential risks to aviation safety that could result from the change and measures needed to reduce risk that must be taken
- actively monitor their operations, seek experience from others, and use this to continuously improve safety in operations. When appropriate, monitoring shall make use of key indicators for operations.

1.4.1.1 Safety officer

Each operator must have a safety officer. A manager shall appoint themselves or another person as the safety officer for the operations at the airport, which is documented in the appendix to the concluded agreement. This officer has an overall responsibility and mandate to make decisions on flight safety issues. The designated flight safety officer shall have good knowledge of the regulations in effect and communicate these to employees.

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1.4.2 Aviation security

In order to gain access to an authorisation area, a person must have a legitimate reason to be there and have a permit authorising them to be there. A person holding an authorisation document must read and understand the provisions applicable to presence within the authorisation area.

1.4.2.1 Security manager

Each operator must have a security manager. The head of the operator shall designate either themselves or another person to be the security manager for operations at the airport. The security manager has overall responsibility for security matters and is authorised to apply for visitor rights and authorisation documents.

The name of the designated security manager (only one person) shall be reported to the airport's Service Centre; see the **airport's extranet** for contact details. The designated security manager shall have good knowledge of the regulations in effect and communicate these to employees.

By signing to receive an authorisation document, the person signing acknowledges that they have studied and understood the provisions that apply to the holder of a badge, keys, driving permit or vehicle permit as well as to entering/exiting an authorisation area and the operation of motorised vehicles at the airport.

The operator is responsible for contacting the airport's Service Center in writing to deregister the security manager when that person is no longer to hold the position.

1.4.3 The environment

It is incumbent upon the operator to consult, at any given time, the environmental stipulations for the airports where the operator operates and to ensure that the requirements are complied with. A link to the environmental stipulations can be found under Chapter 1.6 References

The operator is also responsible for complying with other environmentally related legislation that also applies, the provisions stipulated in AR and the requirements in agreements signed with Swedavia.

The operator shall work to ensure that Swedavia's environmental policy is known within the operator's organisation. The operator shall have a list of the environmental legislation that applies to its operations and a description of how the operator complies with the requirements in its operations.

All businesses, regardless of size, are subject to the self-monitoring regulation. This means that the operator shall have a properly functioning system for self-inspection of the environmental area within its operations. This also includes systematically identifying, assessing, documenting and managing the risks of the operation from an environmental and health perspective.

The operator is obliged to pay for self-inspection measures such as investigations, sampling, environmental impact assessments that are required within self-inspection. At the request of Swedavia, the operator reports documentation of its own controls, audits and other reports.

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1.4.3.1 Environmental officer

A manager shall designate either themselves or another person to be the environmental officer for operations at the airport. This person is the local contact person for environmental issues with Swedavia at each airport. Upon request from Swedavia, the operator must be able to report who has been appointed and provide contact information.

1.4.4 Work environment

All operators at the airport t bear full responsibility for their own employees' workplace. Each employer shall therefore carry out systematic occupational health and safety work and thus be responsible for implementing any necessary measures to prevent ill health and accidents.

1.5 Monitoring and compliance

On occasions when the regulations in effect are not complied with and serious incidents occur or could occur in light of regulations not complied with, the airport management is entitled to limit operations by:

- Terminating the agreement
- Withdrawing authorisation documents

- Refusing access to authorisation areas to persons who may pose a danger to aviation safety
- Withdrawing a driving permit
- Banning the operation of a vehicle or equipment in the airport area
- Removing equipment or a vehicle
- Charging for costs incurred in conjunction with inappropriate action or damage caused to the environment and property
- Suspending activities

1.6 References

1.6.1 Related Information

Part 5 - Aerodrome Manual for operators, Chapter 2.2 Safety Management System (SMS)

Swedavia Environmental policy

Environmental stipulations - Stipulation compilation

Bromma Stockholm Airport extranet [swedavia.net]

1.6.2 Contacts

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Notification of Security Manager at the operator:

Bromma Stockholm Airport extranet [swedavia.net]

2. Order Regulations Bromma

Stockholm County Code of Statutes 01FS 2024:33

Approved on *26 September 2024 (34103-2024*).

Published on *9 Octobre 2024*

The County Administrative Board of *Stockholm County prescribes* the following pursuant to Chapter 6, Section 16, first paragraph of the Civil Aviation Ordinance (2010:770).

2.1 Scope of regulations

§ 1 These regulations are enforceable in the Bromma Stockholm Airport's airport area. In these regulations, "airport area" refers to the airport's passenger terminals as well as the adjacent road system, connecting walkways and outdoor car parks that require passage through automated entry and exit barriers for access, and in addition, outdoor areas to which the general public does not have access due to existing fences or according to posted notices as well as the airport's associated areas and subjects of protection to which access is controlled to guarantee security.

2.2 Decision on subjects of protection

§ 2 Subject of protection refers to the County Administrative Board in Stockholm County's decision that Bromma Stockholm Airport shall be a subject of protection.

2.3 Special permission

§ 3 In these regulations, "special permission" refers to permission issued by Bromma Stockholm Airport or by the police authority. Such permission must be in writing and be available to be shown if so, requested by authorised staff.

2.4 Authorised Personnel

§ 4 In these regulations, authorised personnel refer to the Airport Manager, Security Manager, Airport Supervisor/Airport Duty Officer, Airport Duty Officer (APOC/ADO), security personnel hired by Swedavia AB and police and customs officers.

2.5 Presence in the airport area

Persons engaged in activities not included by the operations in the airport area may not be present there.

§ 5 Persons present within and beside the subject of protection are obliged, if so requested by authorised staff, to show written permission, verify their purpose or otherwise give an acceptable explanation for their presence there.

A place or facility that is not intended for the purpose may not be used as a place to lie down, without the permission of authorised staff.

§ 5

Persons who can be assumed to be below 15 years old and who are not visibly accompanied by a guardian or other adult person are obliged, if so requested by authorised staff, to verify their age.

Camping is not permitted in the airport area.

2.6 Littering

§ 6

Littering, polluting, leaving graffiti, pouring out liquids as well as leaving bottles, cans, packaging or waste in a place or storage space in the airport area not intended for this purpose are not allowed.

2.7 Smoking

§ 7

Smoking is generally prohibited in and beside terminal buildings, which also includes e-cigarettes. Smoking in and beside terminals is only permitted in specially established locations.

In general, smoking is prohibited in the airport's jurisdiction. This also applies to vehicles and temporary staff huts in these areas. Exceptions to the prohibition only apply within the areas approved by the airport rescue service for smoking.

2.8 Alcohol

§ 8

Beverages containing a higher percentage of alcohol by volume than 2.25 per cent may not be consumed in the airport area in places other than those where alcoholic beverage service is allowed.

2.9 Disruptive behaviour etc.

§ 9

Persons who demonstrate disruptive, disorderly or otherwise unsuitable behaviour or conduct may not be present in the airport area.

2.10 Weapons, explosives and fireworks etc.

Firearms and ammunition, as well as certain objects equated with firearms under the Weapons Act (1996:67), held pursuant to law, other statute or special decision, may be carried only by passengers and in direct connection with departure or arrival at the airport.

§ 10

Knives, other stabbing and cutting weapons and other items covered by the Swedish Knife Act (1988:254) may not be carried in the parts of the airport area that are not to be regarded as public places. This prohibition does not apply if the item, as provided by special regulations, is included in the equipment for a given position or a given task, or if possession otherwise − with reference to the nature of the item, the needs of the person possessing it and other circumstances – may be regarded as justified.

Explosives, pyrotechnical products or other products that can be made to explode or cause damage or unpleasantness, as well as flammable products or substances, may not be brought into the airport area without special permission, unless they are authorised for transport by an aviation company.

2.11 Selling, posting of notices, advertising etc.

§ 11 Selling, offering services, marketing surveys, questionnaires, guided tours of passenger terminals and their systems for private groups or similar activities, plus posting of notices, advertising, as well as setting up billboards or advertising signs may not occur without special permission. Fund-raising, distribution of flyers, badges or decals may not occur without special permission.

2.12 Loudspeakers

§ 12 Information, advertising, propaganda or other messages may not be conveyed without permission from Swedavia AB through loudspeakers or other similar devices, if this is done within the airport area.

2.13 Photography, audio recording etc.

Film production, radio production, video production, photography and similar activities that are not of a private nature may not occur without special permission.

§ 13 Film production, radio production, video production, commercial photography and similar activities, which are not of a private nature, may not take place without permission from the Airport Manager, Security Manager/Head of Security, Airport Supervisor/Airport Duty Officer (APOC/ADO), Product Manager Film/Photo or Swedavia JK (Communications Manager on call).

2.14 Public gatherings

§ 14 Applications for authorisation to organise or notify of a public gathering or public event shall be made to the Police Authority.

2.15 Vehicles

§ 15 Motorised vehicles, towed vehicles, cross-country vehicles, towed machinery, sidecars, bicycles and other vehicles may not be driven or parked at any place or space not intended for this purpose without special permission.

Notwithstanding what is stated in the first paragraph, vehicles that are designed to be transported aboard an aircraft or that can be classified as vehicles for the disabled may be driven.

In the parts of the airport's road traffic system covered by these regulations on public order, local traffic regulations and traffic legislation otherwise applies.

2.16 Animals

§ 16 In the airport terminals, it is only permitted to bring animals that will accompany passengers on their flights.

What is stated in the first paragraph does not apply to any dog employed by the police, customs, armed services or security services company as well as any guide, service or hearing dog for disabled persons.

2.17 Presence in, refusal of entry to and removal from the airport area

§ 17

Persons who violate the rules of order and who do not immediately take corrective action or do not comply with a request may, in accordance with Chapter 6, Section 16 of the Aviation Act (2010:500), be rejected or removed from the subject of protection Bromma Stockholm Airport by authorised personnel.

2.18 Violations

§ 18

Anyone who violates these regulations may be sentenced to pay a fine, as provided by Chapter 13 Section 1 (10) of the Civil Aviation Ordinance (2010:770).

For acts that are punishable under another law or regulation, that law shall apply, or the regulation shall apply.

1. These regulations enter into force on 1 November 2024.

2. The regulations repeal the County Administrative Board of Stockholm County's regulations (01FS 2006:216) for Stockholm Bromma Airport, Stockholm Municipality, decided on 27 November 2006, Reg. No. 2132-2006-44713.

2.19 References

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2.19.1 Related Information

Taxi information (website):

Bromma Stockholm Airport extranet [swedavia.net]

3. High-visibility clothing

3.1 Introduction

3.1.1 Purpose

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In accordance with Commission Regulation (EU) No 139/2014 and the Swedish Work Environment Authority regulations AFS 2001:3, it is a requirement to wear High visibility clothing when present in the airport's movement area and baggage sorting halls. The requirement does not apply to passengers.

The airport's movement area refers to the part of the airport intended for take-off, landing and taxiing by aircraft consisting of the operating area and the aprons. Baggage sorting halls refers to the area of the airport where there are people and vehicles in the same premises and where baggage is sorted and handled.

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At Bromma Stockholm Airport, however, there is a requirement to wear high-visibility clothing throughout *the entire Airside area* as well as in the airport's baggage sorting halls.

3.1.2 Applicable regulations

The Swedish Work Environment Authority (AFS 2001:3)

EASA Regulation (EU) No 139/2014, ADR.OPS.D.070

SS-EN 471 High-visibility warning clothing

EN ISO 20471:2013 High visibility clothing

3.2 Requirements for warning clothing

High-visibility clothing must comply with the requirements for Class 2 under the European standard EN 471 alternatively EN ISO 20471:2013. The company or function must be stated on the high-visibility clothing in the form of text and/or a logo. The high-visibility clothing must be worn on the upper body and shall be the outermost garment.

3.3 Colours of High-Visibility Clothing

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To distinguish certain roles and functions at the airport, high-visibility clothing should have the following colours:

Yellow or Green:

- All employees who do not have any of the roles below

Orange:

- Airport Manager
- ADO/ATOS/ADM within Swedavia
- Crisis Coordinator or equivalent
- Supervisory staff of operators, unless otherwise required by the airline

Red:

- Safety Hunter

3.4 References

N/A

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4. Fire safety

4.1 Introduction

4.1.1 Purpose

The purpose of this AR chapter is to ensure a good standard of fire safety at the airport that complies with the Swedish Act on Protection against Accidents (2003:778).

4.1.2 Applicable regulations

Swedish Act on Protection against Accidents (2003:778). Swedish Code of Statutes.

4.2 Responsibility

It is the duty of the owner or users of buildings and other facilities (usufructuary) to maintain fire extinguishing and life-saving equipment in case of fire or other accident. They also have a duty to take the measures necessary to prevent a fire as well as prevent and limit damage and injuries resulting from a fire.

Each operator and each manager is responsible for ensuring that their own staff know:

- how to handle a fire extinguisher and how to protect themselves against a fire.
- how to evacuate the premises where they work.
- where the assembly points are located and what they should do on site.
- where the nearest fire extinguishing equipment is located.

Their own staff must also:

- be trained in basic fire safety when they are hired and then take a refresher course at least every four years.
- take part in evacuation exercises or, if a practical evacuation exercise is not possible, receive information about evacuation at least once a year

Every exercise and distribution of information must be documented in the company's own operations, along with details of the participants. It must be possible to show this documentation in connection with Swedavia's audits or municipal oversight.

Practical training can be done with both a hand fire extinguisher and fire as well as with a VR solution, provided that the VR solution contains a hand fire extinguisher dummy and that all steps that must be performed for a regular hand fire extinguisher are carried out before use

4.3 Ban on and permission for open fires

4.3.1 Smoking ban

Smoking is prohibited throughout the airport area – this ban also applies to e-cigarettes. Smoking is only allowed in specially designated places set up for this purpose.

4.3.2 Candles

Candles may only be used if permission has been granted for *hot work*, see 4.4.2 below, and all safety regulations are complied with throughout the time the flame is burning, including monitoring after the flame has been extinguished.

4.3.3 Barbecuing

Barbecuing is only allowed in specifically designated places that have been approved by the fire duty officer at the airport. Each barbecue event must be reported in advance to the airport's rescue service.

4.4 Hot work

4.4.1 Definition of hot work

All work that involves heating or the formation of sparks is called *hot work*. Examples of this are welding, use of various cutting and soldering tools, circle cutting machines, hot air guns and equipment for applying moisture barriers on roofs. Drilling, sawing and sanding may in some cases be considered hot work.

In case of uncertainty about whether work should be defined as hot work, contact the person responsible for hot work permits at the airport. See contact information in section **4.14**.

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4.4.2 Hot work permits

A permit is needed for all hot work not carried out in, for example, workshops or other spaces specially designated for this purpose. Swedavia is the sole permit issuer for hot work in the airport area on both landside and airside.

A hot work permit may only be issued to people with language skills in Swedish or English who have a certificate for hot work issued in Sweden by Svebra or by the Swedish Fire Safety Association.

Permits are issued by the person in charge of hot work permits at the airport in question. See contact information in section **4.14**. The permit holder must always be able to show the hot work permit if asked to do so during a check.

4.4.3 Hot work near aircraft

Hot work must never be carried out within 20 metres of an aircraft. If hot work is in progress and an aircraft comes within 20 metres of the worksite, the *hot work* must be discontinued immediately.

4.5 Flammable material

Flammable materials must not be left in evacuation routes, corridors, walkways, passageways, stairwells or halls, next to facades or under canopies. The temporary storage of materials when work is in progress must be reported to and approved by the airport rescue service in advance. See contact details on the airport extranet.

4.5.1 Automatic water sprinklers

In areas protected by automatic water sprinklers: to enable the sprinkler to function as intended, it must not be blocked off. Leave at least 1 metre of height clearance between the material stored and the bottom of the sprinkler head.

4.5.2 Placement of containers or other material

Containers or other piles of material may not be placed in an area under a roof (covered loading bays and underground loading areas) or next to air intakes, in tunnels or the equivalent. Open containers must always be protected by netting or similar.

4.6 Areas for battery charging

The installation of charging points for vehicles requires Swedavia's approval. There is a guideline for how indoor charging points must be designed: *Anvisning skadeförebyggande och skadebegränsande – Brand* 'Instructions to prevent and limit damage – Fire', which can be found on the **airport's extranet.** This guidance must be followed.

Managers with responsibility for employees must ensure that their employees understand the risks and know how to use a charging point, as well as how to act in the event of an incident.

A R Should it prove necessary to deviate from the requirements of the guidance, the deviations must be risk assessed and documented before installation. This is to ensure traceability.

4.7 Events, indoor vehicle displays and other arrangements

If an event on Swedavia's premises could have an impact on fire safety – for example, a large number of people in attendance, the use of pyrotechnic products and the like – this must be notified in advance and approved by the fire duty officer at the airport in question.

If a vehicle is to be exhibited in a public space, the *Checklist for displaying vehicles* must be completed and approved by the airport's fire duty officer.

4.8 Fire extinguishing equipment

Handheld fire extinguishers in the airport area must not contain PFAS.

4.9 Disconnecting fire safety devices

Fire safety devices may only be disconnected following the approval of the officer at the airport responsible for the disconnection of fire safety devices; see contact information on the airport's extranet [Swedavia.net]**.** Applications must be submitted at least two days before disconnection is required.

This also applies to the disconnection of automatic water sprinklers and other stationary fire extinguishing equipment.

4.10 Electric Bicycles and electric scooters

Electric Bicycles, electric scooters and other similar small modes of personal transport may not be driven on Swedavia's premises, with the exception of medical aids and work vehicles, such as cleaning machines. The vehicles may not be parked nor the vehicles' batteries charged on Swedavia's premises except in areas specifically designated for the purpose. Electric Bicycles and electric scooters must be parked and charged in specially designated bicycle parking spaces.

4.11 Reporting and raising the alarm

All fire outbreaks and fire incidents must be reported via Swedavia's system for incident reporting,

see AR Part 1 chapter 5. Incident reporting

For details of the rules relating to raising the alarm in an emergency situation,

see AR Part 1 Chapter 6. Raising the alarm and evacuation

4.12 Fees

Swedavia may charge a fee to the owner for the removal of material placed in an unauthorised location.

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4.13 References

4.13.1 Related Information

- Swedavia's Fire Safety Policy
- Instructions to prevent and limit damage and injuries – Fire
- Charging electric and hybrid vehicles
- Checklist for displaying vehicles.
- Checklist fire protection for events and other arrangements

All fire safety information can be found at:

Bromma Stockholm Airport extranet [swedavia.net]

4.14 Contact information

Contact information can be found at:

Bromma Stockholm Airport extranet [swedavia.net]

5. Incident reporting

5.1 Introduction

5.1.1 The purpose of incident reporting

The purpose of incident reporting is to ensure that all disruptions, deviations, divergences, risks etc. at the airport, referred to below as *incidents*, are handled and do not occur again. Incident reporting also helps to identify and counteract undesirable trends.

Incidents are investigated with the principal aim of increasing security – not to examine any question of culpability.

5.1.2 Applicable regulations

Commission Implementing Regulation (EU) 2015/1018

Regulation (EU) No 376/2014 on the reporting, analysis and follow-up of occurrences in civil aviation

(EU) No 2016/679

ISO 14001, 4.5.3

AFS 2001:01

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5.1.3 A just culture

Swedavia practices a just culture in which individuals are not blamed for unintentional errors, but are held responsible for any intentional crime, sabotage, recklessness or gross negligence. This can also entail intentional deviations from regulations, processes and procedures.

5.1.4 Privacy

The contact details of the person reporting an incident are protected by privacy and handled in accordance with the General Data Protection Regulation (GDPR). In Swedavia's incident reporting system, people can choose to remain anonymous. If an incident is reported anonymously however, Swedavia cannot provide any feedback, and it may also make the investigation of the incident more difficult.

5.2 Responsibility

Anyone who works within the airport area and who observes or discovers an incident must report this immediately and in writing. *Immediately* means that the individual employee, or other representative of their organisation, must ensure that the incident is reported in the airport's incident reporting system before the end of that person's shift:

- For companies outside Swedavia – via Report Occurrence at the **airport's extranet** [Swedavia.net]
- For Swedavia employees – via Swedavia's intranet (select the right airport).

The primary duty of the employee or management is to take remedial action. Filing an incident report does not release anyone from this obligation.

5.3 What must be reported

An incident report must be filed in case of:

- an incident that has affected or could have affected aviation safety and/or serviceability or otherwise involved a divergence from planned or ordered operations
- an environmental incident or violation of environmental permit conditions
- inadequate or improper action by an individual
- other circumstances that have disrupted airport services.

5.3.1 Aviation safety – examples

Aviation safety-related incidents that it is mandatory to report in the authorities' (EASA/Swedish Transport Agency) systems in accordance with Regulation (EU) 376/2014 – either via the airport's incident reporting system or another operator's internal system – are listed in full in Regulation (EU) 2015/1018.

The following are examples of aviation safety-related incidents that must be reported:

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- FOD (Foreign object debris) in the movement area, such as plastic wrapping and other debris, which may cause damage to aircraft, equipment or people.
- Damage to aircraft, such as a baggage conveyor or passenger bridge that has damaged the aircraft.
- When a vehicle is driven or crosses the path of a taxiing aircraft in such a way that the aircraft must break or is disrupted in some other way.
- Risky manoeuvres with aircraft in which persons or property are damaged or were endangered, for instance, the risk of collision between an aircraft and a vehicle.
- Gatherings of birds, collisions with birds or animals running loose in the movement area.
- Deviation from aviation safety procedures and/or instructions/manuals/regulations in conjunction with the handling of an aircraft ground stop (*turnaround*).

5.3.2 Aviation security - examples

The following are examples of aviation security incidents that must be reported:

- Invalid/missing badge

- Airside door not closed
- Unaccompanied visitors
- Technical problems that impact perimeter security, such as passageways, security doors and card readers, must also be reported.

NOTE!

Emergency security incidents such as trespassing, unauthorised entry, suspicious items, tools or baggage left behind or a suspected crime shall be reported **immediately** to the Airport Security Centre. For contact information, see section **5.5.**

5.3.3 The environment - examples

The following are examples of incidents that must be reported:

- Excess fuelling, a spill or a failure to suction up glycol at the stand
- Spills of disinfectants or the contents from aircraft toilets
- Wrongly sorted waste or other failure to properly handle waste
- Prohibited engine idling or running of auxiliary power units (APUs)
- Unbermed chemicals or other failure to properly handle chemicals
- Incidents that entail or could lead to an environmental accident or a violation of environmental permit conditions

Reporting of environmental nonconformances

Report the location of the incident, time, quantity, extent, measures taken and sequence of events. Attach a picture where possible.

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5.3.4 Work environment

If an incident in an activity has caused ill health or injury to an employee, or was close to causing ill health or injury, it must be reported as an incident. Potential and future risks that could result in ill health or injury must also be reported in the incident reporting system.

A report must be made in the airport's incident reporting system, even if one is also made in the operator's internal system on the basis of employer responsibility. Employer's responsibility may arise due to the fact that the operator has coordination responsibility for the permanent workplace or developer's responsibility.

5.3.5 Functional faults – technical fault report

In the event of a functional fault, a technical fault report must be filed. A functional fault is where equipment or facilities are not working properly.

In the event of a functional fault affecting aviation safety, both an incident report and a technical fault report must be filed.

For other functional faults, and those which do not entail any of the risks described in the above section, only a technical fault report is required.

To make a technical fault report, see the **airport's extranet** [Swedavia.net].

5.4 In case of emergency incidents – follow the alarm procedure

Emergency incidents where there is an immediate risk to human life or health, the environment, property or economic activity must be handled in accordance with special alarm procedures,

see **Chapter 6** Raising the alarm and evacuation for more details, as well as the **airport's extranet**.

An incident report must be made once the emergency phase has been handled.

5.5 Monitoring

We use audits to monitor the reporting frequency and the willingness to report. Operators at the airport are expected to be actively involved in handling deviations, and Swedavia can also request an analysis of the causes and details of measures taken from the operators. Undesirable trends can lead to focused audits.

5.6 References

5.6.1 Related Information

Occurrence report:

- Bromma Stockholm Airport extranet [swedavia.net]

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Fault reporting:

- Bromma Stockholm Airport extranet [swedavia.net]

6. Raising the alarm and evacuation

6.1 Introduction

6.1.1 Purpose

The purpose of this AR chapter is to contribute to the effective handling of emergency incidents and so prevent risk to human life and health or the property and economic activity of operations.

1.1.1 Applicable regulations

Act on Protection against Accidents 2003:778., Chapter 2

Commission Regulation (EU) No 139/2014, as well as Acceptable Means of Compliance (AMC) and Guidance Material (GM) for government agencies, organisations and airport operations.

SFS 1998:808 Chapter 2, Section 8

SFS 2003:778 Chapter 2, Section 4

SFS 2004:168

SFS 2006:1570

SFS 2011:927

A R AFS 2023:12 – Workplace design/evacuation

6.2 Raising the alarm

6.2.1 Responsibility for raising the alarm

All employees of Operators with operations at the airport have a duty to immediately raise the alarm in the event of incidents that constitute or may constitute a risk for human life and health or the property and economic activity of operations, including:

- Bomb threat, other threat or suspected threat
- Fire, suspicion of fire or other acute danger
- emissions with a risk of spreading to land and water, spills of flammable goods or similar environmental incidents,

see also AR Part 3 Climate and the Environment, Chapter 2 Clean-up

- Infectious diseases or infectious agents (see also Infection Control Guide):

Ebola, smallpox and severe acute respiratory syndrome (SARS), as well as polio, human influenza caused by a new subtype, cholera, plague, yellow fever, viral hemorrhagic fever (but not vole fever) and West Nile fever. In the event of multiple cases that may cause the spread of disease on an aircraft and where the cause is not known for certain, such as food poisoning, this should also be reported. Other circumstances that may potentially constitute an international threat to human health, such as radioactive and chemical substances, must also be reported.

- Improper use of authorisation documents
- Baggage left behind, suspicious objects
- Acute risk of ill health or accident, acute personal injury or illness
- Suspected criminal acts taking place in the airport area.

Note that you must always file an incident report – even when you raise an alarm in the event of an emergency incident.

Swedavia charges a fee to operators who trigger a fire alarm through negligence or failure to act.

Alarm lists and other guidance can be found on the **airport's extranet** [Swedavia.net].

6.3 Evacuation

6.3.1 Preventive responsibility

Each employer/manager is responsible for:

- ensuring that their own staff members have basic knowledge of fire protection
- preparing evacuation instructions and communicate them internally
- planning and carrying out staff evacuation drills for their own premises and documenting each drill.

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6.3.2 Decision to evacuate

In the event of fire, threat, explosion or similar, the following executive officers have the authority to decide immediately on evacuation:

- ADO – Airport Duty Officer
- ADM – Airport Duty Manager
- Rescue Officer – Airport Rescue Service
- Head of Operations – Police
- Rescue Officer – Municipal Rescue Service
- Airport Director
- APOC Supervisor
- Head of Security

6.3.3 Coordination of evacuation

When evacuating the terminal, all employees must work together with other staff to quickly and efficiently ensure that the public comes to safe place. This must be done without putting yourself in danger. The employee must then move to a safe place themselves.

You always have an obligation to help others in the event of an evacuation.

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6.4 Monitoring

If an investigation following an incident show that an alarm has not been raised or that there have been deficiencies in how this was carried out, an operator may be entitled to claim compensation.

Swedavia is entitled to audit staff training on evacuation and the training exercises must be documented.

6.5 PDV incidents

Incidents of the nature of ongoing deadly violence (PDV) are distinguished by their rapid course and require special focus.

The document Guide PDV - ongoing deadly violence under Related information below is intended to support the airport in preparing for a structured, effective and coordinated response to PDV incidents.

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6.6 References

6.6.1 Related Information

Evacuation guide

Evacuation map

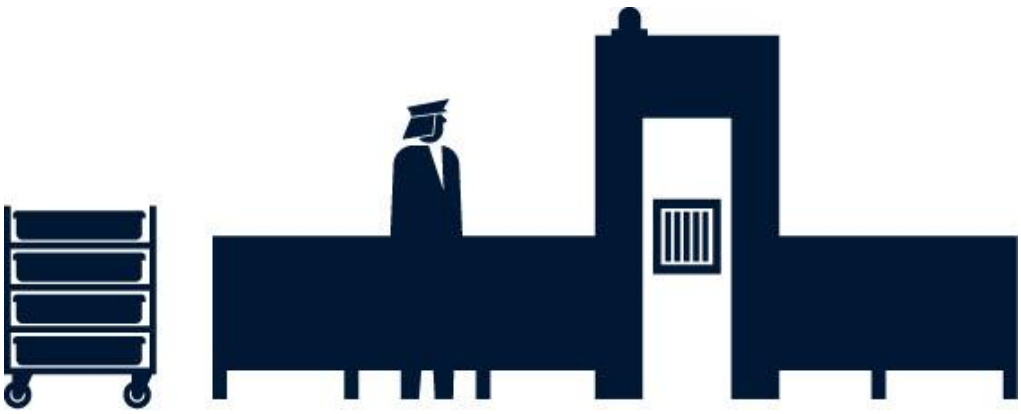
Instructions for bomb threats (web page)

Crisis management (web page)

Guide PDV – ongoing deadly violence

Airport Regulations

Part 2. Security



Swedavia Airports

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Contents

Part 2. Security

1. Introduction

1.1 Purpose

The purpose of this chapter on security is to clearly describe the airport's aviation security requirements. The objective of aviation security is to protect passengers, crew, ground crew, the public and property against illegal acts. Illegal acts include, for example, criminal attacks such as sabotage, hijackings and hostage-taking.

1.2 Regulations

Under the Swedish Transport Agency's regulations, an airport must have security approval and a Local Security Programme (LSP).

The airport's LSP describes the objectives and security standards that apply for aviation security and is based on the Swedish Transport Agency's regulations. The LSP is also applied through the airport's local regulations, AR, which among other things clearly describes the responsibilities of companies and employees with respect to aviation security.

1.3 Applicable regulations

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The Swedish Transport Agency's aviation security regulations (TSFS 2020:80)

The Swedish Protective Security Act (2018:585)

The Swedish Protection Act (2010:305)

The Swedish Criminal Records Act (1998:620)

The Swedish Allegations Registry Act (1998:621)

The Swedish Police Data Act (1998:622)

2. The airport as a subject of protection

2.1 Subject of protection

According to a decision by the County Administrative Board, the airports are subject of protection as provided by the Swedish Security Act (2010:305). The police and the security guards employed by the security services contractor have special powers in a subject of protection, whose boundary is marked by special signs.

2.2 Enclosure

The enclosure between airside and landside must consist of a fence that is at least 250 cm high. The area within 3 metres outside and inside a fence alongside the airside boundary must be free of objects that may facilitate efforts to open it. Local exceptions to the 3-metre rule inside fences are permitted.

2.3 Work and modifications in the subject of protection

The airport's Security Department must be informed and approve all work affecting perimeter security **prior to** the start of such work. This applies to work with fencing or road gates, as well as in perimeter boundaries between authorisation areas, or between landside and airside, and towards the DMA.

For other changes in the airport area, such as refurbishment and new construction, or other operations or activities that may have an impact on aviation security, the function/project manager in charge must consult the Security Department well in advance on the matter.

Note that the roofs of the terminal buildings are to be regarded as part of the authorisation area and may not be accessed except for legitimate job duties.

The airport's Head of Security handles any consultation procedures with the Swedish Transport Agency.

2.4 Regulation of camera surveillance

Permission is required for the use or installation of camera surveillance within the subject of protection or in the passenger terminals. The airport's Head of Security has ultimate responsibility for granting this type of permission.

Application for permission must first be made to the competent authority and, if approved, subsequently to the airport's Head of Security.

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No camera surveillance equipment or pictures from existing camera systems may be disseminated without the consent of the airport's Head of Security.

2.5 Personal security alarm or panic alarm

A personal security alarm is the formal name for a panic alarm.

Personal security alarms are located in several places within the airport and are connected to the Airport Security Center. A personal security alarm automatically calls for assistance from a security guard or the police.

A personal security alarm may only be used in the event of danger or an unsafe situation, such as a personal attack or if employees feel that the situation is an acute threat to their own safety.

In other cases (such as a forgotten bag, an acute illness that does not concern one's own person), staff should call the airport's management centre to ask for a security guard through them.

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2.6 Site specific information Bromma

2.6.1 Imaging prohibition Bromma subject of protection

Bromma Stockholm Airport is a civil subject of protection. Within the subject of protection, which includes terminals and all areas within the airport fence, as well as areas in connection with these, an imaging ban has been established by the County Administrative Board.

Until further notice, Swedavia chooses to have an exception to the rule on imaging prohibition in all places except in the areas where security checks are carried out, part of DMA East and part of DMA North, in the Swedish Customs Administration's control premises and in the Police's premises.

If necessary, for example in the event of incidents that threaten security (special incidents), the exemption may be lifted at very short notice, after which imaging prohibitions apply throughout or at specified parts of the airport.

The Security Manager at Swedavia decides if and when the exemption will be lifted and a ban on imaging introduced.

2.6.2 Regulation of camera surveillance Bromma

Any person, company or organisation that needs to use or set up camera surveillance within the subject of protection or in the passenger terminals must always obtain approval from the security department at Bromma Stockholm Airport.

3. Access control

3.1 Introduction

3.1.1 Authorisation area/CSRA

The CSRA (Critical part of Security Restricted Area) of the airports refers to those areas in the airports to which the public generally does not have access and for which airport personnel must have special authorisation.

In order to gain access to a Critical part of Security Restricted Area (CSRA), a person must have a valid reason to be there, hold a valid permit and pass a security screening before being granted access to the area.

3.1.2 Access for persons

In order to gain access to authorisation areas, a person must provide one of the following:

- a valid boarding card or the equivalent
- a valid form of identification for crew members
- a valid authorisation card/badge
- a valid form of identification issued by the competent national authority
- a valid form of identification recognised by the competent national authority.

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3.1.3 Access for vehicles

A vehicle must be equipped with a vehicle permit, i.e. a vehicle pass card.

3.2 Agreements for operations at an airport

Companies or public authorities that need to use authorisation documents must sign an agreement containing a security clause with the airport or sign a separate security agreement. This also applies to white landside badges or for access to the demarcated area (DMA). Security agreements and security clauses are aimed at ensuring that the aviation security regulations in effect are observed.

Companies and organisations that have operations in buildings in areas with access to authorisation areas (CSRA) are responsible for ensuring that access to the authorisation areas is in accordance with the airport's regulations in effect.

3.2.1 Deregistering staff with special responsibility

Companies or public authorities are responsible for deregistering their security manager, security administrator, person in charge of visitor rights or person in charge of keys in writing to the airport's Service Centre when that person will no longer hold the position.

3.3 Rules regarding entry

3.3.1 Persons, objects and goods

All access to an authorisation area by persons and goods must be made through monitored security screening points for passengers or monitored security screening

points for persons and goods (PVK). All other access shall be regarded as unlawful entry into the airport's authorisation and security-controlled area. Exceptions may be made for emergency response personnel and as necessary in an emergency situation at the airport.

All employees and the items they bring with them must undergo an approved security screening before access to the authorisation area is granted. Persons passing through a security screening point must follow the instructions of the security screening staff.

3.3.2 Vehicles

Vehicles that are to enter the authorisation area must have a valid vehicle permit that corresponds to the vehicle and must be approved by security personnel before entry is permitted.

All personal belongings must be brought in for security screening. Drivers and passengers must not be in the vicinity of the vehicle until the vehicle check has been completed and approved by the security personnel.

Vehicles for which a satisfactory vehicle inspection cannot be carried out may be denied entry to the airport's authorisation area. In such cases, the driver must put the vehicle in order and/or reload the vehicle so that a satisfactory vehicle inspection can be carried out.

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When entering through monitored security screening points for passengers or monitored security screening points for persons and goods, a badge must be shown to the security screener, who must swipe the badge through a card reader (authorisation check) to check that the badge is valid.

3.4 Prohibited items and tools

Objects that can be used as weapons or cause damage to persons or property must not be brought into the airport's authorisation area. The bringing of tools into the authorisation area is therefore strictly regulated.

Employees who are to enter the authorisation area and bring with them tools needed to carry out their work must go through a security screening and authorisation check and be able to justify what the tools brought with them will be used for. Authorised staff at the security checkpoint/road gate will make a reasonability assessment before entry is authorised. They are entitled to refuse the entry of prohibited items and tools into the area.

Tools brought into the authorisation area must be supervised and kept inaccessible to unauthorised persons for the entire time they are in the authorisation area. Vehicles that contain items (tools) and are left unattended, or are parked, must be locked. Alternatively, items must be kept in a locked receptacle in the vehicle, such as a tool cabinet firmly attached to the vehicle.

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Prohibited items in cafeterias and restaurants, workshops and hangars as well as other premises in the authorisation area must be kept under continuous supervision or be locked up.

Companies or public authorities must ensure that employees who handle prohibited items such as tools keep the items under continuous supervision or lock them up.

The person responsible for points of sale located in the airport's authorisation areas must ensure that security tamper-evident bags (STEB) intended for the packaging of purchased liquids are secured against unauthorised access and that there are established procedures for dealing with this.

No sales of prohibited items are allowed in authorisation areas. If there is any uncertainty about what constitutes a prohibited item, contact the Security Department for a decision.

Visit the Swedish Transport Agency's website for an up-to-date list of the items that are defined as **prohibited items** at an airport. This is the same as the list of prohibited items for passengers to take on a plane.

Operations are also subject to the Swedish Act on the prohibition of knives and other dangerous objects (1988:254).

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3.4.1 Tools Airside at Bromma

Companies operating airside and using tools to perform their tasks must have marked tools, as well as procedures and checklists to control the tools when they are used and after the work is completed. Tool marking is considered to be some type of business text or symbol on the tool.

Personnel using tools must ensure during and after work that no tools are left behind airside, on aircraft, or in vehicles. During ongoing work within the movement area, a check of the carried tools must be made before moving to a new location.

If tools are found to be missing, ATOS, tel. 010-109 43 30, must be contacted immediately to initiate a visual inspection of the movement areas.

4. Authorisation areas at airports

4.1 Basic security

The airport must be and be seen as secure for the general public and employees.

We must first and foremost prevent terrorism, hijacking, sabotage and crime. So, it is important that unauthorised persons do not gain entry to our authorisation areas.

The airport must have committed employees who are aware about security, who feel responsibility for their workplace, for civil aviation and for their own security.

4.2 Colour codes on authorisation documents

Employees with an authorisation document must know which colour codes are issued for which authorisation area and be familiar with the regulations in effect for aviation security in Airport Regulations (AR).

Within the subject of protection, the airport is divided into authorisation areas, which are identified by the following colour codes:

- **Red**
- **Red/white striped**
- **Yellow**
- **Green**
- **White**

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The colour marking of authorisation documents indicates which areas the holder is authorised to be in.

The authorisation areas at each airport can be found in the site-specific sections of Airport Regulations.

4.3 Airside

The airside of the airport is the movement areas, adjacent land and buildings or parts of these to which access is restricted.

4.4 Demarcated area (DMA)

The DMA is an area at an airport that is separated from an authorisation area by entry checks. These could be areas for private commercial aviation, for example**.**

4.4.1 Entering or leaving a DMA

Anyone who wishes to enter a demarcated area (DMA) from an authorisation area must always contact the Airport Security Centre (LC) before access is granted.

Security screening and verification of authorisation for entry must be carried out for people and vehicles prior to their entering the authorisation area from the demarcated area and from airside.

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4.4.2 Passing in or out of DMA are at Bromma Stockholm Airport

Security screening and verification of authorisation for entry must be carried out for people and vehicles prior to their entering the authorisation area (CSRA) from a demarcated area (DMA).

4.4.3 Demarcated area at Bromma Stockholm Airport

An area at an airport that is separated from an authorisation area by entry checks. At the airport, this applies to DMA North and DMA East on airside.

4.5 Division into authorisation areas at Bromma

4.5.1 Red authorisation area

- Northern operating area (glycol plant, vehicle fuel plant)
- Tank facility
- Runway lighting facility
- Fire exercise site
- Ramp areas (apron)

4.5.2 Red/white striped authorisation area

Luggage sorting facilities in the passenger terminal and premises where security-controlled baggage is temporarily stored.

Access to these areas shall be limited to the staff who have duties there. This applies to those working on loading, unloading, equipment operation and service, as well as security for hold baggage and persons given authorisation for these areas by Swedavia's Security Department.

4.5.3 Yellow authorisation area

Transit area of passenger terminal, including security control facilities.

Personnel with yellow authority and who have their regular workplace in the transit area have the right to pass by the shortest route between PVK Terminal and transit area (yellow area).

4.5.4 Green authorisation area

Manoeuvring area (runway, taxiways & street areas).

4.5.5 White area

The white area is an access restricted area that requires authorisation.

Arrivals luggage halls and areas in the Tower, including air traffic control premises, are considered white areas.

The area comprising the Tower and Building 020 is also classified as a subject of protection.

The DMA (Demarcated area) is an area at an airport that is separated from an authorisation area by entry checks. At the airport, this applies to DMA North and DMA East.

5. Recruitment and background check

5.1 Introduction

An approved background check is required in order to obtain an authorisation document and access to the airport's CSRA.

5.1.1 Purpose

The purpose of a background check is to determine whether a person can be considered loyal to the interests that are to be protected and is otherwise reliable from a security standpoint. Another purpose is to investigate any vulnerabilities that could put the person in an exposed position and make them vulnerable to external pressure.

5.1.2 Regulations

The regulations that govern background checks on staff at the airport are the Swedish Security Act (2010:305), the Swedish Security Protective Security Act (2018:585) and the Swedish Transport Agency's aviation regulations (TSFS 2020:80).

All operators covered by the TSFS must observe the regulations noted above.

5.2 Employee categories subject to a background check

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The following employee categories are subject to a background check and are categorised in security class 3 according to Chapter 3, Section 9 of the Protective Security Act (2018:585):

- persons with unescorted access to authorisation areas and security areas
- persons with a position as certified security staff
- persons who have more than limited access to confidential information of importance to aviation security
- security managers
- instructors who provide training for security staff and EDD teams
- persons with a position that entails unescorted access to airport supplies
- persons with a position that entails administrator rights or unmonitored and unlimited access to critical information systems, systems for communication technology and data that is used in aviation security

5.3 Security clearance

A background check consists of several elements:

- Security interview
- Verification of information – such as school transcripts, certificates and references
- Check of public records – if the position is categorised in a security class

- Special personal investigation – if the position is categorised in security class 1 or 2.

5.3.1 Security interview – knowledge about the person

- **Identification** – established with an ID card, driving licence or similar ID.
- **Security interview** – must be carried out by the employer to determine whether the person is suitable for work at the airport from a security perspective and to gain more in-depth knowledge about the person. The interview must be documented.

5.3.2 Verification of information such as school transcripts, certificates, references

- **Work experience, school transcripts and certificates should not contain any gaps.**
  It should be possible to follow a person's work history, school transcripts and other certificates for at least five years to corroborate information in the background check. The experience must be presented up as a table or a CV. If there are any gaps (in studies, between jobs, etc.) in the past five years longer than 28 days, these must be explained and if necessary verified. If the gap is related to an extended holiday, this can be overlooked if it comes up in the interview.

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- **At least two references from previous employers.**
  References (at least two) must be provided from previous employers. Reference checks must be documented with information about the date of contact, names of the people, their position and the outcome/opinion. The opinion must be drawn from a security perspective.
- Persons resident outside Sweden during the past five years.

  People whose country of residence has been outside Sweden at some point during the past five years must be able to provide a statement from the criminal records register or equivalent from an authority in the relevant country/countries of residence showing that the person has not committed any crime. Statements must be in English or Swedish or translated into one of these languages by a certified translator.

  Country of residence is defined as the country a person has lived in without interruption for at least six months.

  The statement from the criminal records register must be attached to the application for a check of public records. If no statements are provided, the background check cannot be approved.

  More about the assessment of statements:

  - Business operators are expected to make a general assessment of the credibility of the statement as well as checking that it states that no offences

have been committed. An assessment of the credibility could be, for example, to check that the document appears to come from a government agency or an official source.

- The Swedish Transport Agency will then perform a further check on the statement. It is important that the statement is of high quality and is legible. If the original statement is scanned, it is important that the statement is shown in its entirety, and the copy is in colour. Photographing the record statement is not accepted as an approved copy.

5.3.3 Checklists used for security clearance

Companies/government authorities must use the following checklists for background checks:

- Checklist for taking references
- Checklist for security interview
- Checklist for Discussion for follow up of background check interview
- Checklist for Concluding background check interview

Alternatively, the Swedish Transport Agency's templates can be used, or equivalent with the same content.

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Some information from the allegations and criminal records registries may not be released and does not show up in a check of public records. It is therefore of vital importance that companies conduct a background check as specified above to assess whether the person can be considered reliable from a security perspective.

5.3.4 Documentation/files on background checks

Companies/government authorities must keep a file on anyone who has undergone a background check and works at the airport. Files must contain all documents that serve as the basis for the background check, including, for example, a documented security interview, ID check, transcripts/certificates, references and a check of public records. The documents must be kept as long as that person is an employee and may be examined by Swedavia's Security Department so that it can check that regulations are being complied with.

5.3.5 Background check for subcontractors and temporary staff

For subcontractors, the company/government authority that is the client at the airport may delegate the background check to the employer of the person hired. The client must ensure that the subcontractor has carried out a background check on that person in accordance with regulations and determined that the person is reliable from a security perspective before an application to carry out a check of public records is submitted, and any decision is made to hire that person. This also applies to temporary staff from an outsourcing firm.

5.3.6 Follow-up of security screened staff

The employer or client shall regularly (at least once every two years) conduct a follow-up of their staff to determine whether that person can still be considered reliable from a security standpoint for work at the airport.

This requires a new security interview with a focus on any change in the person's living situation since the last interview, such as a change in the person's finances or travel behaviour.

If there is reason to do so, the person's suitability to take part in security-sensitive operations shall be reassessed.

The follow-up shall be documented and could, for instance, be carried out in conjunction with employee reviews or the equivalent. A check of public records is carried out on a regular basis and no additional application to carry out a check is needed.

5.4 Checking of public records

5.4.1 Application for a check of public records

Applications for a check of public records are made digitally via REKON when the company intends to hire a person. The person who is to be checked must sign a consent form, giving their permission for a check of public records to be carried out. The consent form must be kept by the business operator together with the basic investigation and must be available for inspection.

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5.4.2 Cancellation of checking of public records

The employer or client must promptly cancel the checking of public records in REKON when employment ceases. If the checking of public records is not cancelled, the checking will continue, which constitutes an invasion of that person's privacy. Information about the person will then continue to be sent improperly to the requesting authority.

6. Authorisation cards, keys and pass cards for vehicles

6.1 Definitions and language used

The airport is an international environment with its own language usage that is different from use in other contexts. The words we use in our daily work have been chosen so that the meaning is clear.

The key words in this section and some general definitions:

What we say at the airport	Definition or synonym
Badge or photo badge	Pass card for staff, authorisation card
Vehicle permit	Pass card for a vehicle
Driving permit	Driving licence valid in traffic areas
Crew identification	Pass card for flight crew
Visitor badge	Pass card for a visitor
Airside	The area inside the airport fence, the part of the airport area to which the public does not have access and for which staff at the airport are required to have special authorisation;

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6.2 Badge/photo badge

A photo badge must contain the following information:

- the holder's name
- photo
- badge number
- validity period
- employer
- colour marking for the authorisation area
- barcode

The colour markings are red, yellow, green and red/white striped for the different authorisation areas. A badge often has a combination of these colours.

A white colour marking indicates that the person does **not** have access to the part of the airport's authorisation area that requires a background check and a check of public records.

Photo badges are issued for a maximum validity period of 2 years.

6.2.1 Temporary photo badge

Temporary photo badges are for employees who will only be working at the airport for a limited period of time, such as seasonal workers.

Temporary photo badges have a 90-day validity period.

6.2.2 Replacement of photograph

The airport's Service Center is entitled to require that the photograph be replaced if a badge holder has substantially changed in appearance. The current photograph must also be replaced when it is more than 4 years old.

6.2.3 Security and Safety training

All employees who are to receive a badge that gives access to authorisation areas must complete Swedavia's Security and Safety training course**.** A link to this training course is provided on Swedavia's **extranet** [swedavia.net] under Quick Links and it can be completed once the check of public records has been submitted.

Companies or public authorities must ensure that employees have understood the content of the training course and that they keep up their skills and maintain a high level of security and safety awareness.

A R Employees must take a refresher course at least every two years in conjunction with the renewal of their badge. All employees are automatically given access to the Security and Safety training course two (2) months before the validity of their badge expires.

6.2.4 Basic requirements for authorisation documents

Authorisation documents are issued to employees of a public authority, company or other organisation carrying out operations at the airport who need frequent access to the airport's authorisation areas in their work.

The business operator must first have a valid agreement with Swedavia.

The authorisation document is to be issued to the company where the person is employed and from which they are paid wages. There may be some exceptions. When applying for a badge, the company/public authority attests that the person has an approved background check, is considered reliable and has completed an approved Security and Safety training course.

6.2.5 Need for access to authorisation areas

The security manager/administrator must examine the person's need for access to the different authorisation areas when a badge application is made. The colour code of the badge indicates in which authorisation area(s) the person has their main work duties. The Security Department may reconsider the company's application for access to authorisation areas.

By signing to receive an authorisation document, the person acknowledges their obligation to read and understand the regulations in effect that apply to holders of

relevant documents such as a badge, keys, driving and vehicle permits. This obligation also includes the rules that apply on entry to/exit from an authorisation area as well as, where relevant, the operation of motor vehicles at the airport.

The authorisation is assessed when the company applies for an authorisation document.

Any authorisation document not collected within 3 months will be cancelled. If necessary, the company can submit a new application, which entails a new cost.

6.2.6 Employees or subcontractors of multiple companies

People who are employed by or hired to work for more than one company at the airport must use the badge associated with the company or public authority for which they are performing their duties at that time.

6.3 Replacement badges

In the event that a photo badge is lost or not brought to work, a replacement badge is to be obtained as a temporary replacement. The replacement badge can only be signed out at the airport's Service Centre during regular business hours.

The replacement badge is valid for a maximum of 7 days.

A standard badge is deactivated when a replacement badge is obtained and reactivated when a replacement badge is returned.

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Note that a visitor badge can never be used as a replacement badge.

6.4 Visitor badge

In exceptional cases, visitors may be given a visitor badge that provides access to the airport's authorisation areas.

A visitor badge is valid for a maximum of one day (24 hours).

There are two versions of the visitor badge:

- Visitor
- Trainee
  - a certificate from the school is enclosed with the application
  - the badge is valid for a maximum of 21 days

6.4.1 Information on the visitor badge

A visitor badge must contain the following information:

- The visitor's first and last name
- The word VISITOR
- Date of visit
- Name of escort
- Authorised client

- Company name

6.4.2 Rules for visitor badges

- The visitor badge must be worn the right way up, with the front displayed and clearly visible at chest level.
- A visitor badge is issued on the day it is used, so a new badge is issued for each day it is required.
- A visitor badge may only be used on a maximum of 12 occasions during a 12-month period.
- A visitor badge may only be used for work-related visits concerning the company's activities, such as study visits, training, job interview. It can also be used for a single contractor assignment that is not planned, e.g. repair of equipment of any kind.
- Issuance of a visitor badge does not require completion of a check of public records. However, a person with a visitor's badge must always be escorted.
- Children and younger people

  For safety reasons and to avoid accidents, children under the age of thirteen are not permitted to enter the apron, manoeuvring and movement areas in the authorization/restricted areas.

  Children and youths aged 13–19 may visit their parents' workplace on the apron, manoeuvring and taxiing areas in the authorisation areas. The security manager (appointed in accordance with the airport's authorisation system) for the company or Swedavia must give their permission. Visitor rules apply.

  Children aged 6–12 and Young people aged 13–19 may visit their parents' workplace in terminals and the transit area. The security manager (as above) for the company or Swedavia unit must give their permission. Visitor rules apply.

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6.4.3 Application for a visitor badge and escort

Only someone who has visitor rights to the airport can apply for a visitor badge and escort. Having visitor rights means having the right on behalf of the company to decide on and apply for visits for one or more people to the workplace.

The holder of visitor rights and the escort must hold a valid photo badge that has been active for at least the last three (3) months at the airport in question. The escort must work at the same company as the person who has visitor rights.

For contract work, the client must be the one who applies for a visitor badge and an escort. The client must be listed in the airport's authorisation system. The escort must work for the client or for the contractor concerned and hold a valid photo badge that has been active for at least the last three (3) months.

6.4.4 Use of visitor badges

Visitor badges may not be used as a replacement for lost or forgotten photo badges or while awaiting approval on a check of public records when a company intends to hire someone.

The use of a visitor badge must not be abused or systematic. For example, it may not be used instead of applying for a photo badge in connection with a contractor's assignment. Companies that replace people once their visiting days have been used up are abusing the purpose of a visitor's badge.

If a person needs access to the airport to carry out an assignment, an application must be made for a standard photo badge.

White photo badges may never be used as visitor badges to gain access to authorisation areas.

6.4.5 Visitor escort – visitor badges

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- Visitors must always be escorted when they are in the airport's authorisation areas.
- The person serving as escort must have an active and valid photo badge at the airport in question and have held it for at least three (3) months before escorting.
- Escorting may only take place in the areas that the escort is authorised to be in.
- The assigned escort must ensure that the identity of the visitor corresponds to that on the visitor badge before access to airside is granted.
- An escort may accompany a maximum of five (5) people. For applications for visitor badges for groups of more than five, the number of escorts must be adapted to the number of visitors.
- Security staff may ask to check the visitor's ID against the visitor badge before access to the authorisation area is granted.
- The escort must make sure that the visitor with a visitor badge understands they must always be accompanied by the assigned escort. The visitor must also never be in an authorisation area unsupervised.
- The escort may never leave the visitor out of their sight and therefore may not carry out other duties during this time.
- The escort must make sure that the visitor does not violate any security requirements or do anything unlawful while they are in the authorisation area.
- In the event of an emergency incident where the assigned escort must hand over the visitor to another escort, the escort must be with the same company/have the same assignment. The new escort must also have a badge that has been active for at least the last three (3) months.

- The escort is also responsible for ensuring that visitor badges are returned to the airport's Service Center or a staffed security point at the end of the visit.

6.5 Crew identification/Crew badges

Aircraft crew members on active duty are generally authorised to enter red or yellow areas in connection with an arriving or departing flight.

The crew must wear crew identification, or a badge issued by the airport so that it is clearly visible.

Aircraft crew members (civil) with the airport's authorisation documents (yellow) have group access to the red authorisation area in connection with training. See Border Control for Crew.

6.6 Keys

Keys are a valuable document and must be handled and stored properly.

Swedavia's Security Department administers keys to sensitive security areas and keys that are part of the airport's perimeter security (border to/from CSRA) and must give approval before a key is issued.

Otherwise, keys are handled by Swedavia AB.

Swedavia's key system should be used in the airport area so that it is possible to gain access to the premises in an emergency.

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The lease agreement stipulates how spare keys and door codes are to be handled.

6.7 Vehicle permit

In order for a vehicle to be in an authorisation area, the vehicle must have:

- an established operational need
- a vehicle permit - permanent, temporary (TF), or visitor for vehicle

In order to drive a vehicle in an authorisation area, the driver is required to have a driving permit issued by the airport in question.

Vehicles without a valid permit that will be in an authorisation area on a single occasion, as a visitor, must apply for a visitor vehicle permit and be escorted within the restricted area.

The vehicle permit must contain the following information:

- registration number,
- colour marking for the traffic areas,
- the last date the vehicle permit is valid.

The vehicle permit must be attached to a place so that it is clearly visible and in a way that ensures it cannot be transferred to another vehicle.

6.8 Fees for authorisation documents

Swedavia charges a fee for issuing authorisation documents and keys based on a fixed tariff. Swedavia also charges a fee when companies or public authorities do not return them. The current fees can be found on Swedavia's **extranet**: [swedavia.net]

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7. Issuing of authorisation documents

7.1 Responsibility of the person carrying an authorisation document

Authorisation documents and keys are issued at the airport's Service Center.

Authorisation documents and keys may only be picked by the person to whom they are issued.

The airport's Service Center is entitled to refuse to issue an authorisation document if the person's identity cannot be verified.

An authorisation document is a personal document. It may not be transferred to another person and must be kept so that no one else can gain access to it.

Exceptions to the transfer stipulation are for an authorisation check performed by security screening staff or when the company/public authority with ultimate responsibility for the employee's authorisation documents requires them to be returned to store the document themselves.

7.2 Identity documents for signing out authorisation documents

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Authorisation documents may only be picked by the person to whom they are issued. The person must be able to confirm their identity with an identity document such as:

- a valid ID card issued by the Swedish Tax Agency
- a valid Swedish passport with a burgundy cover
- a valid Swedish national ID card
- a valid Swedish driving licence
- a valid Swedish SIS-marked ID card issued by, for example, a bank, a company or a public authority.

As a general rule, citizens of other EU/EEA countries must confirm their identity with:

- a valid passport or a national ID card.

As a general rule, citizens of countries outside the EU/EEA must confirm their identity with:

- a valid passport.

A trainee or other visitor who is 17 years old or younger need not provide a form of ID if that person's guardian or the person with visitor rights at the company can verify that person's identity.

7.3 Wearing a photo badge

7.3.1 Rules – wearing a photo badge

- All those who work at the airport must carry their photo badge during every shift or carry crew identification.

- Photo badges and crew identification must be worn the right way up, with the front displayed and clearly visible at chest level.
- Photo badges and crew identification must not be covered in any way so that the identity is not clear.

7.3.2 Rules – entry

Anyone passing through a gate or door to or from an authorisation area is responsible for ensuring that the gate or door is closed, and that no unauthorised person passes through. People coming after must use their badge in the card reader or show a valid badge for the authorisation area.

7.3.3 Basic principles for presence in an authorisation area

The basic principles for all presence in an authorisation area are that:

- the person has the right to be there
- the person is on duty
- the person has a task to perform that is part of their job

Authorisation documents may not be used for any purpose other than that for which they are intended.

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A person's right to be present in authorisation areas is determined by the person's photo badge having the correct authorisation colour for the area and the employee's company or authority conducting operations in the area in question.

Employees may be present in authorisation areas other than those indicated on their badge if they are there temporarily for an assignment while on duty. If necessary, the company's management should be able to confirm such an assignment.

Note that this does not apply at baggage sorting facilities (red/white-striped authorisation area) – here the person must: **always** be escorted by staff with authorisation for the baggage area.

7.3.4 Transit area (yellow)

The airport's transit area (yellow) is included in sensitive parts of the authorisation area and is part of the airport's passenger process.

Employees may not use their badge for non-work matters, such as to see off departing passengers or meet friends or relatives arriving in the authorisation area or in the baggage halls within the customs screening area.

No items may be passed between staff and passengers within the authorisation area.

All companies and public authorities are responsible for ensuring that their staff comply with all rules regarding presence in the transit area.

7.3.5 Authorisation documents when travelling

Employees who take flights on business or as private individuals must follow the normal passenger process and not use any form of authorisation document at any point in the process. This means that:

- Employees must pass through all relevant checks, such as security control, border control and customs checks, in the same way as other passengers.
- The security check must take place at the security control for passengers.
- Employees are not permitted to wear their badge in the transit area nor to use it or keys to bypass checks.
- Employees may only access the transit area using their own boarding card. Badges may not be used.
- Employees must not be present in areas outside the passenger flow during their journey, such as staff areas, operational areas or offices located within the transit area.

7.4 Other areas at the airport

7.4.1 Doors in evacuation routes

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Doors in evacuation routes have emergency evacuation fittings that should only be used in the event of an evacuation. Most of these doors also have a card reader that controls access to a space.

The emergency evacuation device must not be misused or used other than during an evacuation.

7.4.2 Baggage handling

Access to the areas for baggage sorting and baggage storage is restricted to employees who have work duties there.

This applies to those working with loading, unloading, equipment operation and service, and security for hold baggage as well as to people given authorisation for these areas by Swedavia’s Security Department.

All checked baggage must be secured against unauthorised access within the area, indoors or outdoors, where the baggage is handled by airport employees once the baggage has been security-checked.

Employees who handle baggage at the arrival conveyor in the baggage sorting facility are obliged to remain there and see that hatches or gates are closed before they leave the area. They must ensure that no unauthorised person can enter the authorisation area once the last baggage has been placed on the arrival conveyor.

Baggage that is brought into the baggage sorting facility from the arrival hall (unaccompanied hold baggage) must first be screened before being left unattended for further handling or sorting.

7.4.3 Check-in counters and gates

Employees who work with check-in or the boarding of aircraft are obliged to close the check-in counters and gates before they leave them, ensuring that safety hatches to the baggage sorting facility are closed and that no boarding cards are left there. There may be other local solutions instead of safety hatches.

7.4.4 Schengen

Employees should observe the regulations that apply for Schengen/non-Schengen travel so that no crew members or passengers are allowed through employee passageways.

Passengers and crew from non-Schengen countries are not allowed to come into contact with passengers travelling within Schengen before immigration controls have been carried out.

7.4.5 Staff with “SECURITY” on their badge

Staff with a badge marked “SECURITY” are assigned functions with operational duties in the airport’s security and public order service and/or have a mandate to take decisions regarding a serious incident that affects aviation security.

Staff with “SECURITY” on their badge have the right to implement access controls and are also granted access to properties in the authorisation area.

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7.4.6 Companies that want to use RFID

Magnetic strip and chip can only be scanned using Swedavia’s card readers.

Companies that want to use badges issued by Swedavia in order to read the RFID in their own systems must submit an application to the Security Department. Each application submitted is decided individually.

8. Monitoring and compliance

8.1 Self-inspection

Companies/public authorities

- must have a system that ensures security commitments are carried out in accordance with applicable regulations such as TSFS and Airport Regulations, as well as their signed agreement with Swedavia.
- are responsible for ensuring that employees and any contractor hired has the requisite knowledge about security and that they comply with the regulations and agreements in effect.
- must communicate changes in regulations as well as new information to employees and any contractor hired. They must also ensure that employees and contractors hired have read and understood the content of changes.
- must have a system or procedure for handling authorisation documents at the company/public authority: applications for authorisation documents and the storage, return and loss of authorisation documents.
- that cease operations at the airport must inform the airport's Service Center of this and return the authorisation documents and keys that were issued to the company/public authority as well as ensure that any check of public records with the Swedish Transport Agency is terminated.

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The Security Department is entitled to monitor and check that the handling of authorisation documents and keys complies with the regulations and provisions in effect for the airport.

8.2 Lack of authorisation documents

- If an employee is discovered in the authorisation area without a badge visible, they are obliged to show a valid authorisation document upon request. If the employee does not have such a document, the Airport Security Centre (Ledningscentral, LC) or police must be contacted.
- If there is any uncertainty about a person's authorisation or if a crime is suspected, this must be reported immediately to the Airport Security Centre (LC).
- Employees at the airport are obliged to report immediately to the Airport Security Centre (LC) if they have observed an unescorted visitor in the authorisation area.

8.3 Return of authorisation documents

Companies, public authorities or individuals must immediately return authorisation documents to the airport's Service Centre

- upon the request of the Swedavia Security Department

- when employment ceases
- when there is a change of employer
- if there is a change in the need for access to authorisation areas
- when the validity of a badge expires or if a badge is withdrawn
- when the company ceases operations at the airport.

A vehicle permit must be returned immediately

- upon the request of Swedavia
- when the vehicle is no longer used to access the authorisation areas
- when the vehicle permit has expired.

An individual or company must return authorisation documents and keys to the airport's Service Center within five (5) days

- when the validity period has expired
- when employment ceases
- upon the request of Swedavia or the employer.

8.4 Loss of authorisation documents

- The loss of authorisation documents, vehicle permits, keys and visitor badges must be reported immediately to the airport's Service Center.

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- The loss of authorisation documents and keys must be reported to the police immediately. A copy of the police report must be sent to the airport's Service Center.
- Authorisation documents that are not returned will be charged at an established tariff.

8.5 Extended absence from work

Seasonal employees, individuals on long-term sick leave and those on leave from their job must return their authorisation documents and keys for safekeeping at the airport's Service Center. The same applies to other long-term absences.

In lieu of this, the company/public authority that is ultimately responsible for employee authorisation documents may require that they be returned for safekeeping by the organisation, provided that they are kept in a secured locker or equivalent. The company/public authority must notify the airport's Service Centre and ask for the document to be put on PAUSE.

8.6 Sanctions

If a person violates or abuses the above provisions, their authorisation documents, visitor rights and keys may be withdrawn following a decision by the Swedavia Head of Security or someone designated by that person. The decision can be temporary or permanent and can be made with immediate effect.

Sanctions may also assume the form of a written warning, which will be recorded in the airport's authorisation system (BKA). The employer in question will be informed whether such a withdrawal will take place or has taken place.

The Security Department may withdraw all authorisation documents, visitor rights and keys issued to the company if the company violates the security agreement or a security clause in another agreement. The Security Department may also decide to withdraw authorisation documents, visitor rights and keys for other security reasons that impact aviation security.

If there is a withdrawal of authorisation documents, visitor rights or keys, any appeal must be received by the Security Department no later than 14 days after notification of the decision by the Security Department at Swedavia.

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9. Handling of non-security-screened flights

9.1 Applicable regulations

All business flights (GA General Aviation) whose take-off mass is from 10 tons up to 45.5 tons shall be separated in flow from other scheduled and charter traffic

According to current EU directives and the Swedish Transport Agency's regulations Serie Sec, this type of traffic – which is classified as insecure– must not be handled in the vicinity of security-controlled flows.

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9.2 Parking and staging

Insecure aircraft do not comply with current EU directives and must be separated from the flow of other scheduled and charter traffic.

A security-screened area is aircraft, passengers, baggage, cargo and mail that are defined as screened according to current EU directives that apply in this area.

Companies or public authorities that handle insecure aircraft must ensure compliance with the regulations.

9.3 Site-specific information Bromma

9.3.1 Parking and staging at Bromma

Uncontrolled traffic on aircraft with a maximum take-off mass of up to 45.5 tonnes, as well as business flights, must always be parked in a demarcated area (DMA) in the North and East DMA. Upon arrival, passengers may not be mixed with other departing/arriving passengers at the airport.

Companies/ authorities that handle business flights (GA traffic) are responsible for ensuring that departing/arriving flight crew go directly to the demarcated area and do not pass through the airport CSRA area.

Once special measures have been taken, any deviations can be approved after approval from the Swedish Transport Agency or the security department.

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In case of uncertainty about the classification of the flight, it should be handled as uncontrolled.

A security guard, via LC, must always be contacted for PVK from DMA to CSRA (e.g. when fuelling aircraft). In some specific cases, escorting/monitoring to/from a defined area may be arranged as agreed with the Security Department.

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10. Other security issues Bromma

10.1 Extra monitoring

Swedavia's security department is responsible for security in consultation with the police and may request extra space for surveillance or to enable other security procedures around an aircraft.

10.2 Notification of night work at the airport and area protection measures

Notification must always be made to the airport management centre: bma-lc@swedavia.se, where work must be carried out next to the perimeter or at the airport after the runway closes.

Special notification must be made for measures in connection with area protection – such as fences, gates, roofs and perimeter protection boundaries between authorisation areas. This type of notification requires a decision by the Security Department, and the notification must be made no later than 48 hours before work is due to begin. Depending on the area and scope of work, monitoring requirements for security staff may be required during the work.

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11. References

For further information, contact Swedavia AB, HSSE Security

Checklist for taking references

Checklist for security interview

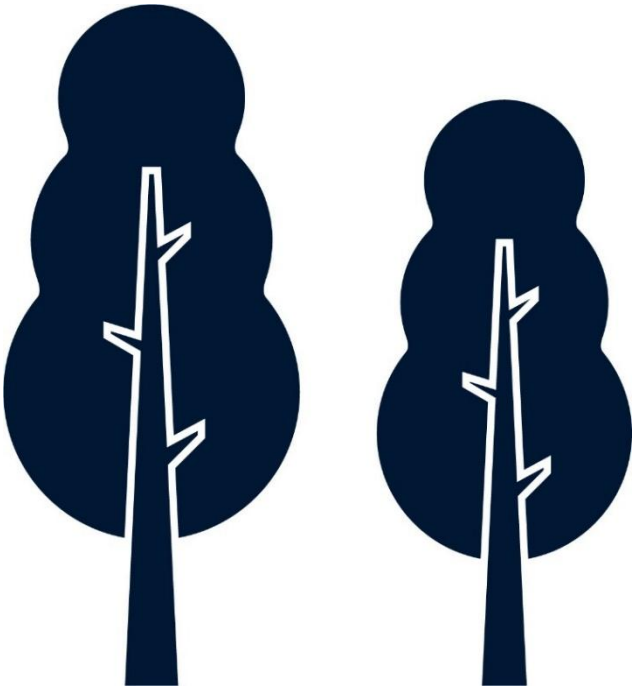
Checklist for Discussion for follow up of background check interview

Checklist for Concluding background check interview

Map authorisation areas

Airport Regulations

Part 3. Climate and environment



Swedavia Airports

Edition 5.0
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Contents

Part 3. Climate and environment

1. Chemical products

1.1 Introduction

This AR section covers the handling and storage of chemical products that are used and stored in the airport area. Chemical products are found in the form of granulates, powder, liquid and gas.

The purpose of this section is to ensure that chemical products are handled in a way that is safe for people, the environment and facilities.

1.1.1 Applicable regulations

1.1.1.1 EU legislation

REACH (EC No 1907/2006)

CLP (EC No 1271/2008)

F-gas Regulation (EU 517/2014)

1.1.1.2 Swedish legislation

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Environmental Code

Regulation (1998:901) on self-monitoring by the operator

Swedish Work Environment Authority's regulations on risks in the work environment (AFS 2023:10)

Act (2010:1011) on Flammable and Explosive Goods (LBE)

MSBFS 2018:3 regulations and general advice on tanks with connected pipes for flammable liquids

Regulation on fluorinated greenhouse gases (2016:1128)

Act (2006:263) on the Transport of Dangerous Goods

Conditions in the airport's environmental permit

1.2 Responsibilities of operators

The operator is responsible for ensuring that all handling, storage and transport of chemical products complies with the legislation in effect and that the chemical products handled in its operations are permitted under Swedish and EU regulations concerning both the outdoor and workplace environment.

Each operator is also responsible for having sufficient knowledge of the impact on the environment and health of the chemical products they use.

1.3 Documentation

1.3.1 List of chemicals

Each operation must have an up-to-date list of all chemical products with their commercial name, manufacturer, applications, normal annual consumption and classification in terms of their danger to the environment and to human health.

The list of chemicals can be made in the operators own system or in a template List of chemicals on the extranet [Swedavia.net].

1.3.2 Safety data sheet

The latest edition of all safety data sheets must be available near to where the product is stored and handled. Safety data sheets must be available in paper form or obtainable digitally. Safety data sheets should not be more than three years old.

1.3.3 Labeling

All chemical products, packaging, containers, tanks and pipelines must be correctly labelled with the contents in accordance with the legislation in effect.

1.3.4 Risk assessment

Operators must carry out risk assessments when working with chemical products and draw up work and safety instructions that describe how chemical products, that may have a negative impact on health and/or the environment, should be handled.

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1.3.5 Substitution

Operators must have a systematic approach to working with substitution. Chemical products that may pose risks to human health or the environment shall, wherever possible, be replaced by less harmful products or alternative working methods.

1.4 Storage and handling

- Chemical products must be handled and stored so that leakage is avoided and so that their spreading to soil, surface water, groundwater and wastewater is prevented. Leakage must also be avoided during loading and unloading.
- All chemical products must be stored in berms, spill trays or spaces with spill barriers that have no floor drain.
- The bermed area must store at a minimum the volume of the largest tank plus 10% of the total volume of the other tanks, if there are several in the same bermed area.
- The risk of fire, explosion and environmental damage must be taken into consideration. Cabinets/spaces specifically designated for storing flammable and/or environmentally hazardous goods must be used and posted with signs in accordance with the laws in effect.
- It is not permitted to store different types of flammable chemical products together or with other goods, if the risk of damage resulting from such storage

increases to more than negligible extent. This means that aerosols must not be stored together with flammable gases and flammable liquids.

- Products that may react with one another, such acids and bases or oxidizing substances, must be stored separately from one another.
- Spill protection and clean-up equipment must be readily available at the storage site.
- Overflow protection must not be used as a stop function when refilling.
- When transporting chemical products, the load must always be secured so as to prevent accidental spills.
- The emptying of chemical products into the sewage system, both outdoors and indoors, is prohibited.

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1.4.1 Cisterns

The following applies to cisterns used for the storage of fuels, glycol, formate and other liquid chemical products:

- Cisterns and related filling devices must be stored in leakproof bermed areas.
- The bermed area must store at a minimum the volume of the largest tank plus 10% of the total volume of the other tanks, if there are several in the same bermed area.
- The operator is responsible for ensuring that cisterns comply to the laws in effect.
- Cisterns must be equipped with a level gauge and overflow protection.
- Refilling via tanker vehicles must not be done to the point that the overflow protection on the cistern is triggered.
- Inspections must be performed in accordance with current regulations.
- The storage site must be protected against collision.

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1.4.1.1 The following applies to double-shell cisterns:

- Bromma Stockholm Airport: Double-shell cisterns do not need to be bermed but must be equipped with a working alarm to detect any leakage between the shells.

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1.4.2 Road tankers and tankers

- Road tankers and tankers with single-jacketed tanks shall have parking spaces (for longer unsupervised parking) connected to an oil separator with an alarm.
- Road tankers and tankers with a double-jacketed tank can be parked in ordinary parking areas. They must be checked regularly to ensure that there has been no leakage between the jackets.

1.4.3 Refrigerants

Operators who have or intend to install cooling units and equipment containing refrigerants must familiarise themselves with an applicable legal requirements. The legislation imposes requirements for refrigerants with low climate impact.

For those facilities with regulatory reporting requirements, the annual refrigerant report must also be submitted to miljo.bma@swedavia.se
as soon as the report is available, but no later than 1 April.

For the background to the requirement, see AR Part 3. Chapter 5. Fossil-free airport

1.4.4 Aviation fuel

Operators handling aviation fuel must report the month's managed volumes at the beginning of the following month to the local environmental function.
miljo.bma@swedavia.se

1.4.5 Other requirements for chemical products

- Degreasing agents that are conveyed to wastewater must be self-separating, so as not to affect the function of the oil separator.
- Chemical products used for washing vehicles must comply with the requirements for eco-labelling with the Nordic Swan or Good Environmental Choice or the EU Ecolabel, or alternatively be included in the Kemikaliesvepet's lists of approved vehicle detergents or degreasing agents.
- Products containing alkylphenol ethoxylates must not be used. These substances can be found in car care products, textiles and cleaning products.

1.4.6 Transport of hazardous goods

The operator is responsible for ensuring that the transport of hazardous goods is conducted in accordance with the laws in effect.

1.5 References

Chemical List Form

Template for Glycol Reporting Bromma

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2. Clean-up

2.1 Introduction

This AR section covers the clean-up of all types of spills and leaks.

Spills can consist of hydraulic oils, other oils, fuels, de-icing glycol and spills of toilet waste or disinfectant fluid/toilet chemicals from aircraft.

The purpose of this section is to limit damage to soil and water.

2.1.1 Applicable regulations

2.1.1.1 Swedish legislation

Environmental Code

Regulation (1998:901) on self-monitoring by the operator

Swedish Act on Protection against Accidents (2003:778).

Conditions in the airport's environmental permit

2.2 Clean-up in the event of leakage and spills

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2.2.1 Spill and clean-up equipment

Operators are responsible for ensuring that spill and clean-up equipment is on standby and available close to where chemical products or waste are stored and handled by the operator.

Swedavia ensures that there is Absol available for clean-up at selected aprons.

2.2.2 Clean-up measures

Whoever causes or discovers a discharge must always immediately:

- If possible stop/limit the discharge being released
- Prevent the discharge from reaching drains, non-hardened surfaces and/or watercourses
- Alert the airport's rescue service, , in accordance with the location-specific information below.
- Start clean-up

Important!

If it is not known how hazardous the spill is – Do not endanger yourself, but alert and await the arrival of the airport rescue service.

In the event of the discharge of flammable substances, where possible:

- secure the area from vehicles, sources of heat, or other items that can cause the formation of sparks or make the situation worse.

B M A

Emergency number at Bromma Stockholm Airport

Alert the airport's rescue services at the Control Centre (LC) on tel: 010-109 43 50

2.2.3 Waste from spills and leaks during clean-up

The spilled material and sanitising agent collected should be considered hazardous waste and kept separate from other waste.

For requirements about hazardous waste management, see AR Part 2 section 4.4 Hazardous waste.

2.2.4 Reporting

All spills and leaks must be reported in Swedavia's incident reporting system, regardless of size.

2.3 Follow-up after clean-up is completed

2.3.1 Repair

After clean-up is completed, Swedavia can make an assessment of how the asphalt surface has been affected and, if necessary, take action.

2.3.2 Cost

In the event of a spill, Swedavia charges the operator in question for clean-up, damage resulting from the discharge and groundwork.

The costs of clean-up and removal of the spill will be charged at the airport's tariff in effect.

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2.4 References

Swedavia incident reporting system

Clean-up guide

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3. Discharge to water

3.1 Introduction

3.1.1 Purpose

The purpose of this section is to ensure that the water from the airport is of a good quality and does not risk affecting people or the environment.

All operators are responsible for ensuring that water discharged from their own operations does not contain pollutants that violate the requirements of the environmental permit and ABVA.

3.1.2 Applicable regulations

3.1.2.1 Swedish legislation

Environmental Code

Inspection and control standards

Environmental stipulations

ABVA is an abbreviation of *Allmänna bestämmelser för brukande av den allmänna vatten- och avloppsanläggningen* (General provisions for the use of public water and wastewater facilities).

Municipal regulations and guidelines from the water and sewerage principal

3.2 Illegal release to water

3.2.1 Stormwater

All operations must take measures to prevent pollutants such as oil or chemicals from ending up in the stormwater system. Where there is a risk of pollution in activities, measures must be taken to minimise the risk of stormwater becoming polluted.

Spill protection equipment must be available at those locations where there is a risk of pollution. The operator must know how to use the protective equipment to handle spills and leaks correctly.

Vehicles and equipment must be handled, repaired or parked so that oil or other pollutants cannot reach the stormwater system.

3.2.2 Aircraft maintenance and workshops

Service and maintenance may only be carried out in a designated location and never near a stormwater drain.

Workshop floors should generally be dry swept. When floor scrubbers are used, the water from workshop surfaces and hangars must be treated as hazardous waste. The floors must not be rinsed with discharge to drains.

There should be no floor drains in workshops and production areas, or in premises where chemicals are handled and stored. If there are floor drains, these should normally be covered with seals or similar and only exposed if needed. Clean-up equipment must also be available nearby.

Used cutting fluids, degreasing and rinsing baths from retail washing and mussels must not be discharged into the sewage system but must be treated as hazardous waste.

3.2.3 Use of floor scrubbers

It is recommended that dirty floors be cleaned by dry sweeping in the first instance.

Where analysis shows that the water from floor scrubbers contains, or may be presumed to contain, levels of heavy metals or an oil index that are too high, this must be treated as hazardous waste. Sampling parameters specified in ABVA must not exceed the maximum permitted levels without the approval of the water and sewerage principal.

3.2.4 Aircraft and vehicle washing

Aircraft washing is only permitted in a facility that is connected to a treatment plant that is approved for the purpose.

Vehicles must not be washed anywhere other than in a washing facility connected to a treatment plant intended for the purpose.

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3.2.5 Flushing of water pipes

When flushing wastewater and stormwater pipes, the water must be collected and sent to an approved waste recipient if there is a risk that the water contains excessive levels of heavy metals or PFAS. The water can be purified locally if acceptable levels in the water are achieved. This requirement also applies to the flushing of pipes in buildings. If in doubt, contact the local environmental manager at Swedavia.

3.2.6 Heavy metals

Discharges of heavy metals into the sewage network (both stormwater and wastewater) must be limited as far as possible. Heavy metals, such as cadmium and zinc, are mainly spread by the washing and maintenance of aircraft and from workshops, but also by the washing of the tools, hands and clothing used in these activities.

Contact the airports environmental manager before flushing waste water pipes.

3.2.7 Oil separators

Oil separators must be installed if there is a risk of water contaminated with oil spreading from the operations to the wastewater and stormwater network. Examples of operations that require oil separators are workshops, garages, vehicle washing facilities and hangars.

Each operator with an oil separator must know:

- Where the oil separators that connect to their own operations are located.
- Whether the respective oil separator is connected to the wastewater or stormwater network.
- What classification the oil separator has (type 1 or type 2) and how it is dimensioned.
- The type of alarm devices that are installed in the oil separators (light and/or audible signal).

3.2.7.1 Maintenance and care

- Oil separators must be emptied at the intervals specified in the municipal regulations. The operator is responsible for ordering the emptying.
- Oil separators must be inspected at least every 5 years. The operator is responsible for ensuring that the inspection is carried out and documented.
- The maintenance and review of oil separators must take place in accordance with the municipal regulations. The operator is responsible for ensuring that the maintenance and review are carried out and documented.

3.2.7.2 Function and design

Each operation must have procedures in place for:

- refilling with water after emptying
- regular monitoring of sludge and oil volumes
- regular check of alarms and automatic shut-off valve
- regular inspection of the condition of the separator and documentation of the checks performed.

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3.2.8 Restaurants and food preparation

Swedavia is not obliged to receive waste water whose content differs to a not insignificant extent from household waste water. If the waste water contains a large quantity of fat, it cannot be classified as household waste water.

- Operators handling food may need to have fat separators.
- If the amount of fat exceeds 100 mg per litre, it must not be discharged directly into a wastewater pipe but must go through a fat separator.
- The fat separator must be type approved according to Swedish standard SS-EN 1825-1 (design) and SS-EN 1825-2 (dimensioning, operation and maintenance).
- Fat separators must be emptied regularly and at the intervals stated in the local cleaning rules. The operator is responsible for ordering the emptying.

3.2.9 Toilet waste from aircraft

Toilet waste from the drainage vehicle must be emptied in the designated place.

The connection and disconnection of the toilet service hose to/from the aircraft must be carried out with great care and precision to avoid spillage of toilet contents and disinfectant fluid. If spillage of toilet waste or toilet chemicals occurs, it must be immediately cleaned up using absorbent materials, such as Absol, and treated as hazardous waste. Otherwise, it is handled according to 2.2.2.

3.3 Water Salute

Water salutes are not permitted.

3.4 References

The National Association of Swedish Tank Cleaning and Sanitation Companies:
https://www.stor.org/auktorisering-ackreditering/

Regulatory guidance for oil separators:
https://www.naturvardsverket.se/48dfff/globalassets/vagledning/branscher-och-verksamheter/oljeavskiljare/tillsynsvagledning-oljeavskiljare.pdf

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4. Waste

4.1 Introduction

The purpose of this section is to describe the rules regarding the management of waste and hazardous waste and to ensure that as much material as possible at the airport can be recycled.

4.2 Applicable regulations

4.2.1 EU legislation

Waste Directive

ABP legislation

4.2.2 Swedish legislation

Waste Regulation

Swedish Board of Agriculture ABP

Environmental stipulations

EASA

Standard for oil separator systems SS EN 858

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ABVA, General provisions on water and sewage

4.3 General

Operators are obliged to sort and dispose their waste in separate containers. This is to reduce the amount of recyclable waste that goes to incineration and to facilitate the recycling or reuse of waste.

For more information see the waste sorting guide.

A sorting fee may be charged to operators who do not manage their waste in accordance with applicable requirements.

Swedavia provides a waste management system for the collection of non-hazardous waste. Operators with a different landlord or who have chosen to use their own waste contractor must ensure that the contractor has a permit and that waste management complies with legal requirements and applicable AR requirements.

The following applies to waste management at the airport in general:

- Littering is prohibited within the airport area.
- Waste management must take place in a way that does not entail difficulties or risks from an aviation safety, health or environmental protection perspective.
- All operators are responsible for ensuring that all waste within the airport area is sorted and disposed of in appropriate and marked receptacles, such as containers and bins.

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- Waste disposal bags, leftover materials or other waste may only be disposed of in places intended for waste.
- In the airport area, waste may only be temporarily stored, pending removal. This may only be done in areas intended for the purpose.
- Waste may not be stored for longer than one year before disposal.
- Improperly placed waste can pose a fire or safety hazard by blocking escape routes or containing materials that can cause fire and smoke spread

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4.3.1 The following procedures apply at Bromma Stockholm Airport:

- All containers and receptacles on airside must always be covered and any lids must always be closed. This is so that birds do not access the contents and so that waste does not risk blowing away.
- Waste bins on landside must be covered where there is a risk of the waste blowing over to airside.
- Doors to waste rooms must be kept closed.
- Transparent plastic bags must be used for waste, where plastic bags are necessary, to enable the type of waste to be identified.
- When transporting waste away from the airport area, the operator must ensure that the carrier is authorised for transport and that the waste is sent to an approved recipient.

4.4 Non-hazardous waste

4.4.1 Food waste

All food waste must be sorted and handled separately from other waste.

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Paper bags must be used to collect food waste/compost.

Waste containing food scraps can attract vermin, which in turn can constitute a risk to infection control or safety. Waste must therefore be managed so as to avoid this.

4.4.1.1 Cooking fat and deep-frying oil

- Cooking fat and deep-frying oil must, without exception, be handled and transported in sealed, labelled containers. This is to prevent damage, injury or accident due to spills.
- Fat separators must be emptied regularly and at the intervals stated in the local cleaning rules. The operator is responsible for ordering the emptying.

4.5 Hazardous waste

Operators who produce hazardous waste must handle it in a way that is safe, legal and environmentally sound. The operator must document the handling of hazardous waste and ensure that it is reported to the Swedish Environmental Protection Agency, in accordance with legal requirements.

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4.5.1 General provisions concerning hazardous waste

- Hazardous waste may not be mixed with other waste.
- Different types of hazardous waste may not be mixed with each other.
- Hazardous waste must be stored in such a way that it cannot pollute the ground or water, for example on a weather-protected and hardened surface.
- Where there is a risk of the containers being damaged by vehicles or similar, collision protection must be in place.
- Liquid hazardous waste must be stored within berms. The bermed area must store at a minimum the volume of the largest tank plus 10% of the total volume of all the other tanks, if there are several in the same bermed area.
- Hazardous waste must be stored in such a way that it cannot pose a risk to health.
- All waste receptacles containing hazardous waste must be clearly labelled with their contents.
- Chemical residues and chemical products that are being phased out must be treated as hazardous waste and kept separate from other waste.
- Flammable waste, such as oily rags, must be placed in the designated metal containers or other fire-resistant containers with tight-fitting lids.
- Operators with hazardous waste must ensure that it is transported in accordance with the legislation in force.

4.5.2 Disposal of hazardous waste

Hazardous waste must not be deposited in waste sorting/recycling points. Each individual operator is responsible for ensuring that the disposal of hazardous waste is carried out in accordance with legal requirements regarding the obligation to make notes and for reporting to the Swedish Environmental Protection Agency.

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4.5.2.1 The following rules apply at Bromma Stockholm Airport:

Each individual operator at the Airport that generate hazardouse waste must ensure that it is disposed correctly in accordance with legal requirements. The requirement means that there is an obligation to take notes and to report the hazardouse waste to the Swedish Environmental protection Agency. The operator can choose to do this themselves or hire an approved waste contractor to perform the service. Information on how reporting of hazardous waste is to be carried out by the waste producer is available on the Swedish Environmental Protection Agency website.

For more detailed instructions, see the extranet [swedavia.net].

4.6 Additional requirements

4.6.1 Construction waste

- Waste from demolition, refurbishment, moving premises etc. must be removed by the contractor hired for the work in question. Such waste may only be deposited at Swedavia's waste management centre if this has been agreed by the parties.
- Construction and demolition waste must be waste sorted in accordance with the legal requirements in force.

4.6.2 Invasive species

Invasive species, such as Japanese knotweed, Himalayan balsam, lupin etc., must not be allowed to spread.

4.6.3 Aircraft waste

The airlines must ensure that the waste is delivered to and handled by a contracted handling company or cleaning company.

The contracted handling or cleaning company shall ensure that the bridge and/or parking area is free from waste after the aircraft has vacated the parking area.

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Handling companies or cleaning companies that handle waste from aircraft must ensure that waste from aircraft which has already been sorted is not mixed with unsorted waste, in accordance with Swedavia's waste management system.

4.6.4 Category 1 waste

Waste containing biological material and originating from third countries is classified as Category 1 waste. This waste must be handled separately from other waste, in accordance with the legislation in force.

4.6.5 Sludge from oil separators, enclosed tanks and water treatment systems

- Sludge from oil separators is treated as hazardous waste.
- Sludge from other types of separators/tanks requires classification and handling based on its pollutant content. This may need to be verified by sampling.

- For more requirements, see the AR Part 3 Chapter 3. Discharge to water.

BMA

4.7 Site specific information Bromma

4.7.1 Waste Management Landside

Environmental rooms for non-hazardous waste are located in the terminal building.

4.7.2 Waste Management Airside

The environmental station for non-hazardous waste is located at building 177.

Only temporary containers, regardless of type, may be placed airside after application and approval from the Airport Technical & Operative Supervisor (ATOS). The container must clearly display:

The company that ordered and is responsible for the container, along with the contact person's phone number.

The dates for the period the container will be located in the airside area.

Containers that remain after the validity date has expired or that have been placed without permission may be removed by the airport. The cost of removal will be charged to the responsible company.

The above does not apply to containers or bins placed by the airport's contracted waste contractor.

4.7.3 Aircraft Cleaning

Non-hazardous waste from aircraft cleaning must be disposed of and sorted at the airside environmental station.

4.7.4 Hazardous waste

Bromma Airport does not allow hazardous waste to be disposed of in the recycling rooms or environmental stations that are open to our customers, tenants, and other operators at the airport.

Operators at the airport that generate hazardous waste must ensure it is properly handled, recorded, and reported to the Swedish Environmental Protection Agency. They can choose to do this themselves or hire an approved waste contractor to perform the service for them. Information on how waste producers should report hazardous waste can be found on the Swedish Environmental Protection Agency's website.

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4.8 References

Waste sorting Guide

Waste Management Bromma

5. Fossil-free airport

5.1 Introduction

In 2020, Swedavia became fossil-free in its own airport operations (electricity, heating and fuels). All other operators at the airport has switch from fossil energy to renewable energy in their operations at the airport from 1 of december 2025. Emissions from aircraft engines are not covered by the requirement.

Swedavia is also working to ensure that all transport to and from the airports is fossil-free and for de-icing chemicals to be produced only from renewable raw materials.

Swedavia's airports take a proactive approach to climate work and are certified in accordance with the international airport climate programme Airport Carbon Accreditation. To achieve and maintain such certifications, operators must actively contribute to the reduction of greenhouse gas emissions in all the activities that take place at the airport.

The purpose of this chapter is to clearly describe the requirements that operators need to follow.

5.1.1 Applicable regulations

5.1.1.1 International agreements and legal requirements

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United Nations Climate Convention

Paris Agreement 1.5 degree target

European Climate Act. Regulation (EU) 2021/1119

EU climate targets for 2030 and 2050

5.1.1.2 National legal requirements

Government Ownership Policy and Principles for Government Ownership Companies

Sweden's 16 Environmental Quality Goals, Limited Climate Impact

Environmental Code

Environmental permits and stipulations with requirements for reduced fossil emissions

5.1.1.3 Other

Swedavia's environmental and energy policy and environmental goals for a fossil-free airport

The airports' climate programme Airport Carbon Accreditation

Ground service operations agreements and operations agreements with requirements for fossil-free energy

Security agreement with requirements for fossil-free energy

Swedavia's procured agreements with requirements for fossil-free energy

5.1.2 Definitions

Greenhouse Gas Protocol – GHG Protocol	The GHG Protocol is an international standard for calculating and reporting greenhouse gas emissions. (https://ghgprotocol.org/)
Fossil-free energy	Fuel and other energy produced without fossil raw materials. Examples of fossil-free energy sources are HVO100 and biogas, as well as electricity from solar, wind, water and biomass. Origin-labelled electricity has a certificate of origin. All electricity supplied by Swedavia is origin-labelled renewable electricity. See www.swedavia.net for verification of the renewableelectricity that Swedavia supplies. All heating provided by Swedavia is renewable.
Fossil fuels	Fuel from fossil raw materials, such as diesel, petrol and natural gas, wholly or partly derived from fossil raw materials. HVO other than HVO100 contains fossil raw materials.
HVO 100	Hydrogenated vegetable oil, i.e. a fuel produced from 100% renewable raw materials.

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5.2 Fossil-free airport 2025

All commercial, permanent and recurring activities at the airport must be powered by fossil-free energy.

Powered by fossil-free energy means that:

- The operation uses only energy (electricity and heat) from renewable sources for heating and operation.
- Vehicles are powered entirely by fossil-free fuels or fossil-free electricity.

See AR Part 3 Chapter 6. Environmental Requirements for Vehicles

- Other equipment and hand tools are powered entirely by fossil-free fuels or fossil-free electricity.
- Only bio LPG (Liquefied Petroleum Gas) is used where operations require LPG.

If an operator chooses to buy electricity, heating or cooling from a supplier other than Swedavia, the operator must ensure that the energy is generated from fossil-free energy sources. When requested to do so by Swedavia, the operator must provide verification, such as guarantees of origin.

The emissions of fossil carbon dioxide must be zero.

5.2.1 Reporting to Swedavia

All operators with a ground handling service agreement or an operating agreement must report information on the sources of emissions of fossil carbon dioxide and other climate-impacting greenhouse gases from operations at the airport, in accordance with Swedavia's current instructions. Emissions from aircraft engines are not covered by the requirement.

The instructions for reporting are published on the extranet [swedavia.net] well in advance of each reporting date.

Reporting takes place at least annually after each calendar year with effect from 2025.

5.2.2 Emissions data required

The operator must annually report data on emissions over which the operator has direct control and which occur in the operator's own operations as well as those which occur in the generation of the energy that the operator purchases and uses in its own operations at the airport. These emissions are referred to as Scope 1 and Scope 2 emissions in the Greenhouse Gas Protocol (GHG Protocol) global standard.

5.2.2.1 Direct emissions – Scope 1

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Direct emissions at the airport may be produced, for example, by the consumption of fuels for vehicles and tools, as well as certain chemical use.

The reporting of chemicals may include, among other things:

- Refrigerant emissions – annual refrigerant reports.
- Use of glycol – the volume of glycol used for aircraft de-icing.

5.2.2.2 Indirect emissions – Scope 2

Indirect emissions in the operator's operations may derive from the generation of purchased electricity and heat.

5.2.2.3 Other emissions – Scope 3

Emissions that occur outside Scope 1 and Scope 2, i.e. in other parts of the operator's value chain, are referred to as Scope 3 emissions. This AR does not contain any Scope 3 reporting requirements.

5.2.3 Provision and review of environmental data

Swedavia may request documentation relating to the operator's calculations and reports of greenhouse gas emissions. The operator is responsible for assisting Swedavia with the reporting of underlying data, calculations and other relevant information.

5.3 References

Swedavia's environment and energy policy

Environmental targets for a fossil-free airport

The airports' climate programme Airport Carbon Accreditation

Certificate of renewable electricity and heating from Swedavia

Instructions for the current reporting date (ongoing publication on the extranet prior to each reporting date).

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6. Environmental Requirements for Vehicles

6.1 Introduction

This chapter regulates the environmental performance requirements for vehicles used on Airside.

6.2 Environmental Requirements for Vehicle Permits

To obtain a vehicle permit in accordance with AR Part 5, Chapter 16.1.8

For driving on Airside, requirements are also set regarding the type of fuel the vehicle uses and the environmental class the vehicle belongs to. The requirements are presented in the table below.

Type of Vehicle	Environmental Class A	Environmental Class B	Environmental Class C
Light Vehicles < 3,5 tonnes	Electricity	Euro 5 or better	Environmental class lower than B
Heavy Vehicles > 3,5 tonnes	Electricity	Euro 5 or better	Environmental class lower than B
Motor Equipment, Tractors	Electricity	Stage IIIB or better, Stage IIIA for vehicles with engine power under 37kW	Environmental class lower than B

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The environmental classes are updated when new vehicle/fuel types become available and approved for airport operations.

New vehicles must meet at least the environmental class according to A or B to be granted a vehicle permit. Vehicles with existing vehicle permits in environmental class C can renew their vehicle permits at the relevant airport.

NOTE! No vehicles may be driven using fossil fuels, including hybrid or gas vehicles with a petrol-powered starter/auxiliary engine.

Biodiesel includes approved product types such as HVO100 and RME.

The environmental requirements do not apply in the following cases:

- Vehicles from the public sector during an emergency response
- Vehicles belonging to the Swedish Armed Forces registered in the military vehicle register (MIFOR)
- Visitor vehicle permits

Special consideration may apply for the police and customs authorities (the environmental classification applies in full).

Swedavia applies differentiated fees depending on the vehicle's environmental class.

6.3 Movement of Vehicles Between Airports and Exceptions During Major Changes

To facilitate the movement of vehicles and work machines between airports with the aim of gradually renewing the vehicle fleets at airports within Swedavia IA, all the requirements below must be met:*

- The vehicle intended to be brought into the current airport must replace an existing equivalent vehicle at the airport, e.g., a newer highloader replaces an older highloader, etc.
- The vehicle must be of a newer model year and have a better environmental class than the vehicle it replaces. This must be stated in the application for a vehicle permit.
- The vehicle may only be operated on Airside.
- Does not apply to light vehicles <3.5 tonnes.
- When establishing a new flight route where an increased number and/or different model of vehicles are required, the transfer of vehicles in environmental class Group C is also approved, the requirement for fossil-free fuel from 2025-11-30 remains.
- In the case of long delivery times for newly ordered vehicles, a temporary intake of vehicles in environmental class Group C is also approved, the requirement for fossil-free fuel from 2025-11-30 remains. The time limit is set to 1 month after the staff has been trained and the new vehicle has been put into operation, after which the replacement vehicle must be taken out of service and removed from the airport. The replacement vehicle must correspond to the newly ordered vehicle, e.g., highloader replaces highloader, etc.

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* *In the event of significant changes that may affect airport operations, the airport manager, in consultation with the environmental manager, may approve additional exemptions to ensure continued operations. For example, when airlines change aircraft types and a major replacement of vehicles and equipment is required.*

6.4 Leakage/Spillage from Vehicles/Equipment

It is the responsibility of the vehicle owner to ensure that vehicles and equipment on the airside are continuously maintained to prevent leakage or spillage.

Leaking vehicles or work tools that are parked awaiting action must be equipped with appropriate collection containers. If drivers discover or suspect that leakage/spillage has occurred during the journey, this must be reported according to the decontamination procedure.

Decontamination Procedure: For actions and alarms, see AR Part 3, Chapter 2. Clean-up.

6.5 Idling

Idling is permitted for a maximum of one (1) minute. Exceptions apply to vehicles that need to have the engine running for their operations at the airport (such as snow removal vehicles and fuel tankers).

6.6 References

The Swedish Transport Agency's definition of environmental classification.

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7. Use of APU (Auxiliary Power Unit)

7.1 Introduction

This chapter regulates APU operation at the airport.

7.2 APU Operation at Bromma

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The APU must not be used whilst parked, except when required for engine start-up, initiation of the Flight Management System or for regulating the cabin temperature. The use of the APU must be limited as far as possible.

For commercial flights, the APU may be started no earlier than 5 minutes before the estimated time for push-back or taxiing.*

For general aviation, the APU may be started no earlier than 30 minutes before the estimated time for push-back or taxiing.*

**These APU requirements are also found in the AIP (Aeronautical Information Publication).*

8. Environmental Requirements for Aircraft De-icing

8.1 Introduction

This chapter regulates de-icing in accordance with the airport's environmental permit and associated environmental conditions.

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8.2 General Rules for De-icing

De-icing may only be carried out at locations approved for de-icing.

After de-icing, the used de-icing fluid must be immediately vacuumed up with a glycol vacuum. New aircraft positioning at the location where de-icing has been performed is not allowed until the de-icing fluid has been vacuumed up.

The amount of de-icing fluid used must be compiled monthly and sent to Swedavia no later than the first working day of the following month.

The amount of de-icing fluid used must be reported in the glycol reporting file.

8.3 De-icing within Bromma Stockholm Airport

A table and map of approved de-icing locations can be found in AR Part 5, Chapter 15.15.3.

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Ground Handling companies must always notify Swedavia of the flight to be de-iced before starting de-icing. This is to ensure the collection of de-icing fluid after departure.

Notify this to: Swedavia Aircraft Stand Parking tel. 010-109 10 52

If testing of de-icing vehicles or training with de-icing vehicles using glycol is needed, this must be done at the Glycol Dump Pocket.

Changes in de-icing fluid must be notified well in advance and may only occur after approval from Swedavia. Notify changes to: miljo.bma@swedavia.se

Airport Regulations

Part 4. Passengers

Swedavia Airports

Edition 5.0
Valid from 6 May 2026

Contents

Part 4. Passengers

1. Loudspeaker announcements in passenger terminals

1.1 General

Swedavia's airports are **quiet** places. This means that all announcements are made on a restrictive basis.

Loudspeaker announcements are intended to create optimal flows and provide the opportunity to give information to passengers, staff and the general public.

- Loudspeaker announcements are made only on request, and then on a restrictive basis.
- Boarding announcements generally occur at the respective gate.
- There must always be agreement between announcements and the information displayed on public monitors.

Central announcements can be heard in all terminals.

Local announcements are heard only in the area where the announcement is made.

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1.2 Types of announcements

1.2.1 Central traffic announcements

Announcements that are permitted to be made, where necessary, using loudspeaker systems that reach public areas:

- **Go to gate announcements for bus departures**: When bus transport to the aircraft is required.
- **Go to gate announcements**: For flights with passport control. A maximum of two announcements per departure.
- **Boarding call announcements**: For flights with passport control and in special cases such as when technology is out of order.
- **Final call announcement**: Made only once. Additional announcements may be made if several passengers are missing and there is a risk of delayed departure.
- **Personal announcements**: Made on a restrictive basis to locate individual passengers. Maximum of 4 names per announcement. If several passengers are missing, a further final call announcement is made.
- **Delay announcements**: Made if the new departure time is at least 15 minutes later than the scheduled departure time. Can be made in order to provide additional information for passengers, such as about meal vouchers.

- **Gate change announcement**: Made at the request of an authorised client.
- **Cancelled departure and diversion announcement**: Can be made with additional information for passengers.

1.2.2 Central public announcements

- **Personal announcements**: Made on a restrictive basis to locate individual visitors or passengers. Maximum of 4 names per announcement.

The following are made at the request of an authorised client:

- **Operational disruption announcements**: To keep passengers informed and make it easier for staff, announcements must be made in the event of operational disruptions affecting the passenger flow. These include, for example, problems with baggage facilities, check-in systems, weather, etc.
- **Evacuation announcements**: These announcements are made automatically or manually. Can be made in the event of evacuation and for return following evacuation.
- **Security announcements**: These announcements are made automatically or manually. They may remind passengers to keep an eye on their luggage, for example.

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1.2.3 Central announcements for medical professionals

Medical professional announcements: Announcements requesting the assistance of a doctor, for example, are made at the request of an authorised client.

Always contact 112 in the event of an emergency.

Contact always
112
in the event of an emergency.

1.2.4 Local traffic announcements

Announcements made at the gate must contain information about the relevant departure and are made by the ground handling or airline staff.

At some airports, central traffic announcements are made locally instead. See Types of announcements under 1.2.1.

2. Boarding and deboarding

2.1 Introduction

All of Swedavia's airports constitute an external border between the Schengen countries, non-Schengen countries and so-called third countries (countries outside the EU). The EC Regulation states that passengers arriving from a third country who have not undergone security screening in accordance with EU security standards may not mix with screened departing passengers. Passengers arriving from a third country must therefore be conducted via other routes.

2.1.1 Responsibility for establishing proper flows

The airline or the ground handling agent engaged by the airline is responsible for carrying out all measures to ensure that proper flow is established, i.e. ensuring that passengers and crew from Schengen countries do not meet those who are not from Schengen countries.

The airports organise the flows according to their own circumstances. More information about how the airport organises the flows can be found on the **airport's extranet**.

2.1.2 Technical equipment or systems out of service

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If technical equipment or systems are out of service, the airline or ground handling agent engaged by the airline is responsible for ensuring that passengers follow the right flow by manually supervising the flow.

They are also responsible for reporting the problem if equipment or systems are out of service.

2.2 Escorting of passengers

Passenger escort shall be carried out if passengers enter the apron during boarding or de-boarding.

The airline or the ground handling company engaged by the airline is responsible, using its own procedures, for appointing a person in charge of escorting and for ensuring that passengers can move between the aircraft and terminal/bus in a safe manner.

For flights not covered by a ground handling agreement, the captain is responsible for ensuring that the escorting of passengers takes place in accordance with the regulations in force.

The escort procedure may not be organised in a way that limits parking of aircraft at an adjacent stand.

2.3 Escort process

Passengers shall be escorted in such a way that there is never a risk that they will deviate from the planned route. Ropes, bands and cones should be used to clarify the path for passengers to follow, although no ropes, bands or cones can replace the requirement for visual monitoring.

2.3.1 Visual monitoring

Passengers shall be escorted using visual monitoring to ensure that passengers:

- do not walk under the wings of the aircraft, in the fuel safety zone or near propellers and adjacent aircraft parking stands
- are protected against vehicular traffic, equipment and other operations
- are only moved via pre-defined routes to, from and across aprons
- are protected against jet blast and other air flows created by aircraft

2.3.2 Physical presence

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The escort shall be a designated representative of the ground handling company and shall remain physically present throughout the escort.

The escort shall hold valid apron authorization, have appropriate training for the task, and be able to raise an alarm in the event of an incident.

Escorting may only be combined with other duties if full control can be maintained. Upon request, the escort shall be able to explain how this control is ensured.

The escort may, if necessary, be supported by other relevant personnel involved in aircraft handling to ensure full control of passengers. Such personnel shall always be able to alert the escort in the event of an incident.

If passengers deviate from the route and the escort in charge is not able to stop this/intervene, a security guard should be called for immediately.

2.4 Remote parking

The ground handling company shall ensure that the bus is at the stand in question and that communication has been established with the bus driver **before** passengers are allowed to exit the aircraft.

The same applies for the boarding of an aircraft – communication must be established between the bus driver and the ground handling company **before** passengers are allowed to leave the bus.

It is the responsibility of the airline, or the ground handling company engaged by the airline to ensure that escorting across the apron area between the aircraft and the bus is carried out as described in point 2.3 above.

AR

2.5 Flights that require a security gate

The ground handling company is responsible for establishing the proper passenger flow for flights that require a security gate.

The security services contractor is responsible for ensuring that the lounge is checked for security purposes prior to departure.

During the activated flow of arriving/departing passengers, only employees on official business for the flight in question are permitted to have access to the jetty structure.

The ground handling company is responsible for ensuring that an active flow is closed immediately once the flow ends. This applies to both arriving and departing flows.

2.6 Access to the gate structure

During an active flow of arriving/departing passengers, only personnel with duties related to the current flight are permitted access to the gate, gate structure, and bridge. The person who opens a door (arriving/departing flow) is responsible for monitoring this door until it is closed to ensure that no unauthorised person passes through.

To avoid the risk of passengers arriving and ending up in the wrong flow and exiting on the wrong floor, personnel who do not have direct business to/from the aircraft are not allowed to break the flow by passing through a door/passage with a card reader and going through the jetway/bridge.

2.7 Bussing

For the bussing of passengers, Swedavia (the bus driver) is responsible for escorting passengers between the bus and the terminal building, jetty or jetty structure (or vice versa).

For PRM and VIP/CIP handling, the service provider is responsible for escorting.

BMA

2.8 Site-specific information Bromma

Pier doors should only be opened during departure and arrival; thereafter, the pier doors must be closed to prevent unauthorized persons from accidentally accessing ramp areas. It is up to the airline itself or through an agreement between the airline and its contracted ground service company to ensure that there are procedures in place to ensure that the pier doors are closed or monitored outside of boarding/deboarding to prevent passengers from going the wrong way.

2.9 References

N/A

3. PRM-PWD – General assistance service

3.1 Introduction

General assistance service (PRM – Persons with reduced mobility) is a right enshrined in EU legislation (1107/2006) and ECAC guidelines which stipulates that passengers with various forms of disabilities should have the same opportunities to travel on public transport by train, bus and air as those passengers who do not have disabilities.

3.1.1 Applicable regulations

A R Regulation (EC) No 1107/2006 concerning the rights of disabled persons and persons with reduced mobility when travelling by air ECAC guidelines, Doc. 30, Part 1, Section 5 and associated quality standards set out in Annex 5-C

3.2 Transmission of information

Passengers must pre-book assistance from the airline or their tour operator.

The airline, ground handling company or tour operator must notify Swedavia of information concerning booked PRMs no later than 36 hours before departure/arrival, and this must include

- the passenger's name,
- the category of disability,
- the flight number,
- the departure or arrival time. This information must be sent via telex to the airport's **SITA address**.

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All airlines that fly to and from the airport must transfer information concerning booked PRMs to the airport no later than 36 hours before departure time via the Passenger Assistance List (PAL).

Any cancellations, re-bookings etc. shall be sent via the Change Assistance List (CAL).

A Passenger Service Message (PSM) shall be sent for every departure. The PSM shall be sent when the passenger is confirmed as being on board.

A R If the passenger has not pre-booked assistance, the airport will provide assistance. The passenger's wait time shall nevertheless be no longer than stipulated in the quality standard ECAC Doc 30, Part 1, Section 5, Annex 5-C.

3.3 Monitoring

Internal and external audits may be held.

3.4 References

Map All Terminals with Help Points

4. Allocation of resources, check-in and baggage

4.1 Introduction

AR regulates the airport's allocation of check-in counters, sorting positions and arrival tapes, as well as the maximum weight of normal checked baggage. The regulation aims to achieve a smooth flow in the airport passenger process. When planning for check-in counters and sorting positions, airline requests are taken into account as far as possible.

Only equipment approved by Swedavia may be placed in common areas. This AR also regulates the use of barrier tapes and signage.

4.2 Assignment of resources at check-in

Check-in desks for a flight are allocated based on the aircraft's capacity. Factors that are taken into account include, for example, different classes/pax/bag/baggage factor/SBD etc.

Performing tasks other than check-in, such as ticketing, overbooking, rebooking etc., must be approved by Swedavia.

With Ad Hoc flights or changes from the current schedule, Swedavia must be informed as soon as possible.

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Counters are not assigned based on branding, but signage is intended to control flow to counters.

4.3 Assignment of sorting positions and arriving baggage belts

Daily planning of sorting positions is done the day before the traffic day in question, after the day planning of the check-in counters has been completed.

The basic assignment is one (1) sorting position for each flight.

Subsequently, more sorting positions can be assigned taking into account:

1. Availability of vacant sorting positions

2. Airline needs for sorting concepts

When allocating multiple sorting positions for a flight, these shall be placed next to each other. Flights requiring container sorting positions are allocated these to the extent that they are available.

Sorting positions will open when check-in opens. Deviations from this are regulated locally at the airport.

The main idea when planning arrival bands is to be able to spread the traffic load as optimally as possible across all arrival bands regardless of which pier the passenger comes from. This makes it a quick process for the passenger.

Consideration is given to the wishes of the ground handling companies to the extent possible. In the event of traffic accumulations, the arrival bands can be allocated in another way to improve logistics and thus minimise queue times.

Allocation of bands can be done according to the Customs Service's requirements.

4.4 Checked baggage maximum weight

Baggage weight rules are determined locally at the airport based on the capacity of the baggage facility, work environment rules and airline rules.

4.5 Plastic-wrapped baggage

Only plastic-wrapped normal baggage from an approved supplier may be checked into our baggage systems. Other plastic wrapped baggage must be handed in at the special baggage positions. This is to minimise traffic jams in our baggage system.

4.6 Signage

The airlines, via the ground handling companies, are responsible for and provide the image in the correct format with the logo to be displayed in the airport display system FIDS. Only operating airline logos are shown in the airport display system FIDS.

4.7 Obligations of air and ground handling companies

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Ground handling companies must open the check-in desk and use the allocated check-in time. This is to obtain a good flow in the passenger process.

The allocated counter must be signposted and staffed. The allocated counter may be signposted before it opens to facilitate queue formation.

The displayed counter must be staffed.

Swedavia is responsible for planning flows, queues and the use of barrier tapes.

Barrier tapes, hand baggage meters and sign holders are obtained from Swedavia.

The airlines/ground handling companies may not erect signs, install equipment or profile themselves with their own material/equipment on the airport holder's public areas without permission being obtained from Swedavia.

For day planning, the airlines must ensure that the ground handling companies have received the necessary information to enter booking numbers and aircraft type via Chroma/AODB.

The ground handling companies Floorwalker is responsible for open SBD counters and the baggage submitted.

Rules on baggage tags and boarding cards:

- Flight numbers on boarding cards and baggage tags must match the flight numbers in Chroma.
- The baggage must be equipped with a unique barcode tag intended for reading in an automatic scanner
- BSM must be generated and activated

- Baggage tags must be active in DCS upon submission
- Pectab must comply with the Iata standard and be approved by Swedavia
- In case of departure from the above, Swedavia must be notified in advance and approve this.

Preprinted baggage tags, boarding cards, tickets, travel documents and corresponding documents shall be kept in a locked space when authorised personnel do not have direct supervision of them.

For the handling and storage of unaccompanied baggage and so-called mass lost baggage, the following applies:

- Arrival bands and their waiting area must be emptied of unaccompanied baggage and free before the next scheduled arrival.
- This baggage may only be stored in the areas/spaces designated by the airport holder
- Agreed procedures for emptying these areas/spaces must be followed
- The ground handling company concerned is always responsible for the handling and storage of this baggage.

4.8 The airport holder's authority

The airport holder reserves the right to decide on priorities other than those stated above if there are special reasons.

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Airport Regulations

Part 5. Aerodrome Manual for operators

Swedavia Airports

Bromma Stockholm Airport
Valid from 6 May 2026
Edition 5.0

Contents

Part 5. Aerodrome Manual for operators

1. Aerodrome Manual for airport operations

1.1 Airport operating permit

The airport operation certificate constitutes the operating permit for the airports. The certificate is issued based on, among other things, the content of an Aerodrome Manual. Certificate holders are not permitted to act, or to cause or permit an act, in contravention of any of the conditions of the certificate, which means that all those operating at the airport have an obligation to comply with the content of the Aerodrome Manual.

1.2 EASA requirements for certificates

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Regulation (EU) 2018/1139 is based on ICAO rules and recommendations and stipulates the common rules in the field of civil aviation for European Member States in order view to achieve a high and uniform level of safety for European citizens. The regulation gives the independent European Union Aviation Safety Agency (EASA) the power to regulate aviation safety in Europe.

Regulation (EU) 139/2014 contains *implementing rules* for airports according to the requirements in Regulation (EU) 2018/1139. Implementing rule ADR.OR.E.005 requires each aerodrome operator to establish and maintain an Aerodrome Manual.

1.3 Scope and purpose of the Aerodrome Manual

An Aerodrome Manual shall contain or refer to all necessary information for the safe use, operation and maintenance of the aerodrome, its equipment, as well as its obstacle limitation and protection surfaces and other areas associated with the aerodrome.

The Aerodrome Manual is the airport’s principal aviation safety document and so its aim is to ensure that all staff at the airports, Swedavia, as well as all operators and partners, are made aware of the aviation safety policy, aviation safety objectives and their own areas of responsibility with regard to aviation safety.

Airlines, ground handling companies and other operators have an obligation, as part of the terms of their access agreements, to comply with the obligations stipulated in the Aerodrome Manual and in the associated references.

1.4 Site-specific information Bromma

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In the event of emergencies that may affect flight safety or cause traffic disruptions on Airside, ATOS/APOC should be contacted.

2. Swedavia's safety management system

2.1 Safety Management System

2.1.1 Scope of the safety management system

2.1.1.1 Purpose

The primary purpose of the Safety Management System (SMS) is to describe how we work systematically and jointly to ensure regulatory compliance and for aviation safety risks to be as low as reasonably practicable on the basis of preventive risk management and continuous communication between the operators at the airport. The SMS control is applied in all affected operations and processes as something that must always be followed as a matter of course.

To successfully achieve this, everyone at the airport, both managers and employees, internal and external, adopts a clear preventive approach to aviation safety risks, characterised by a high level of safety awareness and understanding of the content of Swedavia's aviation safety policy. Preventive aviation safety work can be expressed in simple terms as follows:

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1. Say what you do! - Means that work duties are defined and described.
2. Do what you say! - Means always working as described, i.e. following procedures, etc.
3. Prove it! - Means that the task is performed correctly, and that work is monitored. Partly so that work can be corrected if necessary and partly so that the work management can follow up on the results (documentation).

2.1.1.2 Content

The SMS is an integral subset of the overall management system. Swedavia uses the PDCA method to maintain a quality-assured and systematic working method and to constantly drive improvement. Goals are planned and set (P), the practical work is carried out (D), the work performed is controlled by, among other things audits and self-monitoring (C) and we act on suggestions for improvement that have emerged (A).

The content of the SMS governs and describes the element of quality work that focuses on aviation safety and is carried out systematically as described below. The SMS therefore contains the airport's:

- descriptions of our approach to aviation safety
- policy and overall objectives for aviation safety work
- descriptions of the organisation, responsibilities and dependencies
- description of how the work is documented
- methods for monitoring and measuring aviation safety work
- methods of communication and preventive work
- crisis management organisation and planning

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2.1.1.3 Basic governance principles

Swedavia's approach to achieving the established aviation safety standard is based on the following basic principles:

- Policy

  Swedavia has adopted and introduced a common policy for the operators at the airport that describes and supports the administration and development of the established aviation safety standard. The policy is as stated in the section on Aviation safety policy

- Organisation

  An organisation has been introduced with a clear division of responsibilities to ensure that Swedavia complies with the policy and regulatory requirements. Cooperation and communication between all the operators at the airport are also vital to achieving the common objectives of aviation safety work.

- Planning

  The policy is fulfilled through systematic aviation safety work and the work is always carried out in accordance with the provisions described in the SMS and the Aerodrome Manual. In the planning of activities and measures, priority is given to those that are considered to be the most effective, based on investigations and the evaluation of the risks identified. In this way ensuring that the requisite training/skills and sufficient resources are available at all stages is important here. The airports also require all operators, both internal and external, to comply with the rules and industry standards/best practice and to have documented procedures for the performance of work tasks that have an impact on aviation safety. External operators at the airports have committed to reporting on how they intend to conduct their operations in compliance with the applicable regulations. This takes place through compliance with the requirements stipulated in the agreements signed and through AR.

- Measurement and follow-up of outcomes from the SMS

  Outcomes are measured and checked against established aviation safety targets and key metrics on an ongoing basis to identify where improvement measures need to be introduced. The various meeting constellations that have been established deal with aviation safety issues so that aviation safety is always given the highest priority, departures from standards and targets are addressed and improvements are introduced on an ongoing basis.

- Audits and compliance checks

  Aviation safety audits and checks are carried out to ensure that the operation meets the specified requirements and is working in line with the Aerodrome Manual and SMS/AR control. Depending on the extent of the operation's assessed impact on aviation safety, audits are carried out on a risk-based basis by the HSSE. See chapter 2.3.

2.1.2 Safety Policy

2.1.2.1 Purpose and objectives

To ensure that Swedavia's airports are a safe and secure place for our passengers, visitors, partners and employees, aviation safety is always a top priority at all levels and in all areas and processes, regardless of commercial, operational, environmental or other internal and external requirements.

This priority is reflected in the order of Swedavia's watchwords:

Safety – Punctuality – Service

Aviation safety is a must. By promoting a positive safety culture, characterised by systematic aviation safety work and a high level of safety awareness, Swedavia ensures that aviation safety is the top priority for all employees and partners.

Proactive and systematic aviation safety work enables Swedavia to prevent and manage risks and helps to achieve the business goals the company has set in a safe and efficient manner.

2.1.2.2 Basic rules

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- Swedavia's management and all employees shall always take responsibility for and understand their own role in aviation safety work and set an example for customers and other operators.
- Swedavia's management shall continuously highlight and demonstrate its commitment to the aviation safety policy.
- At Swedavia, applicable legislation, applicable national, international and internal rules, requirements and regulations are complied with as a matter of course.
- Swedavia shall establish aviation safety targets that are followed up through both reactive and proactive safety indicators with the aim of reducing the risk of accidents to "As Low as Reasonably Practicable" (ALARP).
- Swedavia's management shall establish the right conditions for working safely and ensure that there are sufficient resources and qualified personnel to perform work duties and assignments in accordance with applicable requirements.
- Occurrences shall be investigated with the aim of improving aviation safety by learning lessons and not in order to examine the issue of culpability. To achieve this, Swedavia applies the principles of a "just culture", which emphasises the balance between responsibility and learning. Mistakes are accepted as a natural part of human activity. A person can even report their own mistakes without fear of reprisal. Individuals should not be blamed for unintentional errors, but intentional crimes, sabotage, recklessness or gross negligence are not acceptable.

- Swedavia shall actively participate in local, regional, national and international aviation safety work, with the aim of improving aviation safety for the entire industry, and, where appropriate, shall apply acquired best practice.
- Swedavia's management shall ensure that the aviation safety policy is communicated to all employees and partners and shall follow up to ensure that they have taken on board its content.
- In all decisions made, at all levels and in all areas and processes, aviation safety shall be the top priority.

2.1.2.3 Implementation and follow-up

Swedavia shall work to achieve continuous improvement through ongoing analyses, investigations and audits. All deviations, incidents and sources of risk must be reported without delay. If an in-depth investigation is required, this investigation must include a root cause analysis, as well as the development of corrective and preventive measures. The implementation and impact of the measures will also be followed up.

2.1.3 Safety responsibilities for key personnel

Swedavia's position model shows how a position in our organisation is structured: This means that Swedavia's employees can have a position consisting of one or more roles. The following roles have a direct connection to the certificate and are responsible for ensuring that Swedavia meets the requirements of EU regulation (EU) No 139/2014:

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• Role	• Responsibility
• **Accountable Manager**	• Ensure that the airport is operated within the framework of the airport certificates, in accordance with EU No 139/2014. • Ensure that the staff have sufficient competence and that there are adequate resources to carry out flight safety-related tasks. • Comply with AMC1 ADR.OR.D.015(a).
• **Safety Manager**	• Ensure the development, maintenance, review, and continuous improvement of the systematic flight safety work documented in the airport's safety management system (SMS). • Investigation of accidents, incidents, and events • Serve as the point of contact with the Swedish Transport Agency regarding certification matters related to regulation (EU) 139/2014. • Comply with AMC1 ADR.OR.D.015(c).

• **Maintenance Manager**	• Ensure the availability and compliance of the airport-specific technical systems in accordance with EU No 139/2014 and the airport certificates. • Ensure that airport data and airport information are managed according to chapter 2.4. • Ensure the functionality of the airport-specific technical systems • The airport's certificate according to AMC1 ADR.OR.D.015(b).
• **Manager of Operational Services**	• Ensure that the airport's operational processes meet the regulatory requirements according to EU No 139/2014 and comply with the airport certificates. • Ensure that airport data and airport information are managed according to chapter 2.4. • The airport's certificate according to AMC1 ADR.OR.D.015(b).

In addition to the above roles, the following roles also exist:

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• **Role**	• **Responsibility**
• **Training Manager**	• Develop and establish a training and competence assurance process. • Develop and establish a training program that ensures the content and frequency of the training meet the regulatory requirements of EU No 139/2014 and accommodate regulatory changes. • Ensure that there are sufficient instructors and assessors • Ensure that there is a process and a system for documenting training activities and competence follow-up.
• **Local Training Manager**	• Responsible for conducting local, instructor-led course sessions. • Responsible for coordinating and following up on competence checks. • Coordinate the airport's training needs with local leaders and training managers.

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• **Compliance Monitoring Manager**	• Monitor compliance with
	  ○ Airport certificates and permits
	  ○ Governing and reporting dokumentation.
	• Educational standards,
	  ○ Adequate resources and competencies
	• Management system procedures och routines.

• **Lead Auditor/Auditor**	• Reviews that the operation complies with aviation safety requirements in applicable regulations and based on observations, provides the operation with advice on improved routines.
• **Safety Officer**	• Specify and continuously monitor aviation safety requirements and risks in the operation. • Assist the Safety Manager with documentation for standardization and coordination. • Assist the Safety Manager with the management, development, and implementation of the Safety Management System (SMS) • Support the operation with regulatory interpretation
• **Local Safety Officer**	• See Safety Officer • Act as a representative for the airport and make site-specific decisions within the standardized area with a mandate from the Safety Manager
• **Maintenance Officer**	• Point out deficiencies when the operation does not meet the set aviation safety requirements. • Ensure that risk-reducing measures are taken when necessary, and initiate activities to maintain and develop an acceptable level of aviation safety. • Ensure site-specific routines. • Act as a representative for the airport and make site-specific decisions within the standardized area with a mandate from the Maintenance Manager.

2.1.4 Document Management

Swedavia has an information management plan that governs the storage times for different types of documentation, as well as a process for managing governing information that describes how document handling should be carried out.

Safety-related documentation must be accessible and up-to-date, and stored in accordance with the information management plan, but for at least five years.

All documentation is published electronically via the Aerodrome Manual, which is structured according to the requirements in (EU) No 139/2014 ADR.OR.E.005. Relevant parts are also available on Swedavia's extranet [swedavia.net] for external operators, such as Airport Regulations (AR).

All printed documents are valid only at the time they are printed.

2.1.5 Process for Risk Identification and Risk Evaluation

The purpose of risk management is to identify and assess risks, identify the causes of these risks, and develop measures that eliminate or reduce the risks by lowering the likelihood of their occurrence or mitigating the consequences of these risks.

2.1.5.1 Description of Aviation Safety Risk Management

According to Swedavia's Risk Policy, risk management is part of the operational responsibility, and everyone should participate in the company's risk work. As part of this, the management of aviation safety risks lies within all relevant operations. The risk work consists of a combination of reactive, proactive, and predictive measures. The airports continuously conduct event analyses, trend analyses, planned changes, audits, and thereby assess and document various risks that may exist in connection with the airports' operations. Operational risks are documented in a risk bank.

2.1.5.2 Hazard Log

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In addition to the operational risk banks, the airports have an established Hazard Log, where the top aviation safety-related risks are described. The following top risks must always be documented and assessed in the Hazard Log:

- Runway incursion
- Runway excursion
- Taxiway incursion
- FOD (Foreign Object Debris)
- Ground collision during turnaround
- Ground collision with moving aircraft
- Obstacles
- Unauthorized drones
- Wildlife/birds
- Fire at the parking stand

Additionally, the Hazard Log may contain specific risk sources/risks related to aviation safety requirements where we are noncompliant, covering the following situations:

- Where we need to take measures to become compliant
- Where we do not intend to become compliant but have shown that an acceptable risk level is achieved through the implementation of compensatory measures, after approval from the Transport Agency (TS)
- Individual problem areas, normally captured through incident reports, that give rise to risks whose likely consequences have at least the severity level of a

"Serious Incident" and whose current risk level is red or yellow according to the airport's risk assessment matrix. See further below.

2.1.5.3 Identification of Risks

The risks of the operations are reported quarterly as part of the quarterly reporting. Before reporting, risk banks should be updated, and assessments and activities adjusted by the risk owners if necessary. Follow-up of the Hazard Log is carried out regularly with the respective responsible risk owner, and changes are then anchored in the Safety Action Group (SAG) and presented in the Safety Review Board (SRB).

The risks of the operation are largely identified reactively through the events and trends that are recorded (see section 2.2.8), but also through audits (see section 2.3) and operational controls, as well as externally identified risks that come to the airports through international feedback and safety promotion (see section 2.2.11). However, proactive and predictive risk management should be pursued to manage risks before they occur. This means that a significant part of the risk work is to capture risk observations in the incident reporting system, to act preventively to an even greater extent and to address latent risks before they materialize. Encouraging voluntary reporting and fostering a good reporting culture is therefore essential for the proactive approach to risk management.

2.1.5.4 Identify Risk Sources and Analyse Risks

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A risk source is a condition, an object, or an activity related to the current system or the surrounding environment in which the system operates, that can pose an aviation safety risk to the airport, and thereby the possibility of a negative consequence in the form of injury to persons, damage to equipment and infrastructure, or reduction of aviation safety margins or the ability to perform a certain function.

When risk sources have been identified, possible risks and potential consequences are analysed given that a defined sequence of events escalates. The analysis also includes assessing the severity of each consequence and the likelihood of occurrence, according to the definitions in the risk assessment matrix below "Risk Assessment Matrix for Evaluating Aviation Safety Risks".

Identification of risk sources and analysis of risks can be carried out in various ways and with different methods:

- "Brainstorming" with knowledgeable stakeholders from different areas. Only for simple safety justifications may it be appropriate for an individual handler to conduct risk source identification and risk analysis alone.
- Support for identifying risk sources can be obtained from previous safety justifications, checklists with typical risk sources (Preliminary Hazard Lists) / Hazard Log, and investigations of incident reports. However, these should be used with caution and not become limiting. It is important to be able to think beyond already known risk sources.

- For technical systems, it may be appropriate to conduct more formal risk analyses, including quantitative ones (fault tree, failure mode/effects, and criticality analyses (FMECA), etc.).

2.1.5.5 Evaluation of Risks

All identified risks are evaluated based on the likelihood of the risk occurring and the consequence if it does. The need for measures is determined by the assessed risk level. Practically, the risk level assessment is carried out directly in connection with incident investigation (see section 2.2.8), in connection with updating the risk bank/Hazard Log, or in risk assessment meetings in project and change initiatives (see section 2.2.10).

Once the severity and likelihood of the risks have been assessed, the risks are evaluated according to the risk assessment matrix below.

Methods/tools/techniques for evaluating the risks can be described as three main types:

- Qualitative Estimates/assessments of the likelihood of a certain event should ideally use available statistics if such exist, primarily from the airport's own incident reporting system. Alternatively, qualified assessments are made by experienced knowledgeable stakeholders.
- Semi-quantitative Estimates/assessments that use the qualitative/quantitative description of the risk assessment matrix, which also has a quantitative risk index.
- Quantitative Estimates/assessments/calculations of probabilities that use the quantitative description of the risk assessment matrix, calculations of probabilities using fault tree analysis (FTA), reliability block diagrams (RBD), event tree analysis (ETA), etc.

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For risks defined as Acceptable (green), no further measures need to be taken beyond those already defined in the design of the system/work, such as compliance measures.

For risks with an Unacceptable risk level (red), risk-reducing measures (also called compensatory or mitigating measures) must be taken to lower the risk level to an acceptable level according to the following point.

Risks whose risk level falls within the yellow area should be reconsidered, which means that various risk-reducing measures should be considered to strive to lower the risk level to acceptable. Here, a consideration is made between the actual benefit of a certain measure (i.e., how much the risk is reduced) relative to the cost or practical difficulties of implementing the measure. This analysis must be documented.

Risk Assessment Matrix for Evaluating Aviation Safety Risks

2.1.5.6 Risk-Reducing Measures

Where the risk assessment as described above concludes that additional measures are required (yellow or red area in the matrix), activities should be initiated to reduce the likelihood of the risk occurring and/or the consequence if it does. For each measure, a new assessment of the risk level is made once the measure has been implemented.

A person responsible for each activity is appointed, and after the activity is carried out, it is signed off in the risk documentation.

Various types of risk-reducing measures are taken to lower the risk level, such as:

- Eliminate the risk source.

  This is preferable but rarely possible.

- Reduce the likelihood of occurrence.

  This is most often achieved by implementing various safety barriers. If the event occurs, the severity of the consequence remains the same.

- Reduce the severity of the consequence.

  It is relatively uncommon for the severity to be reduced when implementing risk-reducing measures. (An example might be increasing the safety distance around a mobile crane so that if the crane tips over, it cannot hit an airplane. The probability of the crane tipping over remains the same, but the consequence is not the same.

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To maintain the risk level over time, any criteria for monitoring and follow-up of the system/change should be defined. See section 2.2.6.

After risk-reducing measures, the risk assessment should be reconsidered.

The risk can be accepted if - after defining and implementing/considering risk-reducing measures - it is still assessed to fall within the yellow risk level area, but for practical/economic reasons (after a cost-benefit analysis) it is not possible to reduce the risk level further. The risk is then considered As Low As Reasonably Practicable (ALARP).

For follow-up of risks and risk-reducing measures, see section 2.2.6.

2.1.6 Monitoring and follow-up of the implementation and effect of risk-reducing measures

In various parts of the safety management system, decisions are made on measures to be taken to reduce aviation safety risks or to establish an acceptable level of aviation safety. These measures can be defined in, for example:

- Investigations of incident reports (section 2.2.8)
- Aviation safety plans developed in connection with changes (section 2.2.10)
- Analyses initiated as a result of monitoring and follow-up of aviation safety performance (section 2.2.7)

- Analyses following safety directives and recommendations from the authority (section 2.7)

To ensure that the decided measures are implemented and provide the desired aviation safety-enhancing effect, the following should be documented in connection with the decision on the implementation of the measure:

- Who is responsible for the implementation of the measure?
- When should the measure be implemented?
- What method should be used to follow up on whether the measure has had the desired effect, i.e., how should the assessment be made?
- When and by whom should the follow-up be carried out?

The basic principle is that the above information is documented in the systems and/or meetings where the measures are defined.

Monitoring the implementation of risk-reducing measures is carried out within the framework of the Safety Action Group (SAG) or in other meetings where the measure has been defined and documented as described above.

The methodology for following up the effect of an implemented measure must be adapted to the situation. Both qualitative and quantitative assessment criteria can be used, depending on the type of measure and the type of risk addressed.

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After measures have been implemented and followed up to ensure the required effect has been initially achieved, further follow-up is carried out as needed within the framework of continuous monitoring of the Hazard Log. There, individual risk-reducing measures related to the airports' top risks or specific risks are documented, along with information on related Safety Performance Indicators (SPI). Evaluation of the effect of risk-reducing measures is thus also carried out in connection with analyses initiated by monitoring outcomes against SPIs; see further section 2.2.7.

2.1.6.1 Measures from investigations of incident reports

In the investigation of incidents (see section 2.2.8), there is often a need for measures to:

- Directly address the consequences of the incident
- Short-term prevent the same incident from happening again
- Long-term address the root cause, i.e., prevent the same and similar incidents from recurring
- Develop compensatory measures, i.e., measures that can reduce the consequences if the incident occurs again

The investigation results in recommendations, which are converted by responsible parties with the appropriate mandate into decided measures that fully or partially follow the recommendations.

Decided measures, along with other information such as target date, responsible person, method for follow-up, etc., according to the above description, are then documented in the incident reporting system (as far as possible).

2.1.7 Monitoring and follow-up of aviation safety performance

To monitor and follow up on aviation safety performance, safety indicators can be used. Sometimes the terms aviation safety indicators or simply indicators are used, which in this context can be considered synonymous. A safety indicator is a measurable parameter or event used to assess the safety status or risk level within a certain area or specific activity. Safety indicators provide quantitative or qualitative information that helps monitor, evaluate, and improve safety.

A safety indicator can be based on various types of data and measurements, depending on the specific area. It can be quantitative metrics, such as the number of incidents, loss of work time due to injuries, frequency of different types of inspections, or the proportion of actions completed within the set time. It can also be qualitative indicators, such as employees' awareness of safety procedures, the culture of reporting deviations, or the effect of training efforts.

Safety indicators serve as tools to monitor, measure, and evaluate the safety level, identify risks and deficiencies, and make informed decisions to improve safety. By regularly monitoring and analysing safety indicators, organizations or individuals can gain insight into the safety status and, if necessary, take actions to minimize risks and promote a safe and secure work environment or operation.

Many different terms exist for various types of indicators, but one way to describe their meaning is as follows:

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Reactive indicators – Something that involves or occurs as a reaction to something. A metric that measures already occurred events and has an impact on safety. Since reactive indicators only reflect faults and deficiencies, their use can only result in a reactive measure. Reactive indicators indicate a failure to control hazards but usually do not show why the system failed or if there are any latent hazards.

Proactive indicators – Something that prevents a foreseeable (undesirable) future situation in advance and is actively preventive. Proactive indicators provide useful information when the frequency of accidents and incidents is low to identify latent hazards and potential threats, thereby offering opportunities for improvement. There should always be a connection between a proactive indicator and the undesirable outcomes (or reactive indicators) that the monitoring is intended to warn about.

Predictive indicators – Something that has the ability to "predict" what might happen. These indicators do not manifest in the form of accidents or incidents and are used to understand the future and provide estimates of the likelihood of a future outcome. They indicate less severe system failures or "near misses" that, in combination with other events, can lead to an accident or a serious incident.

2.1.7.1 Evaluation of the effect of aviation safety work

Through monitoring and measuring aviation safety performance, Swedavia's defined aviation safety indicators and goals are followed up, and thus the effect of aviation safety work is continuously evaluated and analysed. This approach includes:

- Aviation safety goals and indicators (SPI) (established annually)

- Data collection (ongoing)
- Evaluation of collected data (ongoing)
- Analysis of data (ongoing)
- Aviation safety investigations and studies (ongoing)

Aviation safety performance is evaluated in various aviation safety meetings on a regular basis, including quantitative SPIs, qualitative SPIs, as well as assessments and analyses by the Safety Manager and Local Safety Officer.

- The primary meetings are SRB and SAG, but it is also followed up at LRST and ASG.
- Aviation safety performance is also monitored weekly through unit/board meetings in the various processes.
- Aviation safety performance in the minute-to-minute operational activities is followed up through daily rounds, checks, and reconciliations carried out by ADO, ATOS, ASDO, and APOC. These are compiled by APOC in a daily report to the airport management and others.

2.1.7.2 Aviation safety goals and aviation safety indicators (SPI)

The person responsible for goals and key figures (overall) is the Accountable Manager, but at each airport, the MOS is delegated responsibility for site-specific performance, risks, and SPIs.

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The MOS reports outcomes to the AM and also significant problem areas and challenges, as well as associated activities and measures, from SAG to SRB.

SRB is the forum where Swedavia annually establishes aviation safety goals and SPIs, which are to be common for the airports. Site-specific key figures for each airport are then developed and established in SAG and reported to SRB. Site-specific indicators are established by SAG but can be elevated by SRB to common indicators to achieve similar management and follow-up within IA. Key figures may need to be added and/or adjusted during the current year, but the foundation is that they are worked through and established in connection with annual business and operational planning.

SPIs can be quantitative and qualitative. For quantitative SPIs, Swedavia uses an average outcome for the previous five (5) years, where the outcome/year is recalculated and adjusted relative to the number of aircraft movements, so that large fluctuations in traffic volume do not risk distorting the assessment of safety performance during the current year's follow-up.

The indicator established is normally the nearest lower integer than the average for the previous five years. In cases where it is assessed that extensive changes, temporarily or permanently, can significantly affect an indicator, and it is therefore not possible to set it lower, there is the possibility to make site-specific deviations to higher numbers. This is then documented with justification and established by the responsible party. It is also possible to adjust an indicator downwards, for example, when recently introduced measures are expected to have a positive impact to a greater extent than the average for five years shows.

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This type of deviation from the basic model is also documented in connection with the establishment. SPIs are developed in connection with the annual business planning and then established at the first SAG meeting of the calendar year.

Some SPIs are not suitable for weighting against traffic volume, such as deficiencies after operational controls and implementation of SMS and management's commitment, etc. Key figures that are not dependent on/affected by traffic volume and scope of operations are thus not weighted.

When key figures reach 75% of the established annual indicator (yellow) or reach 100% of the annual indicator or higher (red), SAG should analyse the causes and consider and/or decide on measures and activities. Indicators that have shown significant negative outcomes over a short period may also require activities and measures even if the annual indicator still shows green. Decided activities and measures are documented in minutes and/or activity lists and are then followed up at subsequent meetings.

A challenge with quantitative measurement, mainly with input from incident reporting, is that incident reports can come in "waves." This can be caused by targeted inspections/focus areas or "campaigns" by individual actors to draw attention to other operators' deficiencies, etc. This needs to be considered in the trend analyses and action plans developed in response to escalating key figures, so that measures are directed at the "right" problems and to the appropriate extent.

One way to minimize the risk of misinterpreting quantitative key figures is to simultaneously develop more qualitative and proactive/predictive key figures, which will provide an even more accurate picture of the assessment of aviation safety performance in the future.

Description of aviation safety goals and indicators

- No accidents or serious incidents should occur at Swedavia's airports. In addition to continuous trend monitoring, Swedavia works with the following action plans and activities to ensure that no accidents or serious incidents occur at the airport.
- Communicate and anchor the purpose and function of the safety management system to all actors at the airport, with the goal that aviation safety has the highest priority in accordance with the aviation safety policy. This is carried out in regular aviation safety meetings, as well as through increased/targeted information. See further in section 2.2.11.
- Continuous work in accordance with SMS.
- No serious deficiencies (level 1) in the Swedish Transport Agency's operational controls.
- Swedavia's operations must be compliant with regulations.
- Swedavia monitors compliance through continuous monitoring and management of operations. Audit plans (internal and external) must be followed, and deviations must be investigated and addressed according to action plans.

- Swedavia measures and follows up on:
  - Audits not performed on time according to the established audit plan.
  - Deviations not addressed on time.

2.1.7.3 Results of aviation safety performance

- No Runway Incursion (RWYI) category A/B should occur.
- Swedavia continuously works, in accordance with the Swedish Transport Agency's report "Intrusion on the runway - Recommendations to prevent runway incursions," to reduce the number of incidents. The incidents that do occur should be of the lower severity category, C/D.
- To determine if an incident should be categorized as an RWYI, the guidance provided in the European Action Plan for the Prevention of Runway Incursions (EAPPRI) version 3.0, appendix N, is applied. Incidents not categorized as RWYI are referred to in the EAPPRI as "Safety events." Safety events are not currently followed up with their own SPI.
- The statistical basis is structured by classifying incident reports. Through classification, the airport receives a quick analysis that can point to problem areas, such as "Hot Spots." The statistics are evaluated and analysed by the airport's aviation safety meetings and presented at the aviation safety group's meetings.

To assess the severity of an occurred RWYI, this matrix is applied

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- No Taxiway Incursion (TWYI) category A/B should occur.
- Swedavia continuously works to reduce the number of incidents. The incidents that do occur are expected to be of the lower severity category, C/D.

To assess the severity of an occurred TWYI, this matrix is applied

2.1.7.4 Foreign Object Debris (FOD) should continuously decrease

- Active efforts to reduce FOD at airports are important to avoid damage to aircraft and incidents resulting from this. Therefore, it is required that everyone working at the airport participates in removing harmful objects but also reports this in the airport's incident reporting system. The airport handles found FOD and analyses the deviations that come in, to find measures to prevent the occurrence of FOD.
- Swedavia also engages actors at the airport in continuously recurring FOD inspections. The results are compiled, presented, and discussed at the airport's aviation safety meetings.
- Swedavia measures the number of FOD detected outside regular runway inspections or by ATS.
- The number of wildlife collisions should continuously decrease
- The wildlife control function at the airports is tasked with ensuring the preventive and acute work to prevent accidents or serious incidents caused by birds and wildlife on and near the airport.

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- Swedavia follows up on the number of bird and wildlife collisions that can be confirmed either via dead animals in the manoeuvring area or reports from the commander or ATS. Suspected wildlife collisions are also followed up. This can be, for example, after a pilot report is received, but no verification is found in the form of remains of birds or wildlife on site or on the aircraft. Such incidents are reported as suspected, as they still indicate physical presence. The perceived increased presence of birds and wildlife may require measures even if collisions cannot be confirmed.
- Aircraft damage should continuously decrease
- Aircraft damage usually occurs mainly in connection with aircraft parking, caused either by the airport's infrastructure, e.g., bridges and similar connections, or by collisions with other aircraft or vehicles, materials, or equipment within the framework of a turnaround.
- Damage can also occur, for example, caused by FOD on apron areas, which can lead to foreign objects being sucked into engines or tires being punctured.
- Aircraft damage can also occur in connection with, for example, wildlife collisions, excursions, or collisions in the manoeuvring area. However, these are rather an effect of another occurred top event (incursion, excursion, bird collision, etc.) and are normally not reported in the indicator for aircraft damage.
- Aircraft damage occurring at the airport is measured in this key figure regardless of whether it is caused by Swedavia or an external actor.
- Promote incident reporting
- Swedavia actively works to increase the willingness to report both internally and externally. Even events and incidents of lesser severity are a very important contributing factor to the improvement of aviation safety. To increase the willingness to report, Swedavia applies a just culture where mistakes are accepted as a natural part of human activity. Even personal mistakes can be reported without fear of reprisals.
- Reported events are used as a basis for the follow-up of other SPIs such as RWYI, FOD, etc.
- Follow-up of the incident reporting culture is carried out via other indicators such as:
    - Number of incoming reports
    - Timely handling of reported events
- Ensure the implementation of SMS and the engagement of Swedavia's top management.
- Swedavia's top management should promote the aviation safety policy and demonstrate that aviation safety is important through their actions and commitment.
- Aviation safety should be a fixed item on the agenda at all meetings.
- Follow-up is carried out through the participation of HSSE Safety (Safety Office) in Swedavia's management groups as well as through audits and safety climate measurements.

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In addition to overarching goals, airports can define their own site-specific aviation safety goals within their own focus areas, such as apron conflicts, driving vehicles on aprons, misplacement of equipment/vehicles, etc.

2.1.7.5 Data collection

Data collection for the follow-up of aviation safety performance is carried out through:

- Incident reporting system (see section 2.2.8).
- Safety Office compiles and reports data for each airport, such as status and outcomes against SPIs, significant events, and overall assessment of the aviation safety situation. This is produced for the current month and compared trend-wise against rolling 12 months to continuously see the status for the equivalent of a whole year back.
- Compliance Monitoring Manager reports monthly status for outcomes against audit plans and associated action plans at both SAG and SRB. See further in section 2.3.
- Self-monitoring and minute-to-minute operational reporting. Negative outcomes are reported and managed continuously in meetings at each airport (e.g., APT, management, and work meetings) and escalated to SAG as needed for uniform handling of problem areas. This applies even if they have not been captured through incident management and performance trend monitoring as described above.
- Swedavia conducts recurring safety measurements to assess awareness of aviation safety in airport work to follow up on attitudes and perceptions regarding aviation safety within the organization.
- Individual targeted aviation safety investigations, such as competence mappings, can be used to identify problems or hazards as a complement to aviation safety investigations.

2.1.7.6 Evaluation of collected data

Aviation safety performance is evaluated in various aviation safety meetings on a regular basis. The evaluation includes quantitative SPIs, qualitative SPIs, as well as assessments and analyses from the Safety Office, which are reported by the designated representative.

- The primary meetings are SRB and SAG, but performance and outcomes are also reported at, for example, LRST and ASG in meetings with external actors.
- Aviation safety performance is also monitored weekly, mainly through board meetings in the various operational processes.
- Aviation safety performance in the minute-to-minute operational activities is followed up through daily rounds, self-checks, and reconciliations carried out by ADO, ASDO, and ATOS or equivalent. These are compiled into a daily report to the airport management and other stakeholders and also serve as a basis for the ongoing evaluation of status and performance.

2.1.7.7 Data analysis

Aviation safety data is analysed by the Safety Office, which, among other things, conducts trend monitoring of the aviation safety indicators. The analysis is carried out from two perspectives:

- Quantitative assessments, where statistical analyses of data are conducted.
- Qualitative evaluations based on collected data and assessments by the Local Safety Officer.

These analyses are compiled into reports and charts that are presented in various aviation safety meetings for the follow-up of aviation safety performance.

2.1.7.8 Aviation Safety Investigations and Studies

Events impacting aviation safety are investigated to identify the root cause and develop risk mitigation measures. Aviation safety investigations are also conducted when a safety issue or a compliance deficiency has been identified. The scope of investigations varies with the severity and complexity of the identified or reported issue. See further in section 2.2.8.

2.1.8 Incident Reporting

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The purpose of reporting incidents is to prevent accidents and incidents through the feedback of experiences. Incident reporting is part of the continuous improvement process. It is crucial to emphasize that the purpose is not to investigate blame. To promote a learning culture, Swedavia applies the principle of a "just culture" where individuals are not blamed for unintentional errors but can be held accountable for deliberate violations, sabotage, gross negligence, or wilful misconduct in accordance with Swedavia's aviation safety policy. Each individual has a responsibility to report incidents that deviate in any way from internal procedures, standards, regulatory requirements, or that pose a risk. All safety-related incidents are reported as soon as possible, but no later than the end of the work shift according to Airport Regulation.

Regulation (EU) 376/2014 distinguishes between mandatory and voluntary reporting. Mandatory reporting applies to incidents that may pose a significant risk to aviation safety. A complete list of examples of incidents that require mandatory reporting in aviation can be found in the regulation, Article 4, where incidents related to airports and ground services are exemplified as follows:

- Incidents related to activities or facilities at the airport.
- Incidents related to the handling of passengers, baggage, mail, and cargo.
- Incidents related to the handling of the aircraft on the ground and associated services.

The purpose of voluntary reporting is to facilitate the collection of incident information that may not be captured by the mandatory reporting system, as well as other safety-related information perceived by the reporter as an actual or potential hazard to aviation safety.

Both voluntary and mandatory reporting are conducted directly in the airport's incident management system via reporting forms accessible through both the intranet and extranet [swedavia.net].

Swedavia handles all incoming reports in accordance with the General Data Protection Regulation (GDPR), and reporters can choose to remain anonymous.

All incidents are investigated to always include facts, analysis, conclusions, and recommendations. The investigation aims to find the root cause of the incident so that relevant measures can be taken.

All investigations impacting aviation safety are conducted by approved, certified investigators. Before an aviation safety-related incident is closed, it is reviewed and approved according to the incident management process.

Swedavia and all airport operators must ensure that investigations comply with established requirements. These include involving relevant organizations where necessary in the collection of facts, root cause analysis, and proposals for risk-reducing measures.

Incident reports, including all details of the investigation such as classification, root cause analysis, risk assessment, recommendations/risk-reducing measures, review, approval, etc., are stored in the incident reporting tool.

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The analysis and investigation of incident reports are continuously followed up at the airports' meeting forums. Results from trend monitoring are regularly reported to airport management. Follow-up and decisions on actions are taken within each respective process.

2.1.9 Emergency Planning

Emergency planning at Swedavia is part of the broader concept of crisis management, which is a component of Swedavia's leadership and governance. At Swedavia, a crisis is defined as an event that significantly deviates from the norm, is expected to have very large consequences for airport operations (flows, activities, environment, or property), poses a very serious risk to or threat against people's lives and physical and/or mental health, and where already summoned resources are insufficient.

Primarily, the events referred to are aviation and flight safety incidents, but also included are security-related events such as hijacking, violence and sabotage, traffic and operational disruptions, and national events involving one or more airports, such as crises affecting many Swedes abroad who are transported home by air.

Crisis preparedness is conducted proactively and integrated into normal operations. The effects of high crisis preparedness result in increased robustness in Swedavia's processes, which supports the achievement of our business goals and strategies and strengthens the brand.

The overall goal of crisis management at Swedavia is to protect life, health, property, and our brand, and in cooperation with others, to minimize societal consequences. The overarching aim is to return operations to normal as soon as possible. If an accident or other serious incidents occur, Swedavia and the airports must have a strong capability for crisis leadership and management.

A good crisis management capability requires a high level of crisis preparedness and established forms of cooperation. This also includes systematic work with risk and continuity management. Capabilities are primarily developed in everyday operations, and the system is based on policies, frameworks, guidelines, procedures, and other documentation. In practical terms, this means exercises, training, and feedback after incidents.

Swedavia plans to be prepared to handle various types of incidents such as disruptions in its own operations, societal disturbances affecting our operations, serious incidents, and crises. When such a serious incident occurs, Swedavia has a responsibility to act quickly and be professional and resilient in its response efforts.

The airports have a trained and practiced crisis management organization to handle crises and serious incidents regardless of origin and scope. The crisis management organizations are designed according to a generic functional model with established routines for crisis management, including cooperation with external actors, situational awareness, reporting, information, and communication. This is described in more detail in part E, chapter 19.

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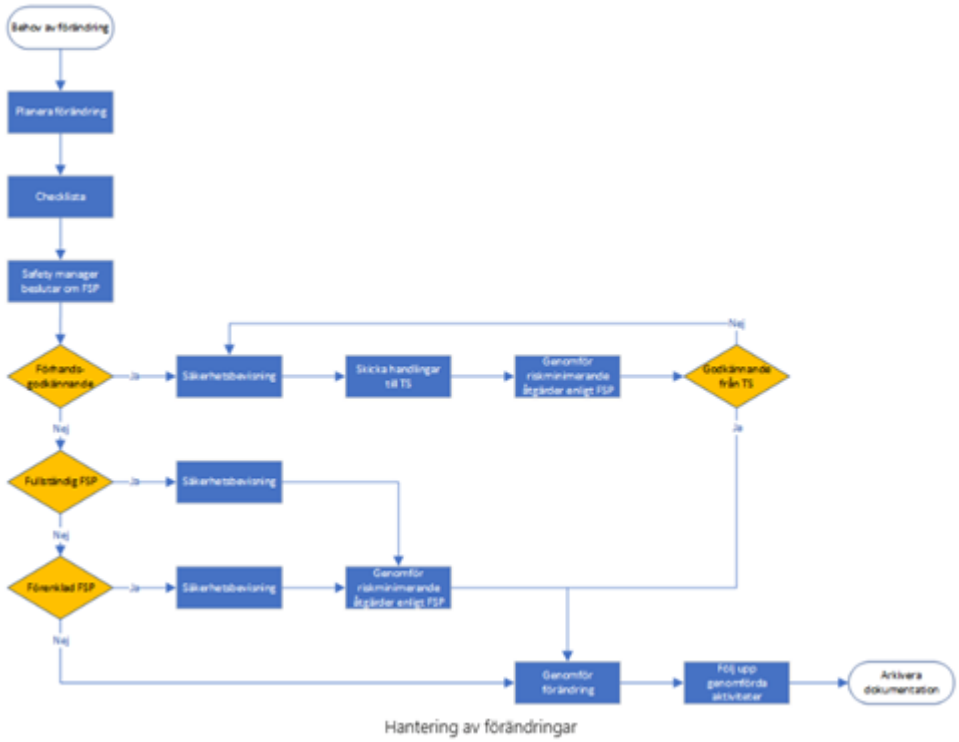
After a completed crisis management exercise or actual intervention involving the crisis management organization, relevant actors are called to an evaluation meeting where, among other things, what happened, what went well, and what can be improved are reviewed. After full-scale exercises, a special evaluation group works on assessment and learning. The evaluation group produces a report that addresses deficiencies and provides suggestions for changes in methods and/or organization.

2.1.10 Management of Change

One of the risks in an organization is when something changes, whether it is an organization, a technical system, a process, or a routine, which leads to a change in safety responsibility, execution, design, etc. Below is a description of how Swedavia manages this to ensure that any risks are assessed and handled to a level that is as low as reasonably possible, and that aviation safety is maintained at an acceptable level.

Swedavia manages changes in accordance with risk identification described in section 2.2.5 and as illustrated below.



Hantering av förändringar

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2.1.10.1 Checklist - Assessment of Impact on Aviation Security, Flight Safety, and Information Security

The checklist should be used in connection with changes within projects, investments, or regular operations to assess the impact on aviation security, flight safety, and information security, and to determine whether safety evidence or an in-depth risk analysis is required. The Safety Manager (or a designated person) reviews and approves the documentation that forms the basis for the decision on the type of flight safety plan required:

- No flight safety plan
- Simplified flight safety plan
- Complete flight safety plan

2.1.10.2 Pre-Approval

For changes affecting airport certificates, their certification basis, and/or critical airport equipment, or if they significantly impact Swedavia's management system, an application for pre-approval must be submitted to the Swedish Transport Agency. The application must be sent to the Swedish Transport Agency before the change comes into effect. The change must not be implemented until the Swedish Transport Agency has given formal approval.

If a need to deviate from current regulations is identified, an application for exemption must be submitted to the Swedish Transport Agency along with a flight safety plan. The

responsible manager/project leader/administrator is responsible for preparing the application and ensuring that all potential risks are addressed. The Accountable Manager signs the application, and the Safety Manager sends it to the Swedish Transport Agency.

Safety evidence for these changes must be submitted to the Swedish Transport Agency for approval and (if applicable) a request for access control. On the Swedish Transport Agency's website, there are links with more information about different types of airport-related matters and their processing times. It also describes how to apply and provides application templates.

Swedavia evaluates all changes in personnel, systems, equipment, and procedures to ensure an acceptable level of aviation safety during and after the change.

Apply for Airport Matters - Swedish Transport Agency www.transportstyrelsen.se
Swedavia evaluates all changes in personnel, systems, equipment, and procedures to ensure an acceptable level of aviation safety during and after the change.

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2.1.10.3 Exemption from Regulations

If a need to deviate from current regulations is identified, an application for exemption must be submitted to the Swedish Transport Agency along with a flight safety plan.

The application process follows two different principles depending on the EU regulation the exemption concerns:

- For airport infrastructure or obstacle limitation surfaces, Swedavia applies for an Equivalent Level of Safety (ELOS).
- For airport operations or organization, Swedavia submits an application for Alternative Means of Compliance (AltMoC).

Application forms for each type of application can be found under the above link to the Swedish Transport Agency's website. The responsible manager/project leader/administrator is responsible for preparing the application and ensuring that all potential risks are addressed. The Accountable Manager signs the application, and the Safety Manager sends it to the Swedish Transport Agency.

When an ELOS application is completed and approved, the relevant parts of the AIP must be updated before the exemption is implemented. See chapter 4 for more information about each airport and chapter 7 for guidance on updating the AIP.

2.1.10.4 Organizational Changes

All changes in the organization or appointments to aviation safety-related roles described in the Aerodrome Manual, or changes to its content, must be documented in a flight safety plan.

If the change concerns the appointment of a role with aviation safety responsibility, an assessment of the individual's competence must be carried out. If necessary, a training plan should be created to ensure the appropriate level of competence is achieved.

2.1.10.5 Changes to Systems/Equipment/Procedures

A system refers to people, technology, and procedures organized as a whole or in parts in such a way that one or more specified tasks can be performed. (Source: TSFS 2019:20)

All systems impacting aviation safety that are added, removed, or changed must be documented in a flight safety plan.

Before new procedures are put into operation, they must be risk-assessed, and the risks documented in a flight safety plan.

The responsible manager/project leader/administrator is responsible for preparing the flight safety plan and ensuring that all potential risks are addressed.

2.1.10.6 Safety Assessment/Safety Assessment Plan

A safety assessment must be carried out:

- before new systems/equipment/procedures are put into operation,
- before changes to existing systems/equipment/procedures are implemented,
- before systems/equipment/procedures are replaced or decommissioned,
- when specifications in the airport's certificate are affected.

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The Safety Manager (or a designated person) decides, based on the established *"Checklist - Assessment of Impact on Aviation Security, Flight Safety & Information Security*," whether a flight safety plan should be prepared and, if so, what type.

NO SAFETY ASSESSMENT PLAN	**Example**
Maintenance actions covered by regular procedures or applicable parts of AR and carried out by trained personnel who are aware of the risks associated with their work. This assessment is conducted by the responsible supervisor or equivalent but can be delegated to the responsible technician if they have sufficient knowledge in risk management. Performed on equipment that has no or only minor secondary impact on flight safety. The work task should be handled in accordance with established routine/AR.	*Replacement of individual components in a system with identical units (fault rectification).* *Replacement of individual runway light fixtures.* *Ongoing maintenance work.*

SIMPLIFIED SAFETY ASSESSMENT PLAN	EXAMPLE
Conducted by the officer/unit or equivalent and approved by the Unit Manager/owner. Simplified safety assessment plan/safety evidence is normally handled internally but may be presented to the Swedish Transport Agency upon special request. Performed on a system to investigate the impact of the change on flight safety. It may also lead to the need for a complete flight safety plan.	*Replacement of equipment with equivalent units, or more extensive fault rectification measures without system changes.* *Replacement of runway light fixtures with associated cabling and new ducting.* *Work performed 1–2 times per year for which there is no regular procedure description.*

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COMPLETE SAFETY ASSESSMENT PLAN	EXAMPLE
Conducted by a safety evidence specialist in collaboration with the Safety Manager (SM) or a designated person. Approved by the SM or a designated person. Safety evidence is presented to the Swedish Transport Agency by the SM or a designated person if necessary. Performed on a system or operation that has a clearly demonstrable impact on flight safety. **If the project/change affects the airport's certificate, the safety evidence must be submitted to the Swedish Transport Agency for approval and a request for access control.**	*Replacement of equipment, corrective actions involving changes to existing systems, or commissioning of systems that introduce entirely new functions.* *Installation of centreline lights that were previously missing.* *Changes in the surface of the runway/taxiway.*

2.1.10.7 Overall Methodology

The safety assessment plan must demonstrate compliance with applicable regulations regarding flight safety and identify flight safety risks and any associated risk-reducing measures. (Other risks are managed according to Swedavia's guidelines for Risk Management.)

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The conditions for conducting a safety assessment according to the established methodology vary depending on the type of change; see the detailed "Procedure for Safety Evidence." However, the following steps are fundamental in the process. Depending on the type of change, the depth and scope of the work may vary.

1. Describe the change (system/work) The change should be described briefly but clearly enough to provide an understanding of the entire change.
2. Identify interfaces Identify stakeholders affected by the change. These could be external organisations or internal units.
3. Identify applicable flight safety requirements and verify compliance All flight safety requirements affecting the change must be identified. The requirement and how it is addressed should be documented.
4. Identify risk sources and analyse the risks Document the risks associated with the change. See section 2.2.5.
5. Evaluate the risks The risks should be evaluated and documented using the established risk evaluation matrix. See section 2.2.5.
6. (If necessary) Define risk-reducing measures If the risk is not acceptable, reducing/mitigating measures and those responsible for the measures should be documented. See section 2.2.5.
7. Define the method for evaluating the effectiveness of implemented risk-reducing measures.

   Describe the expected effect of risk-reducing measures and define the method to be used to evaluate the actual effect after the measure has been implemented.
8. Accept residual risk Analyse and evaluate the risks again. Ensure that the risk is acceptable after the measures have been taken. See section 2.2.5.
9. Document the above for traceability and follow-up All analysis and evaluation are documented and saved according to the "Procedure for Safety Evidence."
10. Follow-up and evaluation

    Depending on the type of change, follow-up and evaluation may need to be carried out continuously to ensure that the effect of risk-reducing measures is satisfactory. At a minimum, follow-up and evaluation should be done once at the end of the project/change. The evaluation is carried out in accordance with the procedure for "Establishing a Safety Assessment Plan" and documented in Appendix 3 of the "Template for Flight Safety Plan." If necessary, individual risk sources/risks are transferred to the airport's Hazard Log and/or the relevant department's risk bank.

    At the end of the project or changes, feedback should be conducted to evaluate the effect of the implemented risk-reducing measures and, if necessary, transfer individual risk sources/risks to the airport's Hazard Log and/or the relevant department's risk bank.

2.1.11 Promotion of Safety

Safety promotion is an important part of systematic and preventive safety work to ensure understanding and application of SMS throughout the organisation by increasing safety awareness and engagement of both management and other personnel.

2.1.11.1 Safety Procedures

The Safety Management System (SMS) is part of the Aerodrome Manual, which is a component of Swedavia's management system and is available to all employees. The SMS is published on the extranet [swedavia.net] for other actors operating at the airports. Employees should be familiar with the published flight safety procedures in the Aerodrome Manual and Airport Regulations (AR) to the extent that they are applicable to their duties. External actors must ensure that their personnel with airside access have read and follow all relevant AR that affect the performance of their tasks.

2.1.11.2 Senior Management

To conduct effective flight safety work, it is essential that senior management is engaged and demonstrates through their behaviour that flight safety is always a top priority. Management should continuously promote the flight safety policy and, through their actions and commitment, contribute to the continuous improvement of the flight safety culture.

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Safety should be a standing item on the agenda in various meetings and information sessions held with employees. Leaders are responsible for providing their employees with flight safety-related information, facilitating discussions on flight safety-related issues and investigations, and highlighting good examples for Safety Awareness (e.g., recognising staff who have taken actions or reported to prevent an incident).

The visibility and presence of management in the operations are also important, and this can be reinforced through periodic activities such as Safety Walks and Clean Airside.

2.1.11.3 Safety Meetings

There are established safety meetings, both joint and at each airport, where external actors also participate; see section 2.1.

Swedavia also actively participates in local, regional, national, and international flight safety work to improve flight safety for the entire aviation industry. This also provides access to "best practices" where appropriate. The work includes, among other things, the development of technical solutions, bulletins, audiovisual material, manuals, conferences, forums, flight safety events, and campaigns. It also involves sharing flight safety data/information with internal and external actors as well as authorities.

2.1.11.4 Safety Training

Procedures for safety-related training to increase awareness are described in Chapter 3. The training plan covers everything from basic training in safety-related knowledge (badge training) to advanced training on SMS and regulations.

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2.1.11.5 Safety Communication

Swedavia employees, as well as actors and suppliers with flight safety-related tasks, should access flight safety-related information. Furthermore, flight safety-related experiences that have emerged through evaluations, follow-ups, audits, and investigations should be disseminated within Swedavia and to the airports' external actors and suppliers.

Swedavia disseminates flight safety-related information through various established meetings and primarily through the following channels:

- Inside

  Swedavia’s intranet is aimed at Swedavia’s organisation.

- Swedavia’s extranet [swedavia.net]

  Aimed at all active operators at each airport.

- Airport Information (AI)

  AI is the airports' newsletter for temporary security or aviation safety-related changes, traffic impacts, construction projects, repairs, or other events that may affect everyone working at the airport.

- Safety Alert

  Safety Alert is a short and illustrative newsletter with various local safety-related focus areas. Current topics for Safety Alert are developed in close collaboration with the airports' operators.

- Safety Bulletin

  Swedavia Safety Bulletin is a newsletter that highlights important aspects of aviation safety relevant to all Swedavia airports. Current topics for the Safety Bulletin are developed at the Safety Service Office in close collaboration with the airports and their operators.

All AR subscribers are informed upon the publication of AI, Safety Alert, and Safety Bulletin.

2.1.12 Outcomes from SMS

Following up on the outcomes from SMS is a very important part of continuously improving the SMS and increasing aviation safety performance. The outcomes from SMS are followed up in the different perspectives within SMS (predictive, proactive, and reactive) through:

- Measurement and follow-up of aviation safety measures (2.2.6).
- Trend monitoring and follow-up of aviation safety performance (2.2.7).
- Evaluation of the aviation safety policy (2.2.2).
- Operational controls and audits (2.3).
- Sharing of aviation safety data/information and experiences with both internal and external stakeholders and authorities (2.1).

- Aviation safety investigations of serious incidents.
- Recurring surveys, such as safety climate measurement.
- Continuous evaluation of the SMS.

2.1.12.1 Continuous Evaluation

An SMS evaluation program is crucial to ensure that all aviation safety measures and processes function as intended and that risks are reduced and maintained at an acceptable level. By continuously monitoring, evaluating, and improving the SMS, Swedavia can anticipate and prevent incidents. This not only helps protect travellers, staff, and aircraft but also maintains public and regulatory trust. The outcomes from the evaluation program are primarily reported to the Safety Review Board but can be shared with other aviation safety-related forums and/or communicated to the organization for aviation safety promotion purposes upon request (see chapter 2.2.11).

More information can be found in the routine description of each subchapter. Safety Management System Assessment (SMSAT) Swedavia uses SMSAT, a process developed by the European Union Aviation Safety Agency (EASA) to provide authorities and organizations with the means to evaluate their SMS. SMSAT allows Swedavia to systematically assess the main components of its SMS:

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- Aviation safety policy and objectives (AM 2.2.1, 2.2.2, 2.2.3, and 2.2.4)
- Management of aviation safety risks (2.2.5, 2.2.6, and 2.2.8)
- Promotion of aviation safety (2.2.11)
- Aviation safety assurance (2.2.7, 2.2.10, and 2.2.12)

These components are assessed based on different maturity levels, aiming to answer the following questions:

- Present – is the SMS correctly documented?
- Suitable – is the design of the SMS appropriate for the size and complexity of the operation?
- Operational – is the SMS implemented in the operation, i.e., are we doing what we say we will do?
- Effective – does the SMS deliver the desired level of aviation safety? Is there continuous improvement with results?
- Resilient (introduced by Swedavia) – does the SMS exhibit resilient characteristics, i.e., does it have the ability to be flexible, enduring, and strong in the face of adversity?

The process annually follows the PDCA cycle described in chapter 2.2.1. The mapping is compiled into a report, which is then submitted to the SRB, where there is an opportunity for strategic decisions for future mappings.

The outcomes from the SMS are communicated within Swedavia in various ways:

- Utfall från SMS i sin helhet sammanställs och presenteras på SRB och på koncernnivå.
- Utfall från SMS diskuteras och analyseras på Safety Service Office:s interna möten.

- Utfall från delar av SMS sammanställs och presenteras löpande på Swedavias olika flygsäkerhetsmöten samt i kvartalsrapporter.
- Utfall från delar av SMS presenteras och analyseras på processmötena, både på aggregerad och flygplatsnivå.
- Utfall från delar av SMS kommuniceras även i andra lämpliga kanaler som intranät, Safety Bulletins, m.m.
- Utfall från delar av SMS presenteras på “Ledningens genomgång”

2.2 Reporting of accidents and serious incidents to the authorities

Swedavia must, as soon as possible, but no later than within 72 hours after being notified of an event, report the collected event information to the Swedish Transport Agency. In Regulation (EU) 376/2014, an event is defined as: "any safety-related occurrence that poses a risk to or, if not addressed or corrected, could pose a risk to an aircraft, persons on board an aircraft, or other persons, and particularly includes accidents or serious incidents." In Regulation (EU) No 996/2010, incidents, serious incidents, and accidents are defined as follows: Regulation (EU) No 996/2010 defines an incident, serious incident and accident as follows:

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Incident

An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

Serious Incident

An incident involving circumstances indicating that there was a high probability of an accident and is associated with the operation of an aircraft, which in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down.

Accident

An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

a. a person is fatally or seriously injured as a result of:
    - being in the aircraft, or,
    - direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or,

- direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew.

b. The aircraft sustains damage or structural failure which adversely affects the structural strength, performance or flight characteristics of the aircraft, and would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes) or minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike, (including holes in the random).

c. The aircraft is missing or is completely inaccessible.

All involved persons who are aware that an accident or a serious incident has occurred must immediately notify the competent authority:

- In an emergency, call 112 (SOS) and request Air Rescue.

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In the event of urgent incidents and crisis situations such as accidents or serious incidents, the established contact paths for minute-to-minute operational functions at the airports, published on Swedavia's extranet [swedavia.net], or links provided here, should be followed.

According to the established routines and checklists of the airport and air traffic control, air traffic control (ATS) must alert JRCC, which in turn notifies the Swedish Accident Investigation Authority:

- Call the Joint Rescue Coordination Centre (JRCC) at 031-64 80 00.
- Contact the Swedish Accident Investigation Authority directly at 08-508 862 99.

The air traffic control's procedures for accidents, incidents, and serious incidents are outlined in the air traffic control's operations manual.

More information can be found on the Swedish Transport Agency's website.

TRANSPORT STYRELSEN

Incidents, Serious Incidents, and Accidents - Swedish Transport Agency
www.transportstyrelsen.se

Here you will find information about incidents, serious incidents, and accidents (crashes), as well as how to notify and/or report them.

A description of how the airport and cooperating organizations and stakeholders take action and handle an accident or serious event occurring at or near the airport is described in chapter 19 of this Aerodrome Manual. Crisis and emergency planning are described in section 2.2.9.

The airport's external management (e.g., ATOS, ADO) is responsible for securing traces in accordance with the Accident Investigation Authority's action list and site-specific checklists/routines, which also include voice and radar traces from ATS, as well as recorded camera footage from the airport's surveillance system.

The police can also decide to initiate a preliminary investigation and represent the Accident Investigation Authority on-site to secure traces. Regardless, securing traces must be done in consultation with and on behalf of the Accident Investigation Authority and/or police at the accident site.

Property that is deemed to be of significance to the investigation must not be moved without permission from the authority (Accident Investigation Authority and Police) responsible for investigating the accident.

2.3 Use of alcohol, psychoactive substances and medicines

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In the Swedish labour market, the so-called duty of loyalty applies, which means that employers and employees must be loyal to each other. Swedavia's collective agreement also expresses the principle that the employment relationship should be based on mutual loyalty and trust. The employee must safeguard and promote the employer's interests and observe discretion both internally and externally in the company's affairs. The employee must not act disloyally towards their employer, nor hinder or harm the employer's operations, and must also cooperate and respect the employer's interests.

This means that the employee must always act professionally in their work, especially employees who represent the employer externally, and always safeguard the employer's interests. The employee also has a duty to inform and must notify the employer of circumstances that may be of significance. This is particularly important in safety-classified work.

In general, the use of alcohol, psychoactive substances, and medications that negatively affect work performance and judgment is not permitted at any workplace in the country, and therefore not at Swedavia's airports. Additionally, the duty to inform means that suspicion of such use must be reported.

Swedavia has a Work Environment and Drug Policy that establishes zero tolerance regarding alcohol and drugs, and random drug testing of employees is conducted continuously and always in connection with new employment, suspicion, or accidents. All employees at Swedavia also sign a Code of Conduct upon employment, which clearly states that the use of mind-altering substances is incompatible with our operations.

When such use is detected, Swedavia has procedures in place to handle it.

3. Qualification and training of airport staff

Swedavia establishes and maintains training plans to ensure that all employees within certified operations have the right competence. A training plan describes the objectives, courses and methods that form part of the training.

Employees to be trained in accordance with Regulation (EU) 139/2014 are divided into two main categories:

1. Personnel working airside, including the employees of an external party.
2. Personnel involved in the operation, maintenance and management of the airport. This includes managers and nominated persons such as the Accountable Manager.

All employees involved in airport operations, maintenance and management must undergo initial and refresher training as well as proficiency checks. This also includes driver training and safety training for personnel who work airside.

Refresher training aims to reinforce employees' knowledge and skills, while differential training is provided in the event that the employee's role or operational environment changes. An individual plan for additional training is required for those employees who do not fulfil the requirements. The effectiveness of the training programme is reviewed annually to ensure it is relevant and practicable.

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Each subject manager evaluates and updates the course plans as necessary.

In addition to its own internal requirements, Swedavia is responsible for ensuring that all external operators with employees' airside comply with training plans equivalent to Swedavia's standards. These include training in aviation safety, human factors and Safety Management System (SMS) training.

4. Description of the airport

This information is provided in IAIP AD2 ESSA/ESSB/ESGG/ESMS.

5. Available aeronautical information services and issuing of information

This information is provided in IAIP AD2 ESSA/ESSB/ESGG/ESMS.

6. Airport dimensions and related information

This information is provided in IAIP AD2 ESSA/ESSB/ESGG/ESMS.

7. Airport reporting

Swedavia is responsible for supplying data and information about the design, accessibility, operational status and other important aspects of the airports to LFV's Aeronautical Information Publication Service (AISP) for publication. This is to ensure that information is accurate and up to date in order to minimise aviation safety risks and prevent accidents occurring as a result of incorrect or outdated data. The distribution of information between Swedavia and LFV is governed by an agreement on the provision of aeronautical data and aeronautical information.

Changes at the airport may be temporary or permanent and are handled according to different procedures. Temporary changes, such as works or events that affect the movement area, the airport's airspace or operational status, are managed via NOTAM (Notice for Airmen) and require timely reporting in order to communicate relevant information to the affected parties. Permanent changes, such as structural changes at the airport, are reported in accordance with the AIP Amendment procedures.

NOTAM is an important tool for providing information about changes at airports that may affect the safety and availability/capacity of air traffic. Specific criteria apply for when NOTAM is to be published, for example in the event of changes to the airport's services, the establishment or interruption of radio navigation and air ground communication services, or in the event of obstacles in the manoeuvring area. NOTAM can also be published in the event of planned short-term operational restrictions or information that is important for pilots flying to/from the airport in question.

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The monitoring and control of AIP data is a continuous process to ensure that the information remains accurate and up to date.

8. Access to the airport’s movement area

The rules applicable here are described in AR Part 2 Security.

All entry into an authorisation area (CSRA) by persons and vehicles must be carried out via person and goods control (PVK), except for access to demarcated areas (DMA) which are not regulated by the Swedish Transport Agency's statutes.

Access to movement areas is controlled through the use of established authorisation areas. The airport’s authorisation areas are those areas of the airport to which the general public does not normally have access.

Access from a demarcated area (DMA area) and into an authorisation area (CSRA area) and vice versa is described in the Airport Regulations.

Vehicles and persons entering an airport’s movement area need to meet operational needs, eligibility and visibility requirements.

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1. The purpose of an operational need is that:
    a. the vehicle is equipped to be in the area where work tasks are to be performed.
    b. people have duties in a specific area.
2. The purpose of authorisation is that:
    a. vehicles hold a vehicle permit in accordance with AR part 5 chapter 16.
    b. people hold authority (colours) on badges that are obtained after completing the airport's Safety/Security training; see below.
3. The purpose of visibility is that:
    a. the vehicle meets the visibility requirements of AR part 5 chapter 16; and
    b. people meet the requirement to wear hi-vis clothing; see below.

An authorisation document for vehicles is issued to companies or other organisations operating at the airport and which need to drive vehicles in the airport's Airside area.

An authorisation document is issued to a person employed by an authority, company or other organisation that conducts business at the airport and who, in their job, requires frequent access to the airport's Airside area. A badge is obtained after completing the relevant airport training courses.

Staff entering the apron on foot must have relevant training and may only enter the movement area when this is necessary to perform their work duties. Those who do not have training must be accompanied.

Vehicles within the driving area when the vehicle/driver does not have an authorised permit for the intended area shall be escorted by an authorised vehicle and driver with a valid permit.

For temporary access to the airport, a visitor badge must be issued. A person with a visitor badge is always accompanied by a person with a valid badge for the relevant authorisation area.

Operators who wish to access the authorisation area shall sign an agreement with Swedavia AB. In the application for an agreement, the operator must state which authorisation areas are desired in connection with planned activities. Once approved by Swedavia AB, a decision is made on the authorisation areas to which the operator is to have access.

It is a requirement to wear high-visibility clothing in the movement area.

See AR Part 1 General at Airport, chapter 3 High-visibility clothing.

Deviations to enter the manoeuvring area on foot without a manoeuvring area driving permit may be granted within established work areas.

8.1 Coordination with Security

Vehicles that are to enter the authorisation area must hold a valid vehicle permit that corresponds to the vehicle and must be approved by security personnel before entry is permitted.

See AR Part 2 Security chapter 4 Authorisation areas at airports

In the event of violation or abuse of regulations, authorisation documents may be withdrawn following a decision by the Head of Security or someone designated by that person. A decision on the withdrawal of authorisation documents can be made with immediate effect.

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Prevention of unauthorised access to the movement area

Airports prevent unauthorised access to the movement area through operational regulations in the Airport Regulations.

9. Inspection and reporting of the operational condition of the movement area

There is a system in place for identifying, reporting and removing objects/remediating conditions that may have an adverse impact on aviation safety.

Inspections are performed regularly – daily, weekly and as necessary – and are designed to ensure aviation safety and availability for aircraft. These inspections include runways, taxiways, aprons and stands. The inspections also check on windsocks, obstacles, signs, and lighting.

Daily inspections are scheduled but can also be carried out spontaneously if deficiencies are suspected, such as contamination or damage with an impact on safety. Weekly inspections are performed during the day once a week and focus on areas that could have an impact on safety, such as surface damage, drains, day markings and apron lighting. More extensive inspections are performed where necessary, for example in the event of adverse weather, increased occurrence of FOD (Foreign Object Debris), or if specific safety risks are suspected.

Reporting is a key part of the inspections and includes logbooks, checklists, and digital tools. The results of inspections must be reported promptly in order to document any deviations or deficiencies and take immediate action where necessary. SNOWTAM reports are used to report winter conditions.

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10. Inspection and maintenance of visual and non-visual aids, including electrical systems

The purpose of performing inspection and maintenance of visual and non-visual aids, including electrical systems, is to ensure aviation safety, efficiency and regulatory compliance in operations. Each airport has its own Certification Basis, specifying the physical characteristics of the airport.

Preventive maintenance programmes are implemented by the maintenance organisation or contracted party. Preventive maintenance can be condition-based or predetermined and aims to minimise the risk of operational disruptions and improve availability. Corrective maintenance rectifies faults or deficiencies quickly, particularly in emergency situations that affect airport operations or pose a risk of damage, injury or danger.

The maintenance programme includes inspections, which are performed daily or at various intervals (weekly, monthly, quarterly, six-monthly inspections) depending on the requirements of each facility. The inspections follow established checklists and are reported via Swedavia’s IFS maintenance system. Any faults that are discovered during the inspections are recorded and followed up.

Visual aids include lighting systems, PAPI systems, visual docking systems, guide signs, colour markings, marker poles, hazard markers, and signal methods. Electrical systems and non-visual aids are also managed within the same framework.

11. Operation and maintenance of airport equipment, including vehicles

11.1 Maintenance, general

Swedavia performs maintenance, or has maintenance performed, in order to ensure that the infrastructure at Swedavia's airports is maintained in such a condition that the safety of the aeronautical operations is not compromised.

The maintenance programme includes both remedial and preventive maintenance procedures where the choice of maintenance strategy for a facility shall be based on the criticality, status and condition of the facility and the risk of operational disruptions and interruptions that may adversely affect the airport's operations and/or safety at the airport.

11.2 Preventive Maintenance

If the consequences of a failure condition, an operational disruption or an unplanned outage are unacceptable from an operational perspective and/or a safety perspective, maintenance must be optimised based on a strategy based on preventive maintenance.

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Preventive maintenance efforts (FU) are initiated based on a long-term plan or are performed continuously in the form of condition-based maintenance (TBU) or in the form of predetermined preventive maintenance (FBU).

- Condition-based maintenance (TBU) is based on ongoing control and monitoring and periodic inspections of facilities and associated maintenance activities (FSUs). The inspection interval, where applicable, follows the manufacturer's instructions, applicable legislation and is also governed by the criticality, status and condition of the facilities and the requirements for availability and reliability.
- Predictable maintenance (FSU) Actions performed based on outcomes from "condition-based maintenance" (TBU) are referred to and defined as predictable maintenance.
- Pre-determined maintenance (FBU) includes maintenance operations that are to be performed continuously at a certain interval without prior condition check, based on e.g. calendar date, operating time, number of operations or similar based on instructions from the manufacturer, applicable legal requirements and in addition the criticality, status and condition of the facilities and requirements for availability and operational safety.

11.3 Remedial Maintenance

If the consequences of a failure condition, an operational disruption or outage in a facility are acceptable from an operational perspective and/or a safety perspective, maintenance can be optimised based on a strategy based on remedial maintenance, when justified.

Remedial maintenance interventions (AU) are typically initiated by fault reports or deficiencies discovered during routine and non-routine inspections.

- Emergency remedial maintenance interventions (AAU) are performed immediately when a shortage, malfunction or failure of a facility adversely affects airport operations or creates a risk of property damage or danger to people's lives and health.
- Deferred remedial maintenance (UAU) is performed when a deficiency, operational disruption or fault in a facility is not acute from an operational or safety perspective and where the execution can be planned for a later time, even if it assumes that the facility is taken out of operation pending action.

11.4 Operation and maintenance of aircraft equipment

The airports have different scopes of what Swedavia provides and what is carried out via ground handling agreements and is owned by operators. Swedavia's airport equipment consists of AVDGS, passenger bridges, fixed installed and mobile aircraft supply (electricity 115 V/400 Hz and 28 V), cabin air (heated or tempered air) and passenger steps.

Before using equipment, the operator must inspect the equipment from a usability perspective and, if applicable, report a fault in accordance with procedures for reporting faults. Regardless of organisational affiliation, the user must have competence for use in accordance with training programmes and competence requirements.

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If equipment or systems are out of service, ground handling companies are responsible for reporting faults to Swedavia Failure Reporting for telephone numbers see the respective airport on the extranet.

11.5 Preventive vehicle inspections

Before using a vehicle, the driver must inspect the vehicle including its equipment from a usability perspective in accordance with Swedavia's regulations, document daily inspection and possess competence for the use in accordance with training programmes and competence requirements. This is regardless of the organisational affiliation.

11.6 Maintenance plan

The maintenance plan is based on the manufacturer's recommendations or requirements, other relevant rules and regulations, own experience and any need for testing of operationally critical functions.

The periodicity of the planned maintenance, timing and combination of checks and measures at each maintenance occasion may differ between airports based on site-specific assumptions and conditions.

11.7 External suppliers

Vehicles owned and operated by operators other than Swedavia are set requirements and followed up through Aerodrome Manual, Airport Regulations, ground handling agreements and audits.

12. Maintenance of the movement area

The purpose of performing maintenance of the airport's movement area is to ensure aviation safety, functionality and regulatory compliance in operations. Each airport has its own Certification Basis, specifying the physical characteristics of the airport. These characteristics are ensured through a maintenance programme for the airport's movement areas and surfaces that is implemented by maintenance organisations or contracted parties.

The maintenance programme includes both corrective and preventive maintenance. Preventive maintenance can be either condition-based (CBM) or predetermined (PDM). CBM involves periodic inspections and checks to detect and remedy faults before they affect safety, while PDM is based on carrying out maintenance measures at predetermined intervals.

Corrective maintenance is triggered by fault reports or the identification of deficiencies and can be divided into immediate and deferred corrective maintenance. Immediate corrective maintenance is carried out straight away when there is a risk of damage, injury or danger, while deferred corrective maintenance is planned for a later date.

Faults and deficiencies are reported via Swedavia's IFS maintenance system. Measures implemented are planned, prepared, carried out and followed up via work orders. Deviations with an impact on safety are investigated and assessed at each airport.

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Maintenance of the movement area includes inspections, friction measurements, PCI inspections and weight bearing capacity measurements. Surfaces are inspected and cleaned up daily to ensure they remain in good condition. Checks on drainage systems, grass cutting and monitoring asphalt surface overload are also important for ensuring safety and functionality.

13. Works at the airport

Works and/or events that will take place on airport grounds and are not part of normal operations shall be planned, prepared and approved prior to implementation, in order to minimise aviation safety risks and disruption to normal operational activities.

The approval of these works and/or events takes place at a Change Approval Meeting (CAM) arranged at the respective airport.

Work that involves temporary or permanent physical changes to land, buildings, control systems or other infrastructure that is owned or leased by the airport shall always require the approval of the facility owner.

The airports have established forums and contact channels for planning, coordinating and anchoring the work, as well as for communicating information to the various operators at the airport (such as Airport Information).

Coordination and communication with Air Navigation Services during implementation takes place primarily via established communication channels (such as meeting forums, Operating Instruction, Airport Information etc.) and functions (e.g. APOC, ATOS, project implementer etc.).

Air Traffic Services is part of the Change Approval Meeting as a reviewer of the methodology.

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These are supplemented with additional channels should the work require (e.g. daily briefings, telephone calls when carrying out a work procedure, etc.).

14. Apron Management

It is Swedavia's responsibility to ensure that procedures, regulations and skills etc. are in accordance with ADR.OPS.D in Regulation (EU) 139/2014. External operators covered by the regulations are included in Swedavia's audit plan. It has been established that Swedavia is not an apron management service provider as long as the airports do not operate active traffic service with clearances to operate aircraft and vehicle traffic in apron areas.

14.1 Handover of aircraft between ATS and the Apron Management unit

As Swedavia does not use an Apron Management service provider, there is no handover of aircraft between air traffic services and any AMS provider.

The pilot navigates in apron areas at their own risk until the pilot requests clearance for the manoeuvring area, i.e. air traffic services provides only a flight information service while aircraft are outside the manoeuvring area.

14.2 Planning and allocation of aircraft parking stands

Swedavia communicates the allocated aircraft parking stand to air traffic services, which has the task of forwarding this information to arriving aircraft.

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14.3 Engine start-up and push-back

Swedavia does not seek to influence the technical aspects of the push-back procedure itself. Responsibility for ensuring that the procedure takes place in accordance with both the airport's regulations and the airlines' guidelines lies with the airline, or the ground handling operator contracted by the airline. However, the following requirements shall be met:

1. The ground handling operator or airline shall ensure that the staff who carry out push-back have access to detailed procedures for each aircraft type that operates at the airport.
2. The ground handling operator or airline shall carry out a risk assessment of its push-back operations based on the operating conditions found at the airport. Operators shall also ensure that risk-mitigating measures are taken to minimise any risks.
3. The ground handling operator or airline is obliged to:
    A. Keep informed about operating restrictions that the airport publishes in relevant communication channels.
    B. Update its procedures, based on the information above, to ensure a procedure that is just as safe under any restriction.
4. The ground handling operator or airline shall ensure that the ground crew is trained and certified in carrying out push-back by a qualified instructor.

14.4 Marshalling and follow-me

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On surfaces where there are no visual aids for navigation/parking of aircraft, marshalls or follow-me vehicles shall be used to ensure obstacles are avoided. Note that it is the marshalls or the driver of the follow-me vehicle who is responsible for assessing whether several marshalls or wing walkers are needed.

Swedavia approves which operators are allowed to carry out marshalling at the airports. These must either complete Swedavia's marshalling training or the equivalent training that complies with **(EU) 139/2014** and the **Standardised European Rules of the Air (SERA)** and be able to present an approved course certificate together with the curriculum for the training. Marshals must complete refresher training at least every 24 months. with annual proficiency check to demonstrate continued competence.

Prior to the commencement of the marshalling job, marshals must perform an FOD check to ensure that the stand is free of equipment, objects, glycol and personnel that may be damaged by or damage the aircraft. The check should be carried out on foot.

Vehicles/persons must not be present or pass between marshals and aircraft during ongoing marshalling jobs.

14.5 Taxiing procedures in apron areas

Taxiing in apron areas takes place under the pilot's own supervision, i.e. air traffic services provide only an information service, which involves air traffic services communicating to pilots via fixed radio frequencies about which area/parking stand the pilot is to taxi to.

The pilot is therefore responsible for ensuring that the aircraft does not collide with other aircraft, vehicles or equipment.

14.6 Communication in apron areas

The methods of communication between airport staff, air traffic services and pilots are

as specified in the procedures set out in AR Part 5 chapter 30. Communication

14.7 Engine test runs

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Engine test runs are permitted only in the airport's designated areas.

The person responsible for running the engine test on the aircraft shall ensure that the risk zone is empty before the anti-collision light is activated.

Authorised technicians may be in aircraft risk zones when anti-collision lights are on, when their task requires, provided that the person has adequate training, has completed risk assessment and ensured the potential need for additional personnel.

Idle power may be performed at each stand.

Idle power means: Starting the engine or engines for the purpose of carrying out technical checks, but with the restriction that only idle speed may be used and for a limited time - maximum 5 minutes. The procedure must be done under the responsibility of the start-up supervisor.

14.8 Departing traffic

- Prior to engine start/push-back, the ground handling operator should ensure that the area is free of FOD, bridges, equipment, personnel etc. Only equipment, vehicles and those authorised for aircraft departure are allowed to stay inside the safety area when the anti-collision light is on. Other equipment must be stored in the designated areas.
- Starting the engines of an aircraft must be done according to the airport's established procedures published in the AIP. These have been developed in consultation with air traffic control.

14.9 Push-back

Push-back procedures are described in the airport **Push-back Plan**, published on the extranet.

Powerback or reversing of aircraft engines as an alternative to push-back is not allowed.

For communication between the start-up supervisor and the cockpit, see Chapter 30.

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14.10 Site-specific information Bromma

14.10.1 Planning and allocation of aircraft parking stands

Swedavia Aircraft Stand Parking is responsible for planning aircraft stand parking within the airport.

In order to make the allocation of aircraft parking as efficient as possible, account is taken of the aircraft type, ground stop length, passenger flows, number of passengers, the activities of authorities and external conditions.

Airlines or ground handling organisations contracted by the airline must notify Swedavia Aircraft Stand Parking as soon as possible of any expected deviation from the standard traffic programme, such as delay, change of registration or unscheduled technical maintenance.

On every occasion when aircraft are moved from the parking stand, the airline or the ground handling organisation contracted by the airline must, as soon as movement commences by towing or technical taxiing, notify Swedavia Aircraft Stand Parking by telephoning 010 109 10 52. This also applies outside the airport's opening hours, when the aircraft is moved from the stand. Such notification shall include the aircraft registration and the places/areas between which the towing/technical taxiing is taking place.

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When using a stand, for example temporarily for equipment or for maintenance, a request must first be made to Swedavia Aircraft Stand Parking for approval.

In the event of technical problems arising after push-back is complete, priority to the original parking stand is not normally granted.

Aircraft parked at the piers must be towed away on request during longer ground stops, while aircraft parked at other stands must also be towed at the request of Aircraft Stand Parking.

Contact Aircraft Stand Parking for an alternative aircraft parking stand. Ground handling companies must be informed if the aircraft cannot be accommodated as described above. In the event of technical problems arising after push-back is complete, priority to the original parking spot is normally not granted.

14.10.2 Push-back procedurer

In order to promote orderly traffic on apron surfaces, push-back in connection with towing shall be preceded by contact with ATS. However, ATS is not responsible for any separation on the apron between vehicles and aircraft; this is regulated in section 16.

When push-back/towing is being performed simultaneously from two adjacent or opposing stands and the push-back/towing supervisors/pilots have not mutually agreed otherwise in advance, push-back/towing from the stand with the lowest number has priority.

Push-back and towing within parking stands must be carried out with the aid of day markings.

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14.10.3 Power Out

In the event of power out, the relevant ground handling company must assist in start-up and then ensure freedom from obstruction (moving equipment).

For aircraft that are exempt ground handling companies, the aircraft commander is responsible for ensuring adequate freedom from obstruction in the event of power out.

14.10.4 Engine test runs

Engine test runs must take place at the engine test run station located at TWY G1 as far as possible. However, a short engine test run at idle power may be permitted at the parking stand in order to limit the number of movements in the manoeuvring area.

All engine test runs must be booked with Swedavia Aircraft Stand Parking, tel. 010 109 10 52, which coordinates with ATS on possible time windows where necessary.

The engine test run station is only available during daylight hours Mon-Sat 0800-1500 (0700-1400) and Sun 1100-1500 (1000-1400) with a maximum continuous time of 30 minutes.

The following applies to the performance of engine test runs:

- The engine test run station meets the load bearing capacity PCN 15. Operators wishing to use the engine test run station shall ensure that the aircraft's ACN value for asphalt (with subgrade B) is below 15.
- The engines must be directed towards the noise barrier.
- All those who move aircraft to the engine test run station are responsible for ensuring that the aircraft is properly positioned and is able to navigate with obstacle clearance in relation to other areas. If the person taxiing the aircraft requires assistance in the form of marshals, this can be ordered from ATOS on telephone no. 010-109 43 30, which will help if time allows. However, it is the operator itself who is responsible for ensuring that personnel with marshalling competence and authorisation at the engine test run station are available.
- The operator decides whether or not to use chocks when performing an engine test run, depending on the prevailing weather conditions for example.
- It is up to each actor to ensure that third parties are not affected by jet blast etc. If new aircraft types, models etc. are to use the engine test run station or use higher engine power than has been used before at the airport, it is up to the operator performing the engine test run to ensure that third parties are not affected.

NOTE! Identified deficiencies or damage/injury at the engine test run station must be reported to ATOS without delay on tel. 010 109 43 30.

15. Apron safety management

The purpose of Apron safety management is to ensure that aviation safety is embedded in the procedures carried out in apron areas and the things to consider when in or close to these areas.

15.1 Protection against jet blast and downwash

Airports are responsible for monitoring the risks associated with jet blast and downwash.

The airports regulate:

- Danger zones.
- Where vehicles and equipment may be parked/stored in apron areas.
- Areas sensitive to jet blast where greater attention or caution is required.

15.2 Aviation safety measures when refuelling aircraft

Aviation safety measures shall apply when refuelling aircraft in apron areas as follows:

- Obstacle clearance for refuelling vehicles during refuelling, i.e. a clear path must be provided.
- Refuelling may take place once it has been ensured that the equipment is connected correctly and is functioning properly.
- The ground power unit must not be started during refueling.
- Ensure that the cable/line for electrical bonding is connected correctly and/or where there are earthing points an earth wire must be used.
- The aviation fuel operator shall have procedures in place for handling a fuel spill in accordance with the airport's established procedures/requirements.
- The airline, in consultation with the refuelling operator and the contracted ground handling company, shall establish procedures that ensure stairs and other escape routes are kept clear during refuelling when crew or passengers are on board.

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The aviation fuel companies are responsible for ensuring compliance with national and international rules for refuelling aircraft.

During aircraft refuelling, there are critical zones around the aircraft that must be kept free of other activities (e.g. equipment, vehicles, personnel etc.). These areas are known as the Fuelling Safety Zones (FSZ) and are defined as a protection area at least three (3) metres from the aircraft connection points, fuel hoses and refuelling tanker and/or hydrant dispenser locations.

The overflow protection must not be disconnected when refuelling aircraft. Procedures carried out in accordance with the aircraft manufacturer's manual for fuelling aircraft where parts of emergency systems are disconnected are permitted (with the exception of overflow protection) when at least one other emergency system is connected and in operation

The airline shall ensure that there is no refuelling while passengers with reduced mobility are on board (also known as PRM) in the category WCHC or WCHS.

Refuelling shall commence no sooner than when arriving aircraft are deboarded of passengers with reduced mobility in these two categories and shall be completed before such passengers' board departing aircraft.

15.3 Prevention of FOD and cleaning of apron areas

All those present in the airside area have a responsibility and a duty to remove foreign object debris (FOD) that may cause damage to aircraft. The ground handling company at a parking stand is responsible for performing a FOD check before aircraft arrival and after aircraft departure. This check also includes the inspection and removal of equipment or objects that may damage aircraft. The responsibility also includes reporting FOD to the airport personnel in charge on those occasions when it is not immediately possible to remove the object personally.

When strong winds are expected in the airport area, ground handling companies must ensure that all equipment and other objects cannot be blown away and cause injury or damage to aircraft, people and their own or others' property. The procedure for this shall be clearly described in the ground handling company's procedures.

Additional requirements are found in AR Part 5 Chapter 33. FOD Control Programme.

15.4 Monitoring operators' compliance with aviation safety in apron areas

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Swedavia has overall responsibility for monitoring operators' compliance with safety in apron areas. In doing so, Swedavia conducts random checks with the aim of ensuring that all operators active on the apron comply with the rules contained in Airport Regulations.

15.5 Control, monitoring and escorting of passengers on the apron

For handling of passengers on the apron, refer to:

Part 4 chapter 2. Boarding and deboarding

15.6 Snow removal/anti-slip treatment at the parking stand

The operator/ground service company is responsible for ensuring that passengers/staff can move safely at all times in good time before the arrival/departure of the aircraft and to carry out anti-slip measures if necessary. For example, apron area for turnaround, stairs and areas where passengers will move with the tools provided by Swedavia.

For more information, see **Snowplan** published on the extranet.

15.7 Procedures for the arrival of aircraft at stands

Prior to the parking of an aircraft, Swedavia approved operators shall ensure that an FOD check of the surface is carried out, i.e. that the surface is free of equipment, objects, glycol and personnel that may be damaged by or damage the aircraft.

Taxiing in shall be monitored throughout the procedure. If obstacle freedom or safety aspects are not met, marshals or the responsible operator for activation of docking systems shall interrupt taxiing in by means of signals according to the SERA regulation or by pressing emergency stop on the docking aid.

Otherwise, no vehicles, personnel or other objects shall pass between the aircraft and docking facility/marshals during taxiing in.

Personnel other than marshals are prohibited from entering the safe area during taxiing into the stand if the anti-collision light is on. Exceptions are granted to authorised personnel assisting marshals, such as a wing walker.

After a full stop and before the anti-collision light is turned off, only personnel necessary to assist the aircraft may enter the safety area. All other personnel must wait for the anti-collision light to go out before entering the safety area.

- No personnel may be under or in the movement area of the passenger bridge during arrival and departure, Equipment must only be placed in specified locations.

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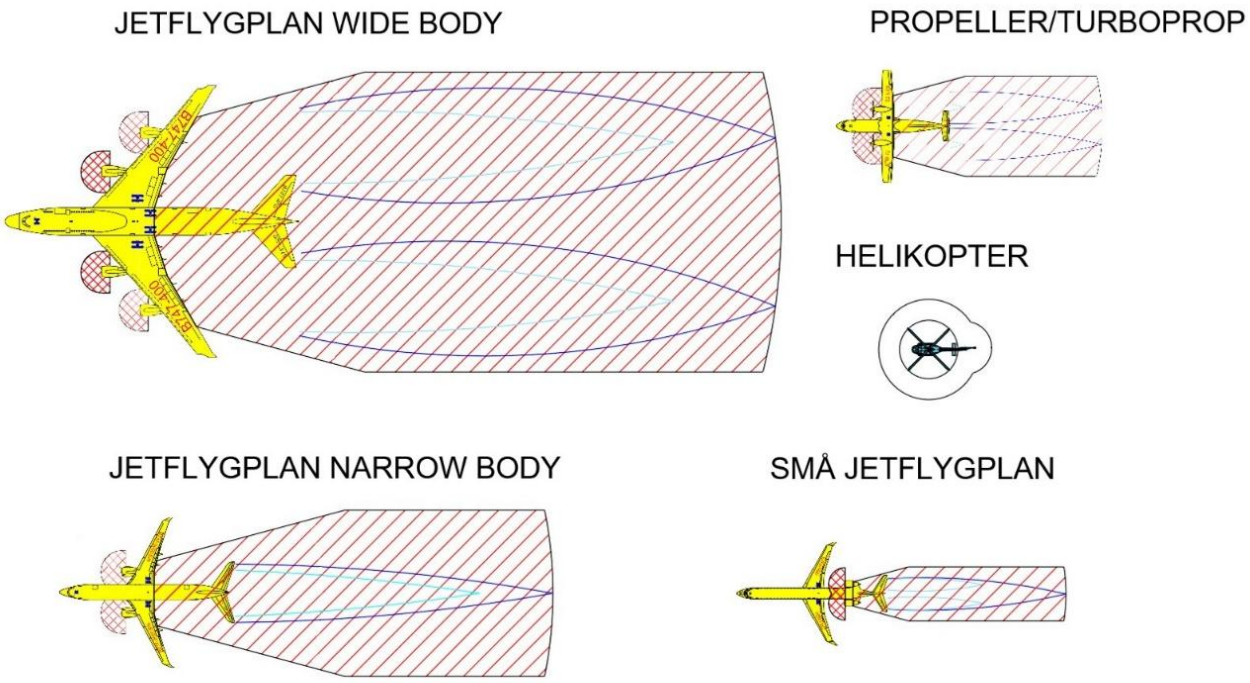
15.8 Risk zones around aircraft

When starting engines on aircraft, a risk zone is created which is clarified as shown below.



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The distance of the risk area to the aircraft is defined by the aircraft manufacturer. Due to risks associated with jet blasts and of being sucked into an engine, these risk zones must be considered when around an aircraft.

Personnel and equipment necessary to assist the aircraft in the arrival or departure procedure may enter the risk area if this can be done safely. All other personnel and equipment must be outside the risk zone when the anti-collision light is on and the engines are running.

15.9 Parking areas for ramp equipment

Ramp materials, loose equipment and air cargo containers shall be secured so that they cannot be moved by wind or jet blast.

- Swedavia’s ATOS and ADO function has the authority to check that the above provisions are complied with and order the transfer or securing of material or equipment that is misplaced or presents risks/obstructions to operations.
- Equipment placed out to prepare for the upcoming turnaround must not obstruct other operations.
- Any GPU and equipment hatches should be closed before arrival and departure.

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15.10 Handling docking systems and passenger bridges

The responsibility for the operation of passenger bridges rests with the ground handling company serving the aircraft that is connected to the bridge. When operating the bridge, the operator is responsible for ensuring that the marked area under and around the movable parts of the bridge is clear.

The bridges and docking systems must be operated according to the manufacturer's operator instructions and/or the instructions communicated by Swedavia.

For safety reasons, the person responsible for departure procedure must not leave the bridge until push-back has started.

Swedavia approves the operators allowed to engage docking aids at the airports. Operators allowed to engage the systems must have completed Swedavia's training with approved results. Permission to operate passenger bridges is valid for two years from the date the training took place or when the operator last received his/her permit. Renewal of the permit must be done every other year. A break in bridge operation of more than six months, even with a valid permit, requires a renewal. If the permit has not been renewed within two months after its expiry date, new training must take place instead.

The operator must be able to present documentation for personnel who have training in the operation of bridges and docking systems. This documentation must be kept as long as the relevant staff have their employment and authority.

15.11 Deployment of cones and chocks

Cones shall always be placed outside the wing tips, max. 1 metre from the wing tip. A cone shall always be placed behind the tail of the aircraft, max. 1 metre from the tail

Each ground handling company is responsible for placing cones and checks after arrival at the designated location according to instructions from the relevant airline.

The person who has set the chocks shall signal to the pilot when the chocks are fully in place, either by hand signal according to SERA, or by activating “Chocks On” in the docking system.

Cones must be complete, contrasting with the surroundings and fitted with reflective material for visibility in reduced visibility.

Commanders of aircraft that are exempt from ground handling are responsible for the placing of cones and chocks.

15.12 Parking stand after departure

After the departure of the aircraft, the ground handling operator is responsible for ensuring:

- The parking stand is free of vehicles and equipment.
- The parking stand is free of Foreign Object Debris (FOD).
- Cables and hoses are rolled up and hung up.

- Chocks and cones have been removed and are stored in the designated location.
- Any steps that have been used are parked in the designated location, connected to the charger and the control panel cover is in place.

After the departure of the aircraft, the bridge operator is responsible for ensuring:

- The bridge is run to the parking position and that no equipment is left underneath the bridge that could be damaged or could damage the bridge during operation.
- The docking aid is disactivated or turned off

15.13 De-icing locations

De-icing may only be done in locations approved for de-icing.

Swedavia, as the airport operator, is obliged to ensure that operators using the airport are given the opportunity to de-ice the aircraft before departure if necessary. The procedure and method must be carried out in accordance with applicable regulations, such as the European Aviation Safety Agency (EASA), Airport Regulations, and relevant environmental considerations for the use and disposal of de-icing fluid. Personnel performing de-icing or related activities must hold approved, current, and valid qualifications.

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The de-icing coordinator, regardless of which de-icing area is used, must be well acquainted with the area and knowledgeable about its characteristics and limitations. The coordinator must also ensure that all personnel performing de-icing meet the required competence standards.

Additional requirements are found in AR Part 3 Chapter 8. Environmental requirements for aircraft de-icing.

15.14 Communication of operational disruption on aprons

When something risks affecting operations on apron areas, operators are obliged to stay informed about operational restrictions that the airport publishes.

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15.15 Site-specific information Bromma

15.15.1 Considerations of Risk Zones in Arrival and Departure Procedures

- On the apron, the boundary of safety areas for parking positions is marked with red lines.
- Equipment may only be placed in designated locations.
- Equipment placed out to prepare for the upcoming turnaround must not obstruct other operations.
- The aircraft manufacturer's risk zones for aircraft must be considered.

15.15.2 Arrivals apron 4, 6, 7 and East

Companies operating on aprons 4, 6, 7, and East are responsible for meeting and receiving aircraft to be parked there. The companies are responsible for notifying traffic planning when this will occur. This ensures that the aircraft is cleared directly to the intended apron.

The following steps must be followed:

- A company representative must ensure that applicable requirements according to chapters 15.2, 15.3, and 15.7 are met before taxiing onto the apron.
- A company representative must be present before taxiing onto the apron to indicate the stop at the marked position so that taxiing can be performed without the aircraft being forced to stop and block taxiways or vehicle roads.

15.15.3 Approved De-icing Locations at Bromma

Additional requirements are found in AR Part 3 Chapter 8. Environmental Requirements for Aircraft De-icing.

Area	Parking position	Annotations
Apron 1	3, 4, 5, 6	Outside the winter season, de-icing may only be performed after confirmation that the drainage channel valves have been adjusted to the winter season position.
Apron 2	7, 8, 9, 10, 11, 12, 13, 14, 15	Outside the winter season, de-icing may only be performed after confirmation that the drainage channel valves have been adjusted to the winter season position.
Apron 3	16, 17, 18, 19	Outside the winter season, de-icing may only be performed after confirmation that the drainage channel valves have been adjusted to the winter season position.
Apron 4, 6, 7 & EAST	All apron	De-icing may only be performed on paved surfaces and in such a way that the de-icing agent does not end up outside of these areas, with immediate absorption of the de-icing fluid.

16. Vehicle traffic monitoring

16.1 General

The airport area is divided into two areas, Airside and Landside. The areas are separated by a shell protection where everything within the enclosure is classified as Airside, which means that all vehicle traffic is controlled by Swedavia. The airport enclosure is classified as a legally fenced area, with reference to the Swedish Transport Ordinance *(1998:1276 Chapter 1 Section 2)*, exception for fenced area. Otherwise, the Transport Ordinance applies in its entirety and is controlled by the Police Authority. For the exemptions provided for in the Traffic Ordinance regarding fenced area, these are incorporated into this part of the Airport Regulation (AR). If the regulations in AR differ from the Traffic Ordinance, AR applies.

16.1.1 Definitions

16.1.1.1 Definition of motorised vehicles

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Motorised vehicles, hereinafter referred to only as vehicles, are divided into motor vehicles, tractors, motor implements and off-road motor vehicles. Motorised equipment such as Segway, e-bike and e-scooter is also defined as motorised vehicles.

16.1.1.2 Definition of work tools

Work tools refer to "Tools needed to perform a job" such as push-back bars, trolleys, shovels & chocks. Non-mobile and mobile but non-motorised equipment is defined as work tools.

16.1.2 Airside

The airports' Airside consists of Movement Areas, Manoeuvring Areas and Other Operational Areas.

- **Movement area:** Areas where aircraft move, i.e. aprons, stands, taxiways and runways with associated areas. *
- **Manoeuvring area** Areas for take-off, landing and taxiing of aircraft with associated areas.
- **Other operational areas**: Areas where there are no aircraft movements.

In order to drive vehicles within the above areas, airports have established traffic areas that require different types of skills of the driver or equipment on the vehicle to be allowed to stay there.

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The area of the apron that is outside the ERA area or outside the double yellow line does not belong to the movement area.

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16.1.3 Traffic areas

Airports may consist of the following traffic areas (TO):

- **White** – The vehicle may be driven within the DMA area.
- **Red** – The vehicle may be driven on the apron and other operational areas adjacent to the apron.
- **Green/White striped** – The vehicle may be driven in the manoeuvring area.

See web map Vehicle map with information layers for Traffic areas.

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16.1.4 Authorisation for traffic areas

In order to drive vehicles within the traffic areas, in addition to the badge, you also need to have a driving permit regarding the traffic area the vehicle is driven on and that the vehicle meets the visibility requirements according to **chapter 16.1.7.**

Red & Green/White striped driving permits & vehicle permits grant access to the White traffic area.

16.1.5 Vehicle insurance

All vehicles, registered and unregistered, used within airport area must have traffic insurance or liability insurance equivalent to traffic insurance Each operator must ensure compliance with all provisions of the Traffic Damage Act (1975:1410). Upon request by Swedavia, documentation must be made available to verify this compliance.

16.1.6 Approved vehicle

16.1.6.1 Commissioning a new vehicle

It is the responsibility of all operators to ensure that, prior to the commissioning of a new vehicle Airside, the vehicle is preceded by a vehicle inspection according to the **Check List "*Before commissioning a new vehicle*"** attached to the application for a vehicle permit.

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Vehicles to be used at a Swedavia airport must be classified according to the Swedish Transport Agency's rules or in accordance with the vehicle description below, as vehicles do not have registration in the Swedish car register. Vehicle classification is performed by vehicle manufacturer or supplier.

The classification for vehicles is stated in the Vehicle Description for Ground Vehicles – Swedavia International Airports. See Swedavia extranet [Swedavia.net].

Registered vehicles used within Airside must bear a licence plate, see the Road Traffic Register Regulation (2001:650). For vehicles that were previously registered in the Swedish vehicle register and are reclassified into a category that does not require a license plate, no license plate shall be mounted. For unregistered vehicles, an internal number must be visible on the vehicle.

16.1.6.2 Inspection and traffic safety inspection

Vehicles and trailers registered in the Swedish road traffic register and used on Airside shall undergo inspection with approved results at nationally determined intervals. Inspection must be carried out by an accredited inspection company, see the Swedish Transport Agency's website for inspection rules.

Unregistered vehicles and trailers as well as decommissioned vehicles with a licence plate used within Airside must undergo a *traffic safety inspection** with approved results at the same intervals as the inspection, see the Swedish Transport Agency's website for inspection regulations for exempted vehicle types. The traffic safety inspection must be carried out by an accredited inspection company.

When applying for a vehicle permit for unregistered or deregistered vehicles, applicants must provide the report from the most recent road safety inspection.

When remarking about deficiencies after inspection/traffic safety inspection, a copy of the documentation showing that the deficiencies have been rectified must be attached in connection with the vehicle permit application.

Operators who use new vehicles that have not yet been called for a first inspection/traffic safety inspection shall, at the request of Swedavia, be able to present documents proving that the vehicle is new.

Vehicles in the above categories that are not specified in the Swedish Transport Agency's car register, for example registered in another country, shall otherwise prove that the vehicle is inspected, taxed, insured and does not possess other deficiencies that compromise road safety.

16.1.6.3 Maintenance programme

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A service certificate from completed maintenance must be attached to the application for a vehicle permit. For new or newly manufactured vehicles, a service certificate is required once the vehicle reaches three years of age.
Applications submitted without a required service certificate will not be processed.
A service certificate from completed maintenance is valid for three (3) years from the date of the service. This means that the same service certificate can be used for multiple vehicle permit applications. If the three-year validity of a service certificate expires during the period of an active vehicle permit, a new service certificate must be submitted to the Vehicle Service Center at least one (1) month before the previous certificate expires.

Performed maintenance actions are documented at least with respect to:

- The submitted documentation must clearly indicate that the service has been performed.
- The date on which the service was carried out.
- Workshop stamp, or alternatively the name or signature of the person who performed the maintenance.

16.1.6.4 Approved workshop

Operators who are to handle deficiencies from traffic safety inspections or to perform service must use vehicle repair shops that sign Swedavia's Checklist for being an approved supplier for vehicle maintenance to perform maintenance in accordance with the airport's certificate requirements.

16.1.6.5 Self-inspection

Operators shall themselves implement self-inspection programmes for vehicles and work tools used on Airside.

For vehicles, this means establishing procedures that ensure that these undergo a self-inspection every new 24-hour period that the vehicle is to be used. The self-inspection must be signed and be vehicle-specific and include at least, but not exclusively, the items in the Checklist for daily self-inspection of vehicles.

Vehicles and work tools that are not found to be in a safe condition during self-inspection must be removed from service until corrective measures are implemented. It is up to each business to ensure that these are not used until the deficiencies have been rectified and they are deemed to be in a safe condition again.

The owner of vehicles and work equipment that have been involved in an incident that gives rise to suspicion of impaired function is responsible for ensuring that these undergo an inspection in proportion to the incident.

The owner of vehicles and work equipment that have been involved in an incident that gives rise to suspicion of impaired function is responsible for ensuring that these undergo an inspection in proportion to the incident.

16.1.6.6 Documentation

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Maintenance must be documented and follow what is stated in **chapter 16.1.6.3.**

The self-inspection must be documented and state the vehicle registration number/internal number, type of maintenance, date and who performed the inspection.

The documentation for maintenance and self-inspection must be saved as long as the vehicle is in operation and at least 4 (four) years after it has been taken out of service, or until the Swedish Transport Agency has reviewed the documentation.

16.1.7 Visibility requirements for vehicles and work tools

Vehicles and work tools driven within traffic areas must meet the following visibility requirements.

16.1.7.1 Visible vehicle permit

Airside vehicles shall carry a valid vehicle permit which is placed clearly on the left side of the windscreen. The vehicle permit describes the traffic areas in which a vehicle is allowed to be driven.

Vehicles and work tools that do not have a windscreen must place the vehicle permit in a clearly visible place.

16.1.7.2 Company identification

Vehicles used on Airside shall be marked with company identification, clearly visible from the side, of at least 30x15 cm where possible.

Work tools and equipment used on Airside must also be marked with company identification on the sides.

16.1.7.3 Prominent colours & markings

Vehicles

Vehicles used in the movement area must be coloured/marked with prominent colours/patterns to enhance the visibility of the vehicle in relation to its surroundings. The following prominent colours are recommended:

- Yellow for service vehicles
- Red for emergency vehicles

Vehicles not marked as recommended above shall be supplemented by the following alternatives:

- Alternative 1: Marked with at least one more prominent colour in relation to the environment in which the vehicle normally operates. Suggestions for prominent colours are orange, white, black, blue but do not exclude other colour choices.
- Alternative 2: Marked with a chequered pattern on all sides that is at least 0.9x0.9m in size and each square at least 0.3x0.3m. The pattern should stand out from the vehicle colour, for example black/yellow or orange/white.

Work tools

Work tools used in the movement area must follow the same guidelines as stated above for vehicles in order to enhance the visibility of the work tool in relation to its surroundings.

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16.1.7.4 Reflectors

Vehicles and work tools in the movement area must be marked with reflectors to the extent that clear marking in darkness is obtained, i.e. size/contours are shown. The reflector foil should be coloured as follows:

- Yellow reflectors - The sides of the vehicle/object.
- White reflectors – The front of the vehicle/object.
- Red reflectors – The back of the vehicle/object.

See Checklist Reflective marking of vehicles and equipment for placement and any exceptions.

16.1.7.5 Lights

Low-beam or low-light automation shall always be switched on when travelling on Airside.

However, in fog and heavy precipitation, fog lights at the front and back may be used instead of low beams. Vehicle drivers shall always take into account the risk of glare for aircraft crews, TWR air traffic controllers or other vehicle drivers in connection with the use of full beams.

16.1.7.6 Warning lights

Vehicles driven in the movement area must be equipped with yellow/orange warning lights placed on the roof or other highly visible place for a 360° viewpoint. It should flash/rotate at a rate of 60-90 flashes/minute and have an effective light intensity of 40-400 candela.

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Exceptions apply to emergency vehicles in connection with emergencies, in which case blue warning lights are to be used and meet the same criteria as above.

Vehicles performing "*follow-me*" shall be equipped with a yellow/orange warning light illuminated sign, have a rate of 60-90 flashes/minute and an effective light intensity of 200-400 candela.

Except for vehicles driving outside the movement area in the White traffic area, all other vehicles driven without escort must have their warning lights on while airside.

16.1.7.7 Radio number/Call identification

Vehicles authorised to be in the manoeuvring area must be marked with a radio number, "*call identification*", which is at least 35 cm in height or adapted to the existing surface and which is reflective and placed on both sides of the vehicle.

The radio number must be marked clearly visible in the vehicle for the driver.

16.1.8 Vehicle permit

16.1.8.1 General

Vehicles driven on Airside must have a vehicle permit.

For additional requirements, see AR Part 3 Chapter 6.2 Environmental requirements for vehicle permits.

The vehicle permit is considered an authorisation document,

See AR Part 2 Chapter 6. Authorization cards, keys, and access cards for vehicles

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as the permit specifies the traffic areas within which the vehicle is allowed to operate, specified in **chapter 16.1.3**.

The airports are required to limit the number of vehicles and vehicle movements with access to Airside, hence vehicle permits are only granted for vehicles deemed necessary for the airport or its operators' activities. The vehicle permit is issued as either Fixed, Temporary or Visitor and also indicates whether the vehicle is to be driven permanently inside Airside or allowed to enter/exit through the airport's guarded entry points.

Vehicles that, for example, are to be repaired, used as spare parts vehicles or similar and must continue to be on airside must have issued a vehicle permit and the vehicle must be equipped with an orange tag marked with the text "Prohibition of use" and with information about action. In connection with the above, ATOS should be contacted for orange tag marking and Swedavia Service Centre will be notified for registration of Prohibition of Use.

Vehicle permits for privately-owned vehicles are issued in exceptional cases, as specified below:

- There must be an operational need.
- The vehicle in question meets visibility requirements in Airport Regulations.
- There must be insurance in accordance with chapter 1. 16.1.5

NOTE! *The requirement for a vehicle permit may be waived for vehicles temporarily used within an established work area on the Airside.*

16.1.8.2 Permanent vehicle permit

Operators working at the airport who have agreements with Swedavia and who need to drive vehicles to perform their commitments can apply for a permanent vehicle permit.

Vehicles with a permit for permanent stay can obtain an exemption from APOC or ADO to leave Airside for inspection or service.

Vehicles (new from factory or used) arriving at the airport that need to be taken to a workshop on Airside to be equipped and undergo traffic safety checks prior to commissioning are allowed to apply for a visitor vehicle permit issued at first entry to airport. Thereafter, permits can be excluded provided that the vehicle in question is stored in a locked space/premises until it is adapted in relation to the content in the Checklist on 'Application for a vehicle permit'.

In cases where a vehicle is to enter the airport and is fully equipped and ready for commissioning with a permanent vehicle permit (not entry/exit), the relevant operator must contact APOC before the vehicle is to pass a manned security check.

To obtain and hold a permanent vehicle permit, the following criteria must be met:

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- The operator must have an agreement with Swedavia
- There must be an operational need to drive vehicles on Airside in connection with service.
- The vehicle meets the visibility requirements set out in **chapter 16.1.7**.
- The vehicle must have valid traffic insurance/liability insurance.
- All vehicles must attach a copy of maintenance documentation
- Ensure that the vehicle meets environmental requirements in accordance with AR Part 3 Chapter 6

16.1.8.3 Temporary vehicle permit

Temporary vehicle permits can only be applied for by already established operators at the airport with the authority to drive vehicles within Airside. Swedavia issues a temporary vehicle permit with one (*1*) calendar day validity for vehicles to be driven for a shorter period than one (*1*) month. If a temporary vehicle permit is to be used for several consecutive days, a new permit shall be issued for each commenced calendar day.

NOTE! *Night work that takes place between two calendar days must be communicated when applying for a vehicle permit.*

Vehicles with a temporary vehicle permit may be driven within the traffic areas where the vehicle meets the criteria for equipment in accordance with chapter 1.5, otherwise the vehicle shall be escorted by an authorised vehicle.

16.1.8.4 Visitor vehicle permit

Operators who have a need to temporarily introduce a vehicle on Airside in connection with service can apply for a visitor vehicle permit. Visitor vehicle permits have a

maximum validity of one (*1*) calendar day and the vehicle must always be escorted by an authorised driver and authorised vehicle; see chapter on escorting vehicles.

NOTE! *Night work that takes place between two calendar days must be communicated when applying for a vehicle permit.*

16.1.8.5 Application for vehicle permit

Operators wishing to introduce vehicles on Airside may apply for a vehicle permit from the company's approved administrator by filling in the vehicle permit form.

The application must be accompanied by a service certificate for the vehicle

When applying for a vehicle permit for unregistered and decommissioned vehicles, the records from the latest traffic safety check must also be attached, see the Swedish Transport Agency's website for inspection regulations for exempted vehicle categories.

16.1.8.6 Application for visitor vehicle permit

Visitor vehicle permits can only be applied for by approved administrators by filling in the visitor form.

16.1.8.7 Return of vehicle permit

Operators are responsible for the return of issued vehicle permits in the event of, for example, renewal of vehicle permit, change of vehicle registration, if the company is no longer in business or if the vehicle permit has been revoked.

A R

Vehicle permit returns are made to the airport Service Centre. Operators who have failed to return vehicle permits are specifically charged for this; see fees in **chapter 16.1.13.**

16.1.8.8 Loss of vehicle permit

Loss of vehicle permits must be reported immediately to the airport's Service Centre or Management Centre. See the form for loss/damage reporting.

16.1.8.9 Withdrawal of vehicle permit

In the event of a breach of the provisions of the document, the vehicle permit may be withdrawn after a decision by Swedavia.

16.1.9 Driving permit

16.1.9.1 General

A driving permit is valid for 24 months and is an authorisation of where you are entitled to drive a vehicle on Airside. The driving permit contains colour codes indicating the traffic areas in which the driver is entitled to drive.

To obtain or maintain a driving permit, it is required that:

- An operational need for a driving permit can be demonstrated.
- The employer has checked that the personnel concerned have a valid driving licence for the vehicle.

- The employer has checked that the personnel concerned also fulfil any conditions in the driving licence.
- The driver has successfully completed the airport driving permit training including knowledge test and check-out.
- For authorisation in the manoeuvring area, a language test and driving permit training for the manoeuvring area are also completed with approved results results (for Swedish and English).
- Training and certificates of competence for each vehicle to be used, associated equipment, and accessories to be used.
- The employer must thereafter carry out ongoing checks.
- Safety/security training and valid badge

16.1.9.2 Driving permit training

Swedavia provides driving permit training and associated repeat and refresher training for the different traffic areas. See Swedavia extranet for information on driving permit training and application forms.

16.1.9.3 Application for driving permit

Operators who need to drive a vehicle on Airside must complete the form:

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- Registration for training and application for driving permit when applying for a new driving permit
- Application for a renewed driving permit 24 months when applying for a renewed driving permit.
- Registration for refresher training for driving permit (3-12 months) when applying for a new driving permit

It is up to the operators to ensure that their own staff in connection with registration for driving training meet the prerequisite requirements and hold a valid driving licence, which must be documented and saved on an ongoing basis for at least two years.

For more information regarding forms or booking of driving training, see site-specific information.

16.1.9.4 Absence from vehicle driving

Absence 3-12 months

If someone with a driving permit does not drive for between 3-12 months, the individual and the employer must ensure that they do not drive until they have successfully completed the airport refresher training.

Absence >12 months

In the event of absence from driving for more than 12 months, competence has expired, and new basic training must be carried out.

16.1.9.5 Special vehicles

All operators at each airport are responsible for developing training programmes for the types of vehicles used. Each operator must establish an internal training structure and document the staff's competences and ensure that these are renewed on an ongoing basis.

Operators must be able to present the certificates for the above training whenever requested by Swedavia or during business audits.

16.1.9.6 Return of driving permit

The holder is responsible for the return of permit documents on the following occasions:

- When renewing a driving permit.
- In the event of Swedavia or the employer's decision to revoke a driving permit.
- In the event of changes to personal data in the driving permit.
- When driving permits for the performance of the service are no longer necessary.

The employer is responsible for the return of driving permits on the following occasions:

- On withdrawal of a driving permit.
- In the event of an employer's decision to revoke a driving permit.
- Upon termination of employment
- If the company is no longer in business.

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In the event of the withdrawal of a driving permit, the holder is responsible for notifying the employer of this. Return of driving permits is to Swedavia Service Centre.

Driving permits that will not be used for an extended period must be submitted to Swedavia Service Centre for storage.

16.1.9.7 Loss of driving permit

Loss of a driving permit must be reported immediately to the airport's Service Centre or Management Centre. See the Loss Report Form.

16.1.10 Airside controllers

ATOS, the police and surveillance companies hired by Swedavia have the right to stop and carry out checks of vehicles and vehicle drivers.

Vehicles found to be in such a condition that they may not be used in traffic until confirmed deficiencies have been corrected are subject to **a prohibition of use**.

Drivers who, in connection with driving vehicles on Airside, are found to be without a valid driving permit, shall be escorted to their employer, provided that the company is located on Airside, alternatively to the nearest gate.

16.1.10.1 Penalties for traffic violations on Airside

AR

Swedavia is responsible for investigating traffic violations reported in our case management system. Based on what the investigation concludes, Swedavia can choose to issue sanctions as a consequence of the situation. Swedavia uses a system where the vehicle driver who has violated the airport's traffic rules receives points/dots as a penalty depending on how serious the event is deemed to be. The registration of penalty points/dots is done on all driving permits in cases where the driver holds driving permits with several operators.

In the event of a violation of the airport regulations, driving permits may be revoked, temporarily or permanently, by Swedavia. A driving permit is withdrawn for drivers who receive three (*3*) penalty points within a period of 24 months. The minimum withdrawal time for a driving permit is one month; a longer period may be applied depending on the severity.

If drunk driving is suspected, the police must be called. Drivers who drive vehicles on Airside without a valid driving permit may, after investigation, have their badge revoked.

In order to obtain a driving permit after revocation, a new basic driving permit training or a driving permit training manoeuvring area is required, depending on which authorisation is relevant for revocation. In cases where a person's driving permit authorisation is revoked, the authorisation for the manoeuvring area will be paused during the period of revocation.

Traffic violations with penalty points/revocation of driving permit.

Offences that lead to a penalty/revocation of a driving permit are assessed by Swedavia based on, but not limited to

Checklist Penalty and consequences of traffic violations.

For an appeal of the decision, a written appeal should be sent to kortillstand.bma@swedavia.se.

16.1.11 Removing vehicles/equipment

AR

ATOS has the right to prohibit the use of vehicles that do not meet the requirements of this AR. Prohibition of use will be lifted once the listed deficiencies have been addressed and inspected by ATOS.

Vehicles that are driven and found to be without a valid vehicle permit on Airside will be escorted to Landside by ATOS or by Swedavia's security company. Vehicles without registration plates that are not allowed to leave Airside, i.e. may not be driven on public roads, are marked with a prohibition of use and escorted to an area outside the traffic area.

The owner of any vehicle found without a driver and valid vehicle permit on Airside will be contacted by Swedavia. If Swedavia does not make contact with the owner, the vehicle is marked with a prohibition of use. If the vehicle is to be moved but is subject to a prohibition of use, escort must be requested by ATOS/APOC. If the vehicle remains without a valid vehicle permit after seven calendar days from the contact date with the owner, alternatively notification, the vehicle can be moved by Swedavia to an area where the vehicle owner is invoiced for the costs.

If the vehicle is in the movement area and Swedavia assesses that the vehicle risks affecting aviation safety or other activities, the airport holder has the right to move/remove the vehicle.

If it is found that a vehicle with an issued prohibition of use is still used on Airside, Swedavia or a security company hired by Swedavia has the right to immediately escort or take measures to remove the vehicle from Airside.

16.1.12 Removing work tools

The owner of a non-compliant work tool found on Airside will be contacted by Swedavia and told to rectify the shortcomings or remove the work tool from Airside immediately. ATOS has the right to prohibit the use of work tools that do not meet the requirements of this AR.

If it is found that work tools remain or continue to be used on Airside or are deemed to risk adversely affecting aviation safety or other operations even though the owner has been told to remove the work tool, Swedavia is entitled to move the work tool and invoice the owner the costs.

16.1.13 Fees

Information regarding fees for vehicle permits, driving permits and driving training can be found on the extranet. Companies that have failed to return vehicle permits and driving permits are charged specifically for this.

16.2 Traffic

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Swedavia has a responsibility to ensure that the number of vehicles allowed on Airside is limited to a minimum according to operational need.

BMA

16.2.1 Pedestrian and cycle traffic on Airside

Pedestrian and cycle traffic may only occur within marked pedestrian and cycle paths, and it is prohibited to walk/cycle outside these paths to cross areas. Pedestrians walking on other surfaces in connection with the performance of their duties, for example during inspection of the travel area are allowed to walk outside marked walkways, **Map of pedestrian and cycle paths**

Cycling must be in connection with work assignments or to move between buildings in a fast and safe manner; other “recreational cycling” is prohibited. Companies that need to start using bicycles on Airside must contact Swedavia's operations department.

Conditions for using a bicycle on Airside:

- The cycle must be equipped with reflectors, front = white, back = red & sides = orange.
- The cycle must have approved lighting front and back.
- Cycles must be clearly ID-labelled with company or department name
- The cycle must be permanently located on Airside. Do not take out/in through central gate.
- Giving rides is prohibited.
- Private cycles, scooters or equivalent are not allowed on Airside.
- A specific instruction for cyclists or pedestrians takes precedence over other instructions.
- Cycles are prohibited during the winter season and must be stored until the winter season ends.

Note! On pedestrian and cycle paths and pedestrian crossings, vehicles and cycles must give way to pedestrians.

AR

16.2.2 Road and other safety markings

Vehicle roads are with white solid borders and all vehicle driving must be within these white lines as far as possible. When the vehicle road crosses a taxiway or is driven on a surface where there is no obstacle clearance to the adjacent taxiway/taxi line, that section of the vehicle road is indicated with laterally dashed white border lines; see image below. Vehicles must give priority to air traffic at the give-way line, so-called “*shark’s teeth*” or stop line.

B M A

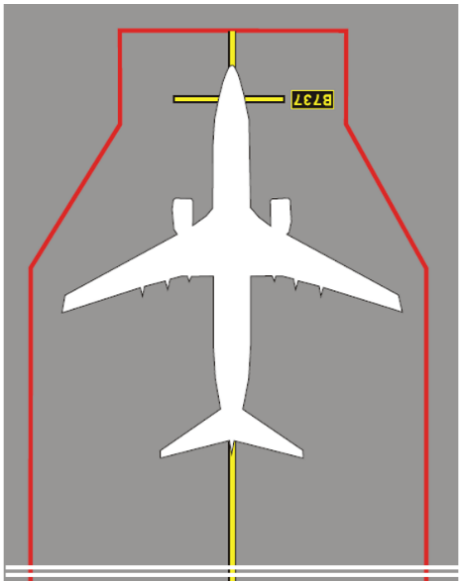
Sections where the Vehicle Road is marked with a White/Red/White border line indicate the limit of the manoeuvring area. This boundary line **MUST NOT BE CROSSED** without first obtaining clearance from air traffic control.

A R

The aircraft's Equipment Restraint Area (ERA) at the stand is marked with a single red safety line.

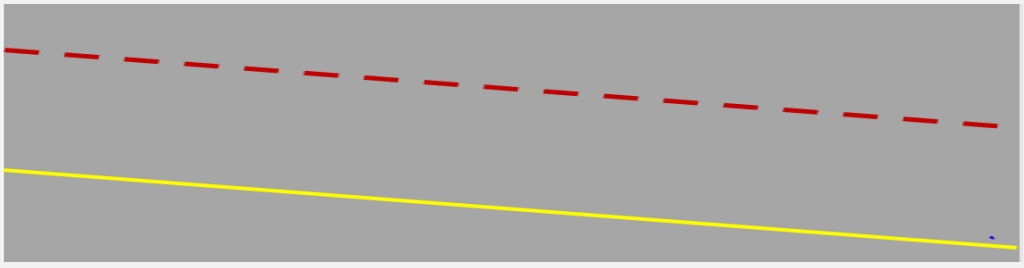
When an aircraft is about to taxi in/out of the stand, no equipment and/or vehicles may be present inside the limit while the aircraft engine/s are running.

Exceptions are granted to certain vehicles necessary for aircraft taxiing in or out, such as the follow-me.

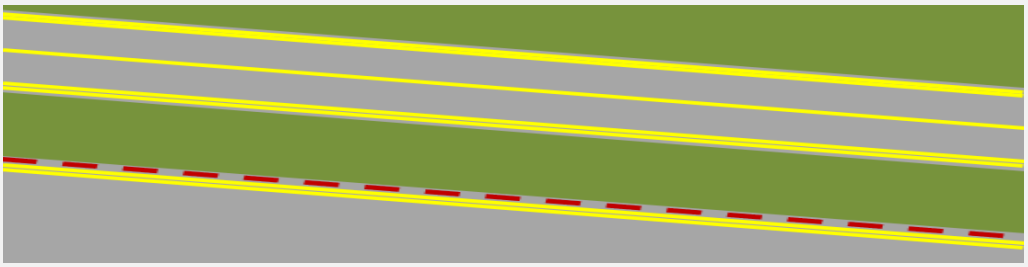


B M A

Red-dashed line on apron indicates freedom from obstacles in relation to adjacent taxi line.



Dashed line on East Apron



Dashed line on Apron 4

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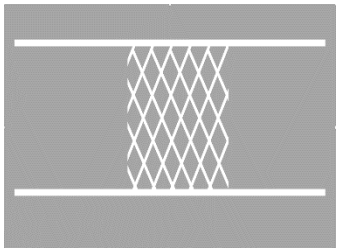
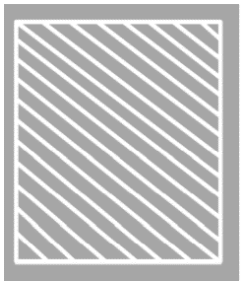
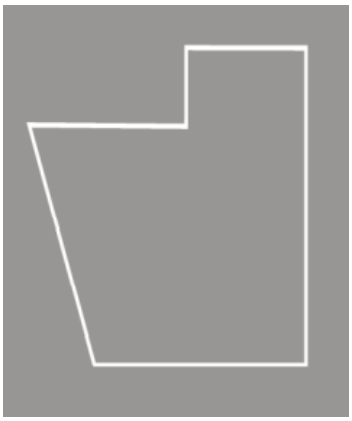
Red restricted areas	White restricted areas	Parking spaces
	 	
Where there are red restricted areas (slashed areas), vehicles and work equipment may *not stop*	Where there are white restricted areas (slashed areas), vehicles/work equipment may not park; stopping is permitted but vehicles/work equipment must be kept under supervision.	Parking spaces for vehicles/work equipment are marked with a single solid white line park.

Vehicle roads of a temporary nature may be marked with different types of markings than those stated above, for example cones, direction signs, fences or similar. Information about these "*temporary*" solutions will be given in relevant communication channels.

16.2.3 Traffic and order rules

The following traffic and order rules apply within Swedavia.

- The movement of vehicles on Airside may only take place in connection with service assignments and should primarily take place on marked vehicle routes.
- Vehicles driven on the movement area must have the yellow/orange warning light turned on when in motion.
- The number of movements in the movement area should be minimised as far as possible. If there are alternative vehicle routes that avoid the movement area, these should be used primarily.
- It is prohibited to use the runway to cross the airport area.

Road signs, road markings and traffic signals set up by Swedavia must be followed.

- Emergency vehicles calling for "free road" (*blue warning light*) are exempt speed limits.

AR

- General speed limit on Airside is 30 km/h
- Regardless of the speed limit, the vehicle's speed must be adapted to what road safety requires. Consideration must be given to road, weather and visibility conditions, the condition and load of the vehicle and traffic conditions in general. The speed must never be higher than the driver can maintain control of the vehicle and stop in front of any foreseeable obstacle.
- Vehicle drivers must show consideration for others on Airside.
- Keep a distance from the vehicle ahead to minimise the risk of collision.
- When meeting vehicular traffic, this should be done on the right side.
- Turn signal/flashers should be used when changing direction of travel.
- Overtaking vehicles must primarily take place on the left but may take place on the right when the driver of the vehicle ahead turns to the left or clearly prepares for such a turn.
- If there is an obstacle to meeting, the driver who has the obstacle on their side must stop.
- Directions by the police, ATOS, Swedavia's appointed security contractor, Road Transport Manager, or by Swedavia's designated traffic guards shall be followed.
- The weight of the trailer or trailing vehicle must not exceed the weight of the towing vehicle or the total weight according to the vehicle manufacturer's specifications.
- Exits onto marked vehicle roads have a right-of-way requirement.
- The right-hand rule applies on Airside.
- Handbrake/parking brake must be tightened/turned on when parking vehicles.
- It is prohibited to run over cables, hoses or other equipment.
- No more passengers may be carried In a vehicle than it is registered for.
- Seat belts, if available, should be worn by everyone in the vehicle.
- Fuelling of vehicles shall take place on Swedavia approved surfaces.
- You may not stop or park the vehicle in a way that creates danger.

16.2.4 Undisturbed driver environment "Sterile driver environment"

When driving a vehicle, the driver's attention must be directed to driving a vehicle and calls must be avoided. The so-called "sterile driver environment" shall be applied. Below is the current application regarding vehicle drivers while driving:

- Drivers may not use a mobile phone to reply to text messages, emails etc.
- Drivers must not take notes on paper/blocks while driving.
- Drivers may only talk on the telephone/radio device if necessary for personal or aviation safety, aviation security or in a specific approved work methodology. Other work-related or private telephone calls should be made from stationary vehicles, whether using hands-free or not.
- Drivers are not allowed to listen to music or car stereo.
- Drivers who are in the manoeuvre area must ensure that they can always hear calls over the radio.
- Conversations with passengers other than necessary and work-related, should be avoided while travelling. If the conversation can take place in stationary vehicles, this is preferable.
- There should be no loose or distracting objects in the driver environment.

16.2.5 Priority/Give way "*Free Road*"

AR

Vehicle drivers must always give way to “free road” for:

1. Aircraft (including towed) always take precedence over vehicle traffic. When giving way, vehicle drivers must stop the vehicle completely and wait for the aircraft to pass.
2. Emergency vehicles during an emergency.
3. Refuelling vehicles in the event of evacuation from a parking stand
4. Slip prevention vehicles during ongoing assignments
5. FOLLOW-ME vehicles during assignments
6. Vehicles leaving the manoeuvring area.

In the manoeuvring area, the following priority rules apply:

1. Rescue vehicles during an emergency that call for a free road.
2. Vehicles and vehicles towing aircraft shall give way to aircraft taking off, landing or taxiing.
3. Vehicles not towing aircraft shall give way to vehicles towing aircraft.
4. Vehicles not towing aircraft shall give way to other vehicles that are not towing aircraft in accordance with air traffic control instructions.
5. Vehicles and vehicles towing aircraft shall follow instructions issued by air traffic control.

16.2.5.1 Rules Regarding Vehicle Escorting

The escort convoy must not be overtaken or interrupted by other vehicles on the airport.

16.2.6 General rules regarding driving on other operational surfaces

For vehicles driving on other operational surfaces, not all EASA regulations that apply to the movement area apply, but the traffic regulations still apply.

Within baggage handling areas, a maximum speed of 5 km/h applies.

16.2.7 General rules for driving on apron

AR

When driving a vehicle on the apron, the vehicle must be driven on marked vehicle roads; an exception is granted when the vehicle must travel from the vehicle road to/from the stand or building. This should then take place as close as possible to/from the marked vehicle route.

BMA

All vehicle traffic shall use the outer Vehicle Road for transport on Apron 3. Only vehicle traffic using aircraft parking stands 15-19 is allowed to drive on the inner Vehicle Road on Apron 3.

On aprons, a speed limit of 30 km/h generally applies except when on Apron 1 or within 15 metres of an aircraft, in which case a speed limit of 15 km/h applies.

Blue light vehicles are exempted from the above speed regulations during an emergency with blue light turned on.

A R

Only vehicles involved in aircraft ground stop operations may be driven at the stand. Exceptions are granted for vehicles which cannot be driven within the marked vehicle path for size reasons, or which carry out maintenance or inspections.

All equipment and other items that, due to their weight and size, can be blown away by jet blast or wind must always be anchored, to avoid damage to aircraft, people and their own or someone else's property.

It is forbidden to:

- Drive vehicles between marshals and aircraft or engaged docking aids and aircraft.
- Drive vehicles at the stan d in question when the aircraft anti-collision light is on.
- Drive vehicles between aircraft and active refuelling vehicles that have taken a position for refuelling.

B M A

Vehicles operating on the apron must not be driven closer than 1.5 meters to a parked aircraft, except for vehicles involved in ground handling operations connecting to the aircraft (*such as catering trucks, fuel trucks, baggage conveyors, etc*.).

A R

Reversing in the vicinity of parked aircraft shall be avoided as far as possible, with the exception of vehicles that need to reverse in connection with their assignment. Reversing shall be planned to take place away from aircraft where possible. Reversing shall always be done with the full attention of the driver and great care towards aircraft, equipment and persons. Drivers who believe that reversing cannot be done safely must seek help from a person assisting during the manoeuvre.

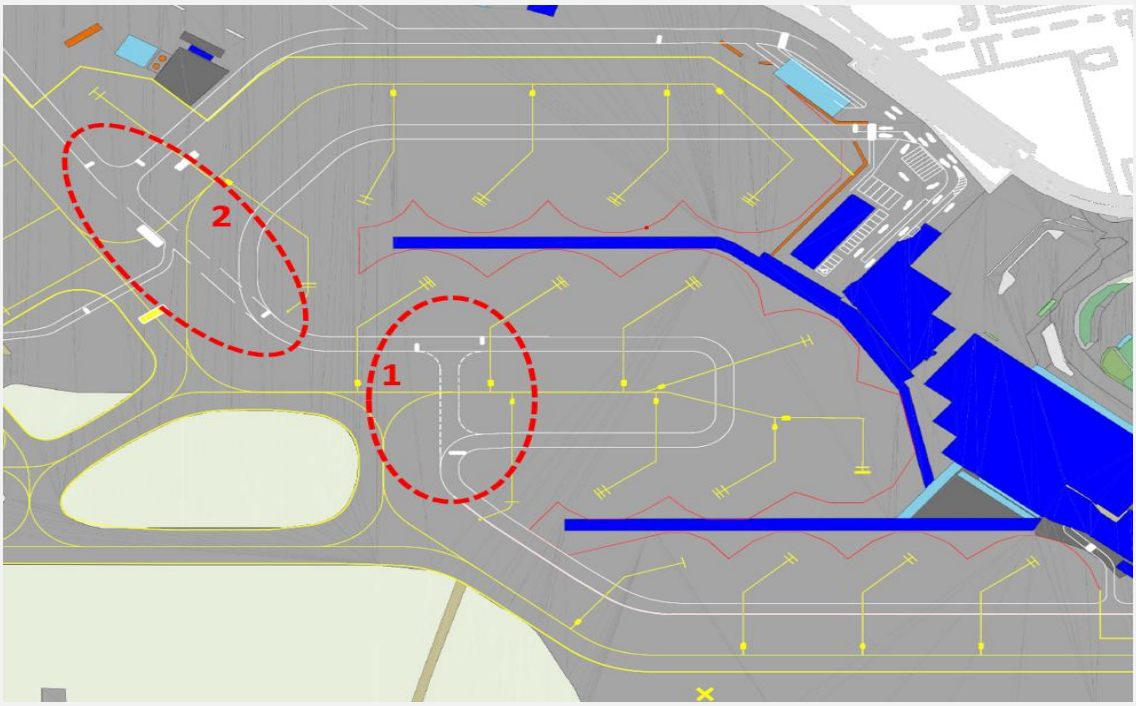
Vehicles involved in activities related to aircraft ground stops must, at each approach towards the aircraft or at a distance of at least five (5) meters from the aircraft, confirm the functionality of the brakes through the so-called break/stop procedure (*brake test with clearly marked braking*). This should be carried out with a sufficient safety margin for the prevailing speed, so that avoidance of the aircraft is still possible in cases where the brake test leads to suspicion of reduced braking effectiveness.

BMA

16.2.7.1 Obstacle clearance between vehicle roads and taxi line on apron

Vehicle roads are mainly separated from taxi lines by distance, but due to the airport's design, there are stretches where there is **NO obstacle clearance** in relation to taxi lines. These stretches are marked with laterally dashed white borders and preceded by give-way markings, *so-called "shark's teeth"* which indicate the limit of where obstacle clearance in relation to taxi lines ceases.

The driving of vehicles along these routes shall be carried out with extra supervision and always taking into account existing air traffic by giving preference to taxiing aircraft **at the specified give-way markings**.



There are two (*2*) road segments of the Vehicle Road in connection with Aprons 2 & 3, where there is **no obstacle clearance** in relation to adjacent taxi lines.

1. When crossing the taxi line to/from Apron 2 between stand 7 and stand 13/14. This road segment is classified as a heavily trafficked area with a complex traffic picture.
2. When crossing the taxi line to/from Apron 3 between stand 15 and Remote North. This road segment is classified as a difficult-to-overview area where air traffic can come from four different directions, TWY T, Apron 2, Apron 3 and Remote North.

AR

16.2.8 General rules regarding driving in the manoeuvring area

In order to drive vehicles on the manoeuvring area, a driving permit "***clearance***" from the air traffic control tower (*TWR*) is required. Clearance to the manoeuvring area must be done via predetermined approach points. It is prohibited to pass a lit stop bar even if air traffic control gives clearance to pass.

A R

After driving off-road or in areas where there is a risk of FOD following the vehicle, special care must be taken, such as cleaning the tires and wheel arches of soil, stones and gravel.

The driver shall follow signs, markings and air traffic control instructions via radio communications and lights operated by air traffic control. All instructions from air traffic control shall be immediately read back and performed. Air traffic control must also be notified when the vehicle has left the manoeuvring area.

In addition, it is required that:

- The driver has a green/white striped driving permit.
- Drivers have passed a language test for the Swedish and English language.
- The driver establishes two-way radio connection with air traffic control.
- The vehicle has a green/white striped vehicle permit
- The vehicle is equipped with a fixed mounted antenna for two-way ground and/or aviation radio.
    - If the driver leaves the vehicle, air traffic control shall be informed, and a portable two-way radio shall be used.
- The vehicle meets the visibility criteria in accordance with **chapter 16.1.7.**
    - Emergency vehicles with blue lights turned on are exempt from the above speed limits.

For local rules and procedures for entering the manoeuvring area, refer to site-specific information.

For more information on radio communications, see AR Part 5 chapter 30.

B M A

The following speed regulations apply to the manoeuvring area:

- Taxiways – 60 km/h.
- Runway – 120 km/h.

Blue light vehicles are exempted from the above speed regulations during an emergency with blue light turned on.

Outside the normal opening hours of the runway/TWR, all movements of vehicles in the manoeuvring area shall be notified on fq 121,605 MHz. Vehicle drivers must always maintain compliance with the frequency when in the manoeuvring area.

The vehicle paths in each end of RWY referred to as the "*Emergency Route Bällsta*" and the "*Emergency Route Ulvsunda*" are both one-way emergency routes and may only be operated in the direction from RWY (*exceptions apply to rescue vehicles during rescue operations and vehicles during snow removal operations*).

AR

16.2.8.1 Waiting places on taxiways connected to the runway (RWY)

All waiting areas on taxiways connected to the runway (*RWY*) are equipped with so-called "*Stop Bar*". A stop bar consists of a row of red illuminated recessed luminaires co-located with the respective waiting area line. When aircraft/vehicles are given clearance to pass the waiting area, ATS simultaneously turns off the stop bar.

- **An illuminated red stop bar must NOT be crossed**

16.2.8.2 Waiting places on vehicle roads connecting to the runway (RWY)

Vehicle roads connecting to the runway are equipped with a STOP sign and a supplementary board that states that passing the sign may only be done after permission has been obtained from air traffic control. This sign is reinforced with red flashing light. The flashing lights may be passed when clearance is obtained from air traffic control. If the lights are not flashing, clearance from air traffic control is still required before passing.

16.2.8.3 Driving vehicles on grass areas within the manoeuvring area

Work vehicles may be driven on the manoeuvring area's grass areas after obtaining permission from air traffic control.

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However, in the case of simultaneous air traffic on RWY, work vehicles must not be closer than ***"55 metres from the runway edge",*** which shall be announced in the movement permit (*clearance)* from air traffic control in accordance with the methodology and phraseology prescribed in air traffic control's operating manual.

In cases where work vehicles are within the sector area but further than ***"55 metres from the runway edge"*** with simultaneous air traffic, account shall also be taken of the special protection areas established to ensure the operation of navigation equipment; see related documents on the extranet Map Protected Areas CNS.

The demarcation ***"55 metres from the runway edge"*** with reference points is described in the **Appendix Use of work vehicles on runway strip.**

16.2.9 Vehicle call identification "*Radio number*"

Radio numbers are assigned by the airport. Trailer vehicles are not assigned radio numbers, only the towing vehicle. Misuse or non-compliance with set requirements lead to the withdrawal of authorisation for the manoeuvring area. The radio number must be marked in accordance with **chapter. 16.1.7.7.**

16.2.10 Loss of Radio Communication

AR

See AR Part 5 Chapter 30.5 Loss of Radio Communication

16.2.11 Driving vehicles to, from and within work areas in the movement area

When working in the movement area, the work area must be established. Within the designated work area, the airport may change the traffic rules stated in this document.

This will be handled in accordance with the procedures in AR Part 5. **chapter 13.**

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16.2.12 Winter tyres and winter conditions

When winter road conditions exist or are forecast, vehicles must use winter tyres. Winter conditions prevail when there is snow, ice, slush or frost on any part of the road. Vehicles must have winter tyres from **1 December–31 March** if it is winter road conditions.

Exempt from the above are vehicles where winter tires are not an option (lock ring rims, wheel tracks, solid tires); however, these tires must be coarse patterned when there are winter road conditions.

The requirements apply to both heavy and light vehicles and also apply to foreign registered vehicles. Read more about the requirements for winter tyres on the Swedish Transport Agency's website.

Note! *Studded winter tires are prohibited in the Maneuvering Area!*

Considerations for winter road conditions:

- It is up to the driver to adjust the speed according to the prevailing road conditions.
- Reduce speed in deteriorated road conditions as the braking distance becomes longer and cornering becomes more difficult.

Number of connected baggage carts:

In deteriorated road conditions, only three (3) baggage carts are allowed to be connected simultaneously behind the towing vehicle.

16.2.13 Vehicle driving with low visibility procedures (LVP)

When LVP applies, all work tasks in the movement area that are not necessary for the continued operation of the airport must be avoided until the airport notifies that LVP has ceased.

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During low visibility procedures (LVP), escorting on active areas of the manoeuvring area is not allowed.

16.2.14 Vehicle escort

For the driving of vehicles in traffic areas where drivers and/or vehicles are not authorised, such transport shall be escorted by an authorised driver and an authorised vehicle. Drivers and vehicles with a valid driving permit and vehicle permit are classified as authorised to perform escorting in the traffic areas in which they are allowed. Escort of vehicles during state visits, emergency vehicles with blue lights, and Mifor are exempt from the requirement of self-inspection of vehicles.

See Swedavia’s extranet for procedure Escort of vehicles.

16.2.15 Load securing

General requirements for load securing are regulated by the Road Traffic Ordinance (1998:1276 section 80). The driver must ensure that loads do not create a traffic hazard or otherwise risk injuring persons or property. The vehicle driver is responsible for securing the load even if they have not loaded themselves.

16.2.15.1 Baggage trolley load securing

When baggage trolleys are used for the transport of baggage, freight, mail etc., these trolleys must be **equipped with four sides** to meet the requirement for load securing. If the height of the load exceeds the height of the sides, a roof must also be used to prevent the load from falling off.

Drivers must ensure that containers are locked onto the dolly cart and that the curtain on the container is attached according to instructions before moving off.

16.2.15.2 Load securing of animals

Vehicle drivers are responsible for ensuring that cages or similar are properly secured prior to commencement of transport and during transport to/from the aircraft's stand to ensure that the cargo does not move.

Before transport, vehicle drivers must:

- Visually check that the cage door appears to be intact, tightly closed and locked.
- Place the cage door against a fixed side/railing on the trolley or against the driver's cab on the truck bed to minimise contamination from the cage in the unlikely event of the door opening.
- Secure the cage so that it can handle a sudden movement by the animal, turn by vehicle or similar, without the cage moving.
- Ensure that the animal's stay at the stand is minimised to reduce stress and exposure to heat/cold or precipitation.

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Load securing on trolley/truck bed must always take the form of securing with rope, straps or other type of load securing that meets the above-mentioned points.

Great care must be taken when moving the cage between the trolley/truck and the aircraft.

16.2.16 Requirements for support surface for support legs

The support surface on the support legs should be adapted to the weight of the vehicle to avoid damage to the asphalt. The support legs should be positioned so that the risk of FOD is minimised. See Swedavia's extranet for the calculation of pressure on support legs.

16.2.17 Parking

Throughout Airside, parking bans apply in zones. Vehicles and equipment may only be parked in designated areas. Illegal parking outside marked locations or in violation of signage at the relevant location may result in a charge of a control fee according to LKOP (*Act regarding Control Fee with Illegal Parking (1984:318)*). The control fee for unauthorised parking will be charged to the vehicle owner. For unregistered vehicles, the company to which the vehicle permit is issued is charged. On Airside there are fixed parking spaces that are marked with the names of the activities used. Fixed parking spaces are leased by Swedavia.

Vehicles and work equipment that only participate in activities related to aircraft ground stops are allowed to park outside the **"*Equipment Restraint Area*" security area**.

Inspection regarding parking is carried out by Swedavia.

16.2.18 Vehicle-related accidents/incidents

In the event of a vehicle-related accident inside Airside, the person(s) involved always remain at the accident site and perform the following:

1. Contact APOC SV to handle the situation that has arisen
2. Ensure vehicles are not moved until ATOS approves this.
3. Wait for ATOS, for further handling such as documentation and/or damage report.
4. Involved parties write an incident report before the end of the working day.

NOTE! *In the event of a collision with aircraft, the airline representative concerned shall also be contacted immediately.*

NOTE! In the event of more serious incidents with confirmed or suspected serious personal injuries, 112 should be called first and then LC should be contacted via radio or telephone. Notify if ambulance has already been called for LC to prepare escort to the accident site.

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In the event of a vehicle-related incident, such as a sudden engine failure or breakdown, the driver shall take the following actions:

Contact ATOS by telephone and report the situation. Depending on where the incident has occurred, this unit will close off the area and coordinate with Air Traffic Control if the incident affects arriving or departing aircraft.

16.3 Safety

16.3.1 Protective equipment when driving vehicles

Drivers and passengers shall wear protective equipment such as helmets and goggles, etc. where this is considered necessary by the manufacturer.

16.3.2 Consideration regarding jet blast and engine start-up risk areas

Special consideration should be given to jet blast from aircraft taxiing in and out. Passage by vehicles behind a parked aircraft is prohibited when the aircraft's anti-collision lights are on as departure from the location may be imminent; also applies on marked vehicle routes.

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Exceptions to the above apply if the driver can confidently determine that the aircraft is going to park or, at startup, is still parked with chocks at the nose wheel.

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16.3.3 Hot spots for vehicle traffic

A hot spot is defined as follows: "*A known area of the airport's movement area where the risk of collision is significantly greater and requires increased attention and caution from both pilots and drivers*."

See the Web map Vehicle Map for Hot Spots.

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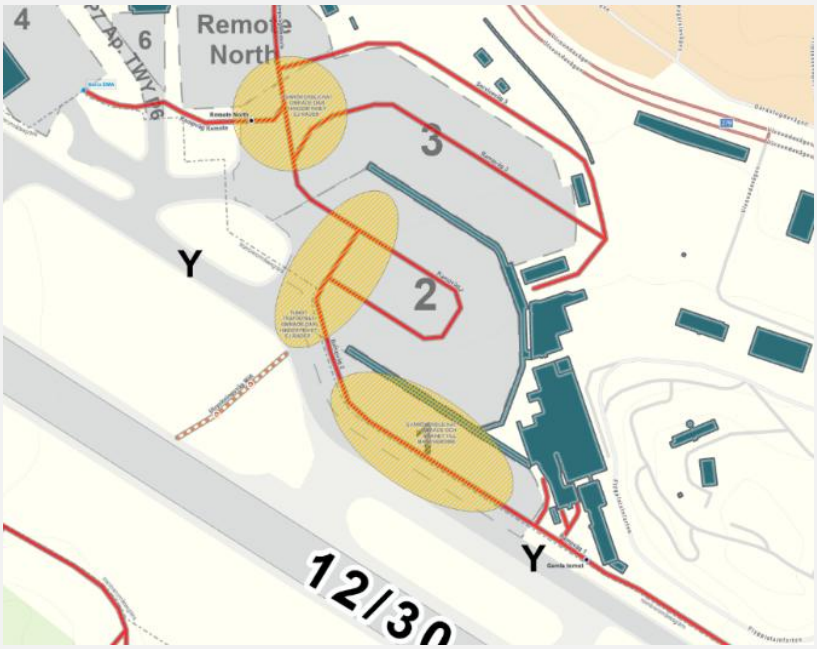
The airport has three (*3*) designated Hot Spots for vehicle traffic, see figure below.



16.4 References

16.4.1 For further information, please contact

APOC Supervisor: tel. 010-109 13 00

ATOS: tel. 010-109 43 33

Airport Security Centre (Ledningscentralen/LC) tel. 010-109 43 50

Swedavia Service Centre Arlanda (also handles Bromma): 010-109 66 50 (weekdays 08:00-11:00)

If you have any questions about driving permit training, please contact kortillstand.bma@swedavia.se

If you have any questions about driving and vehicle permits, please contact the Service Centre: servicecenter.fordon@swedavia.se

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16.4.2 Reference documentation

- Act on Control Fees for Unauthorised Parking, LKOP 1984:318
- Road Traffic Ordinance (1998:1276)
- Road Traffic Register Regulation (2001:650)
- Vehicle Act (2002:574)
- TSFS Series SEC
- EU Regulation No 2015/1998
- EASA (EU 139/2014) (Aerodrome Manual chapters 16 & 30)

17. Wildlife control

To minimise the number of collisions between aircraft and wildlife, the airports establish, implement and maintain a Wildlife Control Plan. The plan takes a systematic, risk-based approach, where risks are identified and documented, and mitigating measures are developed and monitored.

All wildlife control activity reporting is documented in a site-specific log and includes the presence of different species, measures implemented, incident reporting, remains and occurrences. Collisions are classified as confirmed, probable or unconfirmed, and all measures are documented.

The Wildlife Control Plan includes risk assessments based on previous incidents, species, and geographical and seasonal factors, as well as proposed measures for reducing the risk of collisions. Proactive methods designed to disturb wildlife and make it more difficult for wildlife to become established at the airport include grass cutting, tree felling, drainage, ring rolling, ground preparation and securing buildings and equipment.

Reactive methods include scaring, disturbing and protective hunting, using various techniques such as scare shots, sound and light signals and trapping. Local cooperation with stakeholders and operators around the airport is also important for reducing the risks.

AM The Wildlife Control Plan requires regular risk assessments and measures to ensure there is an effective strategy for managing and minimising the risk of collisions between aircraft and wildlife, as well as cooperation with nearby areas and resources in order to achieve these objectives.

18. Monitoring of the airport and its surroundings

18.1 Introduction

This chapter describes Swedavia's systems for monitoring and control of the protected areas at airports and nearby airspace from both an operational and a long-term perspective. The main objective is to maintain safety margins in order to minimise the risk of collisions with physical obstacles, both natural and artificial, inside and outside the airport area.

Obstacle checks and monitoring take place on a continuous basis in order to detect and report objects that risk penetrating obstacle limitation areas, such as approach areas and take-off and climb areas. Checks and measurements are carried out on a regular basis by operations departments and external suppliers.

Obstacle measurements and checks include daily inspection rounds, periodic checks and sighting instruments to monitor vegetation and other obstacles. Obstacle analysis and removal also take place and can include the removal of trees, bushes or other objects that affect the airport's obstacle limitation surfaces.

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Swedavia handles referrals and questions about obstacle matters from various operators and cooperates with government authorities to secure airport areas and national interests. Temporary establishments that could constitute obstacles, such as construction cranes or laser shows, are also analysed.

In addition to physical obstacles, matters relating to navigation equipment, electromagnetic radiation, noise, reflections and misleading light are also addressed. Handling referrals and monitoring national interests are important for safeguarding the long-term function of the airports, and establishments of a temporary nature are handled by Swedavia Obstacle Management, hinderhantering@swedavia.se

18.2 Introduction on radio transmitters and EMC

The purpose of the regulations on radio transmitters and EMC is to protect the radio environment at the airport and so maintain safe operations.

All electrical equipment in products and facilities emits electromagnetic fields that can interfere with other electrical equipment and radio frequencies within the airport. The electromagnetic compatibility requirements (EMC requirements) ensure that electrical equipment and systems do not create interference for other equipment or disrupt the radio environment.

Radio transmitters and mobile base stations also need to be regulated because they affect radio waves and create radio interference.

In this section, we describe the rules and limit values that must be complied with when installing or operating this type of equipment or system within or around the airport area.

18.3 Radio transmitters

Swedavia has a responsibility under **the Aviation Ordinance (2010:770), chapter 6, section 2** to ensure that radio communications between aircraft, air traffic control and other devices, on the ground or in the air, work without interference. In order to install and operate radio transmitters within and near the airport, an operator must therefore apply for a permit from Swedavia's EMC och Radio Spectrum Management.

18.3.1 Permits and reporting

An operator needs to apply for a permit from Swedavia's EMC and Radio Spectrum Management:

1. when a transmitter is to be installed or operated within a radius of 4 km from the airport

An operator needs to report to Swedavia's EMC and Radio Spectrum Management:

2. when a mobile base station or similar is to be installed or operated outside the area specified above, but within a radius of 6 km from the airport

Note that a radio permit does not include any other required permit, such as a building permit.

18.3.2 Conditions for a permit

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To obtain a permit from Swedavia's EMC and Radio Spectrum Management, the operator concerned needs

1. a permit from the Swedish Post and Telecom Authority (PTS)
2. to demonstrate how the installation complies with the statutes and regulations of the Swedish National Electrical Safety Board.

Documentation must be drawn up in accordance with European standards and demonstrate how the relevant standards are complied with.

The requirements above do not apply to systems strictly for indoor use that do not require a licence from the PTS (for instance, wireless LAN).

18.3.3 Responsibility

The operator is responsible for ensuring that the transmitter does not interfere with or affect aviation safety. In the event of interference to aviation safety, the operator may be liable for damages.

All radio transmitters must:

1. be installed in a professional and safe manner, and
2. be inspected on an annual basis.

18.3.4 Temporary radio communication

When there is a need for spoken communication via radio for temporary establishments such as for construction projects, events, film recordings or similar situations, companies and other organisations are advised to use the existing Airport Radio System.

If there is a need for Airport Radio, contact **Swedavia IT/Swedavia IT/Airport Telecom** 0770 111 538, airporttelecom@swedavia.se.

18.4 EMC – Electromagnetic compatibility

18.4.1 Basic requirements

It is a basic requirement that all electrical equipment:

1. complies with electromagnetic compatibility (EMC) legislation.
2. is CE marked.

Such equipment may, for instance, be advertisement screens, information monitors, TV screens, computers, automated check-in machines, electronic employee registration systems and LED lighting in all its forms.

All operators at the airport shall ensure that electrical equipment, systems and products that are used or will be used at the airport comply with the EMC requirements as specified in this section of the Airport Regulations. Note that Swedavia has defined its own EMC levels for certain areas, see section 18.4.3.

18.4.2 Detailed information about EMC

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Swedavia's Radio Spectrum Management has prepared a document containing supplementary information about EMC, Swedavia's specific limit values, CE marking, examples of equipment, answers to frequently asked questions and other information. Contact EMC and Radio Spectrum Management at emc@swedavia.se for an up-to-date version.

18.4.3 Limit values and permits

For safety reasons Swedavia has specified acceptable EMC levels in the airport's EMC protection area in addition to those that apply under current law (as per Webb Map for Protection Area EMC). An operator needs to apply for a permit from Swedavia's EMC and Radio Spectrum Management in case there is a risk the EMC limit values below will be exceeded.

Unwanted electromagnetic radiation (radio signals) from equipment must not exceed limit values corresponding to the following standards

Zone	Requirement
Area marked in blue outdoors – within the EMC protection area	EN 61000-6-3 or alternatively EN 55022/32 Class B
Area marked in red outdoors	EN 61000-6-3 or equivalent Maximum allowable field strength at a 10-meter measurement distance: 21 dBµV/m for the frequency range 108 MHz–137 MHz 24 dBµV/m for the frequency range 380 MHz–430 MHz.
Indoors within the EMC protection area	EN 61000-6-3 or alternatively EN 55022/32 Class B

License-free products must meet the following standards

Radio products in general	EN 301 489
WLAN	2.4 GHz - EN 300 328 5.2 GHz - EN 301 893
Bluetooth	EN 300 328

18.5 Monitoring

Swedavia is entitled to inspect radio transmitters and electrical equipment without notice. In cases where deviations are identified, the operator is directed to remedy the problem immediately. If equipment exceeds the transmission limit values, the operator is responsible for remedying the interference immediately at its own expense.

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19. Plan for emergency rescue operations in and around the airport

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This chapter describes Swedavia's preparedness for and handling of emergency situations at airports or in their vicinity. The Aerodrome Emergency Plan aims to organise the airports' response to incidents, including cooperation with external organisations. The airports adapt their organisation to the size, complexity and terrain conditions of operations.

In response to an incident, the functions and roles required to handle the situation are activated. Each airport has its own specific alarm policies and procedures for sharing information and taking action quickly. The plans describe initial assessments, alarm channels and checklists to ensure the right functions and operators are activated.

Exercises are an important element of preparedness and are carried out on a regular basis, including full-scale exercises every two years to test the entire plan and cooperation with external organisations. Smaller-scale exercises are carried out in between these to address any shortcomings identified in larger exercises.

The exercises include scenarios such as accidents, fires, terrorist acts and infection control events. These exercises are documented and evaluated to identify and remedy any shortcomings. The plans and procedures are updated regularly (at least every two years) to reflect changes and to address any shortcomings identified so that future incidents are handled better.

19.1 Site-specific information Bromma

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See Contingency plan for Bromma.

20. Fire and rescue service

The primary objective of the airport Fire and Rescue Service is to save lives in the event of incidents involving aircraft or other incidents at or in the vicinity of the airport by establishing a survivable environment and facilitating evacuation. This is achieved by having sufficient competent staff and appropriate equipment to handle incidents at or in the vicinity of the airport.

Read more in Part 1 chapter 4 Fire safety.

The airport fire and rescue service is available and ready for emergency response during air traffic and published opening hours.

The category of the airport Fire and Rescue Service is determined based on the types of aircraft operating at the airport, taking into account movement frequency, cabin length, and cabin width.

Rescue equipment includes vehicles with extinguishing agents, powders and supplementary equipment for the task. Maintenance programmes and functional checks ensure that equipment and vehicles work correctly.

The airport Fire and Rescue Service ensures that response times, regardless of geographical challenges or integrated tasks, do not exceed 180 seconds, with an operational target of not exceeding 120 seconds, measured from the initial call to the airport rescue service to any part of an active runway.

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In the event of an incident involving aircraft, the rescue service is alerted by air traffic services, and direct communication with the crew can be established if necessary.

21. Removal of unusable aircraft

This information is provided in IAIP AD2 ESSA/ESSB/ESGG/ESMS.

22. Handling and storage of aviation fuel and dangerous goods

ICAO definition of dangerous goods:

“Articles or substances which are capable of posing a risk to health, safety, property or the environment.”

It is the responsibility of the airline, either itself or through a contracted ground handling company, to develop procedures for the safe handling and storage of dangerous goods. These procedures shall comply with the provisions stipulated by ICAO.

It is also the responsibility of the airline, either itself or through a contracted ground handling company, to ensure that dangerous goods are never left unattended in areas where flight operations take place. Dangerous goods must also not be temporarily stored in areas not intended for the purpose while awaiting transport or loading but must be transported directly to or from the aircraft or cargo area.

22.1 Safe handling and storage of aviation fuel, equipment, storage facilities, delivery, dispensing etc.

The following applies:

- A clear path for evacuation must always be left for vehicles and other mobile equipment.
- Vehicles must never drive over equipment used for refuelling aircraft.
- Open flames and the use of electrical equipment or other objects that generate high levels of heat are not permitted in the vicinity of aviation fuel.

It is the responsibility of the respective aviation fuel operators to develop procedures that ensure the safe handling of the aviation fuel facility and associated equipment in accordance with regulations in force.

Aviation fuel operators are also responsible for the following (not an exhaustive list):

- The storage of aviation fuel
- The distribution of aviation fuel to/from the fuel facility and to/from aircraft.
- The quality of fuel and the suitability of the fuel for use in aircraft – takes place through agreements where the fuel companies guarantee to ensure that the aviation fuel is of the right quality.
- The refuelling procedures for aircraft.

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22.2 Audit and inspection intervals for aviation fuel

Aviation fuel companies must be able to present documentation to Swedavia demonstrating compliance with the aviation fuel requirements in accordance with EU 139/2014, which must include the following (not an exhaustive list):

- Maintenance of facilities and equipment for the storage and dispensing of aviation fuel performed correctly.
- Facilities and equipment accurately labelled according to fuel type.
- Documented testing of aviation fuel during the storage and dispensing phases to ensure uncontaminated aviation fuel of the correct specification.
- Authorised personnel who are qualified in the storage, refuelling and other handling of aviation fuel.

Aviation fuel companies that are affiliated to the Joint Inspection Group (JIG) or equivalent comply with the requirements of EU 139/2014.

Aviation fuel companies that are not affiliated to JIG or equivalent must be able to present documentation corresponding to EU 139/2014.

The airports check that the operator engaged in the sale and handling of aviation fuel is able to present a certificate and/or approved inspection report for the points described above. This is checked in connection with audits.

23. Low visibility – LVP

LVP (Low Visibility Procedures) are established procedures for low visibility.

Swedavia evaluates the procedures by monitoring incident reports at each airport and by meeting operators at the airport, such as the Local Runway Safety Team – which includes ATS and aircraft operators.

Low-visibility procedures entail stricter rules limiting the use of the airport's operational areas and related service areas. Low-visibility procedures apply before the LVP enters into force.

LVP comes into effect at the latest when the runway visual range (RVR) falls below 550 m or when the cloud cover height or vertical visibility is lower than 200 ft.

With Low Visibility Procedures (LVP) in place at the airport, all personnel in the following work areas must immediately stop work and leave the work area unobstructed:

- Work area that is isolated in the manoeuvring area.
- Work area adjacent to runway.

During LVP, construction or maintenance work in the vicinity of the airport's power supply or IT systems shall not be performed.

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When LVP is in place, all work tasks in the movement area that are not necessary for the airport's continued operation must be avoided until the airport notifies that LVP has ceased.

23.1 LVP at Bromma

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Supervisors for work according to the points listed above are responsible for registering as a subscriber for these SMS messages. Notification is made to APOC Supervisor, tel. +46 10 109 13 00.

24. Winter airfield maintenance

Swedavia's Snow plan describes how airports carry out winter airfield maintenance to ensure safe flight operations during the winter season. The plan contains details of the organisation behind winter airfield maintenance, the resources available, communication methods between the key parties, and the priorities in order to maintain safe operations.

The organisation of winter airfield maintenance is adapted to the specific air traffic at each airport. During the winter season, measures including assessing bank condition and reporting runway condition codes (RWYCC) according to the Global Reporting Format (GRF), snow removal, anti-skidding operations and improving surface condition must be implemented quickly and efficiently.

Winter airfield maintenance measures include developing plans and procedures, inspecting movement areas, measuring precipitation depth and RWYCC on the runway system, as well as reporting conditions in the movement area. Snow removal is a critical part of winter airfield maintenance and includes improvement measures such as ploughing, sanding, chemical anti-skid treatment and the removal of snow.

Traffic restrictions and runway closures are governed by airport-specific procedures and may be necessary in severe weather situations or while improvement measures are being implemented. Decisions on such measures are made by the person with responsibility for this in consultation with air traffic services and are communicated via NOTAM.

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The Snow Plan also contains guidelines for friction measurement, improving braking performance, and snow removal in the vicinity of CNS and MET equipment so as to ensure that winter airfield maintenance does not have an adverse impact on aviation safety. Airports can apply for Specially Prepared Winter Runway (SPWR) certificates to allow higher RWYCC in icy conditions.

25. Adverse weather conditions

Each airport has its specific geographical challenges and its specific physical design of the airport. This means that weather conditions can have different impacts at the airports. Here is a comprehensive common approach to managing adverse weather conditions.

It is the responsibility of the airport operator to provide information on expected adverse weather conditions. Information and warnings served are based on forecasts and warning service from SMHI.

Swedavia is not responsible for each operator's limitation or initiation of interruptions in operations. Each employer takes measures to ensure its work environment responsibility for its employees and must have documented action plans for actions where the employee may be affected.

Swedavia ensures systems for communicating alerts to operators at the airport who have requested the service. The system informs the operators of the prevailing conditions (current weather), or upcoming expected weather conditions (forecasts). Upon receiving information that any of the established weather categories may or does prevail, the respective operator must take the measures that are incumbent on them in the prevailing circumstances.

A M The airport operator's information and warning system may consist of one or more technical solutions, for example via Airport Radio, via SMS service, email distribution or similar.

Swedavia uses weather suppliers' warning services and follows established weather warnings with associated warning descriptions when sending out. Agreements exist with suppliers to gain access to extra services and a meteorologist on duty to ask questions.

The airports have access to LFV's Airport Weather Observation System (AWOS) where the weather can be viewed in real time for wind (direction and strength) and also the actual temperature at the airport.

In the ordinary business audit carried out by Swedavia, compliance with procedures and instructions to comply with the airport's regulations is checked. The audit programme shall check that operators working at the airport airside have developed procedures/instructions for their employees in the event of an adverse weather condition.

Each facility owner ensures that their infrastructure and facilities (fixed/mobile) are protected and monitored regularly regardless of whether adverse weather conditions occurred or not.

Excessive precipitation can mean reduced visibility that negatively affects the visibility of day markings and signs. The speed of vehicles must be adapted to the prevailing conditions and to the nature of the documentation in order to prevent driving errors and other dangers.

When thunderstorms occur at or near the airport, necessary precautions must be taken to protect personnel and equipment. High points and objects in the terrain are at greater risk of being struck by lightning and therefore, for example, excavation work and work with cranes, work on masts or on ladders should be suspended until the thunderstorm has passed. No personnel should be on scaffolding or roofs during a thunderstorm.

Electrical wiring and metal fences can conduct the lightning current for long distances. These places and objects and their immediate surroundings are in a vulnerable position to be avoided. Work with electrical hand tools and flammable goods must be interrupted. Personnel should seek shelter in a car, a building with a lightning rod or made of reinforced concrete or alternatively seek out a location that is not in an exposed location.

Construction work during the winter months can cause problems that make work difficult or sometimes impossible, and therefore necessary precautions should be taken. The use and driving of a construction vehicle must always be adapted to the prevailing road conditions.

Vehicles and equipment must be kept free of snow and ice while travelling on Airside.

The person responsible for the work environment at the workplace must have continuous supervision and must, without unreasonable delay, remove snow and ice to a sufficient extent to maintain a safe workplace and ensure that snow and ice cannot fall down and injure or damage people or property. Before snow clearing is complete, work may need to be carried out at a slower pace or may need to be completely interrupted.

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25.1 Site-specific information Bromma

In case of strong winds, personnel must ensure that they have the necessary protective equipment on them such as safety glasses and be aware that work may need to be carried out at a slower pace or need to be completely interrupted.

When strong winds are expected at or near the airport, take the necessary precautions to prevent dispersal or overturning of building materials and equipment.

Required precautions include:

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- That construction materials, equipment and fences must be secured to a sufficient extent with, for example, straps, nets, anchored with weights, lowered or moved.
- Tarpaulins and plastic sheets must be handled with care.
- Equipment used must be secured and braked, especially before using high-lift equipment. Equipment that does not have brakes should be chocked or otherwise anchored so that it cannot move uncontrolled and cause damage.

26. Nighttime operations

Swedavia's airports have established procedures and infrastructure, including both visual and non-visual aids as well as navigation equipment, which enable round-the-clock operations.

The installed visual aids are managed, inspected, and maintained in accordance with Chapter 10, thereby ensuring safe procedures during night operations. The exact location and specifications of lighting intended for aircraft movement are provided in the current AIP. Any changes in this regard are communicated in accordance with Chapter 7.

When daylight ends, Air Traffic Control manages the lights on the runways and taxiways to be used, following the same principles applied for various types of LVP (Low Visibility Procedures). General lighting is activated via twilight relays. Signs necessary for aircraft take-off, landing, taxiing, and parking are illuminated at night and constructed of retroreflective materials. Specific limitations are addressed in location-specific documents.

Should the airport's primary power supply fail, the secondary power supply takes over. The transition occurs with connection times in accordance with EASA ADR.DSN.

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26.1 Aircraft movement

A pilot-in-command is permitted to reduce the intensity of one or more flashing lights if they actually, or potentially, have a strong adverse effect on the pilot's ability to safely and satisfactorily perform one or more tasks required in their duties.

27. Protection and control of radar and other navigation aids

27.1 Introduction

27.1.1 Purpose

For aviation safety reasons, it is important to ensure that CNS equipment used at Swedavia's airports is not subjected to external influences. Processes and routines must therefore be followed when working in areas of influence for communication equipment (C), navigation equipment (N), surveillance equipment (S) and meteorological equipment (MET) at Swedavia's airports.

27.1.2 Applicable regulations

ICAO Annex 10 Vol I Radio navigation aids - AMD 89 & 92
ICAO Annex 10 Vol IV Aeronautical Charts - AMD 89
ICAO Annex 3 Meteorological service for international air navigation – AMD 80

27.2 Safety

Before any change in land or buildings within Airside is planned and implemented, the facility owner must be contacted and the change evaluated, analysed and in some cases, safety proven with regard to critical and sensitive areas around navigation, ground radar and meteorology equipment. This may also include areas on the landside and/or in the vicinity of the airport. Examples of this are buildings that can change the propagation of radio signals.

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Air traffic control should be contacted directly for ongoing maintenance work. Other work shall be coordinated with CAM.

27.2.1 Access to CNS premises and facilities

The purpose of regulating access to premises and facilities with CNS equipment used at Swedavia's airports is to ensure that relevant personnel have adequate training and the necessary knowledge and understanding of the equipment's impact on aviation safety and the risk sources with subsequent consequences linked to this.

The following applies to cover the requirements and ensure that no one accidentally changes or negatively affects CNS systems from an aviation safety perspective when visiting these premises and facilities, while at the same time meeting the access needs that exist:

- All personnel who need access to Swedavia's premises and facilities containing CNS equipment for their work must have received basic training on presence at Swedavia's premises and facilities containing CNS equipment.
- If only occasional visits to Swedavia's premises and facilities containing CNS equipment are necessary, LFV SoU DUS shall be called in as an escort.
- All staff who have their own access to Swedavia's premises and facilities containing CNS equipment must be checked and categorised in security class 3.

Escorts for access to Swedavia premises and facilities with CNS equipment are requested from LFV SoU DUS. Orders are made via Swedavia IT/Swedavia IT/Airport Telecom. If there is any uncertainty as to how escorts are requested, contact the facility manager.

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27.2.2 System List

The following systems are managed under the responsibility of LFV SoU CNS.

Abbreviation	Description
DME	*Distance Measuring Equipment*. Navigation aids for aircraft during approach and en-route.
GP	*Glide Path*, glide path transmitter that shows the elevation angle towards the touchdown point on the runway.
ILS	*Instrument Landing System*, collective name for the systems LOC + GP.
L	*Locator* - Beacon
LOC	*Localiser*, course transmitter that shows the centre of the runway.
MLAT	*Multilateration,* part of ground movement radar for increased position accuracy and possibility of transponder identification.
NDB	*Non-Directional Beacon* - Beacon
RVR	*Runway Visual Range,* runway visual range meter. Provides the pilot with information about meteorological visibility on the runway.
SMR	*Surface Movement Radar,* radar for monitoring the ground movements of aircraft and vehicles.
Wind meter	Meter showing wind strength and direction at the runway.
VOR	*Very High Frequency Omnidirectional Radio Range,* navigation aids that, using equipment in the aircraft, show the direction to/from the aid.

27.2.3 Definition of critical and sensitive areas

Critical area	Critical area is the area surrounding equipment where interference is unacceptable. The critical area protects the equipment during operation from interference in the presence of both moving and fixed objects. Even outside the critical area, interference can be caused by vehicles or changes in the terrain, depending on the size and nature of the objects.
Sensitive area	Sensitive area is the area surrounding the equipment where interference may occur. The sensitive area protects the equipment during operation against interference from both moving and fixed objects such as vehicles, aircraft, earth mounds or other equipment that can affect the signal so that transmitters are turned off or uncontrolled interference occurs.

27.3 Protection areas NAV

The geographical extent of ILS protection areas varies by airport and system.

See the appendix for each airport to distinguish areas via the attached map images.

27.3.1 Protection of LOC

27.3.1.1 Critical area LOC

Persons and vehicles in the critical area for LOC will cause interference or disconnection of the transmitter. Parking of vehicles or piling up of earth/snow is not permitted.

27.3.1.2 Sensitive area LOC

Parking of vehicles and machinery is not permitted. Piling up snow/earth is not permitted. For snow removal, grass cutting or other maintenance work, air traffic control (TWR) must be contacted in advance for permission.

Permission must be obtained from local air traffic control before personnel or vehicles enter the sensitive and critical area for ILS.

27.3.2 Protection of GP

27.3.2.1 Critical area GP

A M People and vehicles within and in the immediate vicinity of the critical area for GP will cause interference or shutdown of the transmitter. Parking of vehicles and piling up of earth/snow is not permitted.

27.3.2.2 Sensitive area GP

Parking of vehicles and machinery is not permitted. Single vehicles moving within a GP-sensitive area normally do not constitute a disturbance. Piling up snow/earth is not permitted. The piles should be flattened to the surrounding terrain height.

Permission must be obtained from local air traffic control before personnel or vehicles enter the sensitive and critical area for ILS.

27.3.3 Protection of DME

27.3.3.1 Critical area DME

Normal operations will not affect DME provided that something stands up higher than the DME mast in the immediate area of the GP mast.

27.3.3.2 Sensitive area DME

The sensitive area extends up to 3,000 m from the DME mast and in the event of major changes such as new construction at the airport, LFV SoU CNS must be contacted to review any potential impact.

27.3.4 Protection of VOR

If maintenance work is to be carried out within one of the protected areas, the local air traffic control shall be notified in advance for authorisation. For the sensitive area, permits are only required for vehicles higher than the VOR balance grid.

Depending on the geographical conditions at each VOR, the actual impact may be different.

27.3.4.1 Critical area VOR

The critical area extends from the centre of the balance grid with a radius of 65m. In this area, the terrain should be horizontal and flat. No stationary objects, such as earth mounds, snowbanks, ditches, bushes, agricultural implements and vehicles may be located within this area while the VOR station is in operation. The ground surface, if it consists of grass, must be kept mowed.

Normal passage through the critical area in connection with patrols or maintenance with vehicles lower than the runway balance grid does not affect the operation of the VOR station. However, permission must be obtained from local air traffic control before personnel or vehicles enter the critical area. Local differences may exist, see information for each airport.

27.3.4.2 Sensitive area VOR

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The sensitive area extends with a radius from 65m to 250m from the centre of the balance grid. Passenger cars are allowed within the sensitive area, but larger parked vehicles (trucks/fire engines/field vehicles, etc.) or other larger equipment are not allowed when the VOR station is in operation.

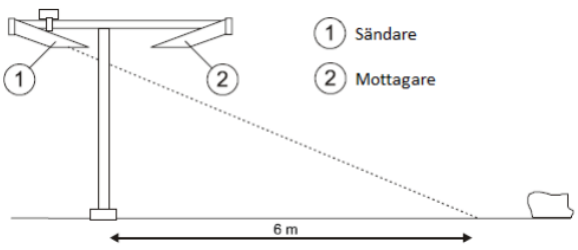
Vehicles temporarily passing or stopping on the runway for maintenance, within the sensitive area, do not affect the operation of the VOR station.

27.4 Protection areas MET

27.4.1 Protection of RVR

27.4.1.1 Critical area RVR

The critical area consists of a circle around the RVR meter with a radius of 6m, in which nothing must be placed or ground work carried out. The area in the sensor's transmitter and receiver line of sight is particularly sensitive.



27.4.1.2 Sensitive area RVR

Do not place vehicles or other objects near the RVR meter that cause visual reflections in the sensors. This may cause interference with the presentation of meteorological visibility.

Equipment and work that risks affecting visibility conditions (e.g. smoke, steam, dust formation) must, as far as possible, be avoided and planned so that operational traffic impact as a result of the activity is minimised.

During maintenance work of/at RVR, local air traffic control must be contacted in advance for permission.

27.4.2 Wind meter protection

27.4.2.1 Critical area wind meter

There is no defined critical area for wind meters.

27.4.2.2 Sensitive area wind meter

The sensitive area consists of a radius of 100m from the wind sensor mast. Within the sensitive area of the wind meter, large vehicles or other objects can affect the wind meter. This may result in incorrect directions and/or speeds for the presentation of wind. If possible, try to position “temporary obstacles” on the leeward side of the wind mast.

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27.4.3 Cloud altimeter protection

27.4.3.1 Critical area cloud altimeter

The critical area of the cloud altimeter is above the two lenses on the meter that are the transmitter and receiver. There is a risk of eye damage if the meter is running, and you look down through the lenses; the laser is invisible.

27.4.3.2 Sensitive area cloud altimeter

No sensitive area for cloud altimeters has been defined.

27.5 Protection areas SUR

No critical area for SMR and MLAT has been identified. The extent of sensitive area is specified in the **attached map images**.

Before starting work at the facility, air traffic control must always be contacted.

27.6 Protection area COM

The group-wide spectrum management is managed by EMC and Radio Spectrum Management.

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27.7 Changes and contact

Work involving changes in critical or sensitive areas may result in changes to the following:

- Ground radar images
- Swedavia GIS
- Signage

Contact CNS/MET

In the event of questions or uncertainty about aviation safety in relation to CNS equipment, contact LFV SoU CNS cnsmetswedavia@lfv.se.

BMA

27.8 Bromma site-specific information

27.8.1 CNS/MET system Bromma Airport

The following equipment forms the basis for dimensions/restrictions within the critical and sensitive areas. A change in make can result in new dimensions of the critical and sensitive area.

See web map Protection area CNS/MET

NAV-System		
Bana	Hjälpmedel	Nivå
12	LOC	CAT I
12	GP	CAT I
12	DME	-
30	LOC	CAT I
30	GP	CAT I
30	DME	-

MET-System	
Bana	Hjälpmedel
12	RVR
12	RVR MID
12	Vindmätare
30	RVR
30	Vindmätare
12/30	Molnhöjdsmätare

27.8.2 Planning of work at Bromma Airport

Contact air traffic control directly for ongoing maintenance work. Other work should be coordinated with ATOS.

27.8.3 Effect ILS 12 at Bromma Airport

Pedestrian and cycle traffic within the critical area will not affect the signal for LOC 12. Regular vehicle traffic along the ring road has been considered and will not affect GP 12.

27.8.4 Effect ILS 30 at Bromma Airport

The effect of Bällstavägen's placement within the LOC 30 sensitive area has been considered and does not normally affect the signal. Nor does pedestrian and cycle traffic in the sensitive area affect the signal. The exception is inside the fenced yard where no one can be present without clearance.

The effect of Ulvsundavägen's placement within the GP 30 sensitive area has been considered and does not affect the signal.

27.8.5 Effect Wind meters at Arlanda Airport

For wind meter 12, the parking stand east of the mast may be granted an exemption for the parking of trucks and containers with a maximum height of 4.5 m at a distance of 80 m from wind meter 12.
For wind meter 30, the area northeast may, if the mast is granted an exception for the parking of trucks and containers with a maximum height of 4.5 m at a distance of 100 m from wind meter 30.

28. Use of the aerodrome by aircraft exceeding the certified design characteristics of the aerodrome

Introduction

This chapter describes the procedure for allowing an aircraft that exceeds one or more aspects of the airport's certified design to use the airport, either temporarily or regularly. The purpose is to ensure continued safe operations through structured handling and risk assessment in accordance with applicable regulations.
The chapter covers all situations where an aircraft whose physical dimensions exceed the certified design of an airport requests to conduct operations at the airport.

Responsibilities

Swedavia is responsible for:

- Ensuring that each request is assessed from a safety perspective.
- Conducting the relevant safety assessment in accordance with the Safety Management System, Part 5, Chapter 2.2.10.
- Implementing necessary operational limitations or other measures.
- Ensuring that all documentation related to assessment, planning, and approval is archived and traceable for audits or inspections.
- Ensuring that the designated responsible party, in consultation with relevant stakeholders, revises and updates procedures and instructions as needed. Relevant stakeholders may include air traffic management as well as personnel responsible for practical implementation.

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Prior Approval for Landing of Aircraft Exceeding the Airport's Certified Design

To allow landing of an aircraft that exceeds the airport's certified design, prior approval from the Swedish Transport Agency is required, based on an Aviation Safety Plan. The aircraft operator is responsible for:

1. Submitting a request.
2. Providing technical information about the aircraft in question as a basis for assessment.
3. Complying with the restrictions and procedures established in connection with the approval.

29. Fire prevention measures

Swedavia's work on fire prevention measures, i.e. its systematic fire protection work, is based on the Swedish **Act on Protection against Accidents (2003:778)** and the requirements of **Regulation (EU) 139/2014**.

Each airport and operation have its own descriptions for systematic fire protection work, based on the Fire Safety Policy.

More information about fire protection is provided in AR Part 1 General information for those at the airport, chapter 4. Fire safety.

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30. Communication at the airport

30.1 General rules

1. Radio communication takes place in either Swedish or English, with the specific language used determined by each airport.
2. Standard phraseology shall be used in all communication with air traffic services. In exceptional situations where standard phrases cannot be used, plain language (everyday language) should be used.
3. The plain language should be clear and concise to avoid misunderstandings in communication.
4. In radio communication relating to the driving of vehicles, the driver must have an undisturbed environment.

30.2 Communication with air traffic control

When communicating with air traffic services (LFV), two-way radio shall be used on the dedicated frequencies for air traffic services or on other frequencies as necessary. The dedicated frequencies are coordinated between Swedavia and air traffic services.

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Vehicles shall be equipped with a permanently mounted antenna. Continuous radio contact must be maintained with air traffic services. Radio contact must also be maintained using a portable radio if the driver of a motor vehicle is carrying out work outside the cab.

The above applies to operations within the movement area and other operational areas where communication with air traffic control is required.

30.3 Communication in the manoeuvring area

In the case of two-way communication with air traffic services, calls shall be made in accordance with established methodology and the allocated call sign shall be used. Radio and communication training for the manoeuvring area is included in driving permit training for the manoeuvring area. This means that access to the manoeuvring area is granted only to persons who have a driving permit for the manoeuvring area.

30.3.1 Language test

A person who will use radio communication with Air Traffic Control must demonstrate operational-level proficiency in the use of phraseology and plain language in:

- Swedish
- English

The language test is linked to an assessment scale (1–6) specified by EASA, where levels 4–6 constitute a pass, with the following clarification:

- **Level 6:** Expert level, valid for life, no requirement for repetition

- **Level 5:** Extended level, valid for 6 years, with a requirement for retesting from the date the language test was issued, for renewal.
- **Level 4:** Operational level, valid for 4 years, with a requirement for retesting from the date the language test was issued, for renewal.

30.4 Communication in apron areas

30.4.1 Start-up/push-back/towing/fault when manoeuvring in apron areas

Verbal communication between the pilot and the airport takes place primarily via air traffic services. The dedicated radio frequencies for VHF communication are published in the AIP for each airport.

All communication involving flight operations elements such as towing, start-up/push-back or other events involving contact with air traffic services shall take place using standard phraseology in accordance with **SERA 923/2012**.

30.4.2 Terrain references

Particular care should be taken when referring to runways, taxiways and parts thereof. If “end of runway” is used, it should be referred to in a way that cannot be misunderstood, e.g. “northern end of runway”, “ILS in the north”, “GP 21” etc.

30.4.3 Radio traffic in emergencies and urgent situations

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In the event of an emergency or urgent situation, all radio traffic relating to this situation takes precedence over all other radio traffic. Functions and motorised vehicles that are not affected must avoid making transmissions. Air traffic services or functions and/or motorised vehicles may impose radio silence. Radio silence may be imposed on those who are not affected but disrupt radio traffic.

30.5 Loss of Radio Communication

All traffic in the maneuvering area is required to continuously monitor the air traffic control radio frequency and comply with its instructions/clearances.
In the event that air traffic control does not receive contact/confirmation/readback via the radio frequency *(for example, due to technical radio failure or the involved persons' non-compliance)*, air traffic control may also attract attention using light signals, either via a signal lamp from the control tower or via the runway lighting system. The meaning of light signals according to the table below:

With signal lamp	Meaning
Steady red light	Stop
Flashing red light	Leave the landing area or taxiway and be alert to aircraft
Flashing green light	Permission to cross the landing area or move onto the taxiway

Flashing white light	Leave the maneuvering area via the shortest route but never cross a runway or FATO*. Establish contact with air traffic control. If there are other needs, an agreement can be made with the local airport and described together with local air traffic control. * Take-off and landing area for helicopters, where such exists
With lighting installation	**Meaning**
Flashing runway lights	Leave the runway and be alert to air traffic control/tower and any light signals from there
Flashing taxiway lights	Leave the runway and be alert to air traffic control/tower and any light signals from there
Flashing approach lights*	Immediately leave the area in and around the runway extension or move to a location that is protected from an obstacle perspective.

*TSFS 2019:36

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In consultation with air traffic control, a mobile phone can be used in the event of radio failure. Relevant phone numbers to be used in any situation that may arise should be clarified together with air traffic control before proceeding on the maneuvering area.

30.6 Communication of information

30.6.1 Manoeuvring area

Air traffic services and individuals or drivers of motorised vehicles who are in the manoeuvring area have a joint responsibility to communicate airport-related information that may affect the safety of operations in the manoeuvring area.

30.6.2 Apron

The airport shall ensure that information about operational restrictions in apron areas is communicated using established information channels such as NOTAM.

31. Towing of aircraft

31.1 Responsibility for towing procedures

The airports regulate towing procedures at the airport's infrastructure. The airline or the ground handling company contracted by the airline is responsible for towing procedures.

All towing must take place with communication via ATS.

31.2 Communication when towing

Towing initiated by an external party must be communicated to Swedavia Aircraft Stand Parking.

Swedavia communicates future towing needs to the relevant operators, such as airlines, ground handling companies and ATS.

31.3 Visibility when towing

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- Navigation lights shall be switched on during all towing of aircraft within the movement area, regardless of time of day or weather conditions.
- Anti-collision lights may be used in combination with navigation lights if required by the airline.

31.4 Standard towing route

To ensure obstacle clearance, towing shall follow the visual aids intended for taxiing aircraft. Before towing can begin, the following must be done:

- **On aprons** – approval is obtained from either ATS
- **In the manoeuvring area** – a permit/clearance is obtained from ATS.

If there are no visual aids, marshals and/or wingmen must be used to ensure obstacle clearance.

Towing inside hangars is not handled by the airports.

31.5 Towing in adverse weather conditions

Operational restrictions on the use of the airport's infrastructure may potentially be imposed in the event of adverse weather conditions.

31.6 Site-specific information Bromma

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On every occasion when aircraft are moved from the parking stand, the airline or the ground handling organisation contracted by the airline must, as soon as movement commences by towing or technical taxiing, notify the Airport Coordinator by telephoning 010 109 40 38 or, outside the airport's opening hours, Swedavia Aircraft Stand Parking by telephoning 010 109 10 52. Such notification shall include the aircraft registration and the places/areas between which the towing/technical taxiing is taking place.
Use of remote aircraft parking stands Bromma's remote aircraft parking stands are not operational for passenger flows. Taxiing to and from parking stands R5–R9 is not permitted, and aircraft must be towed.

32. Handover of activities

The handover of an activity between direct operations personnel and indirect operations personnel shall be planned in a way that allows enough time for the involvement of both the transferring and receiving personnel so that the relevant operational information is provided.

Handover shall take place with two-way communication when one shift immediately follows the other; the handover must take place both verbally and in writing.

The handover documentation must be saved locally and be available for presentation. If shifts or handovers do not immediately follow one another and a verbal handover is not possible, this can be done in writing with the relevant information provided.

For direct or indirect operations personnel in the manoeuvring area, the handover shall include, at least, relevant information about the use of the runway, work in progress and weather conditions that may have an impact on flight operations.

Swedavia works actively to ensure that all operators, whether internal or external, are aware of and involved in the planning of a future impact or change in operating conditions that may affect them.

Relevant information is published under Airport Information (AI) and is sent out by email and also published on the intranet and extranet. All staff working at the airport have a duty to keep up to date and read information provided.

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Messages are sent by text to affiliated staff, concerning operational impact or adverse weather conditions for example. For personnel in the manoeuvring area, the impact is communicated via ATS.

These services are available for subscription with sign up via Swedavia’s extranet [Swedavia.net].

33. FOD control programme

33.1 Applicable regulations

For FOD Management, the following requirements of Regulation (EU) 139/2014 apply:

ADR.OPS.B.016 Foreign object debris control programme with associated AMC and GM

33.2 Foreign Object Debris (FOD)

33.2.1 What is FOD?

Foreign Object Debris (FOD) refers to dangerous objects and debris occurring in the movement area (apron/manoeuvring area), which can, among other things, cause serious damage to aircraft. Examples of FOD include carcasses and other wildlife, stones, aircraft waste, metal, pieces of glass and items arising in the production and handling of aircraft parts.

FOD damage does not necessarily need to be damage to an engine but can be any damage where foreign objects endanger aviation safety or cause serious damage to an aircraft.

33.2.2 Purpose of the FOD control programme

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The purpose of the FOD Control Programme is to minimise FOD by working according to a systematic risk-based programme, where risks are identified and documented and mitigating and/or corrective measures are drawn up, implemented and followed up.

33.2.3 Our assignment

In all work assignments in the airport's , it is of the utmost importance to be attentive, aware and adopt a preventive mindset. This is partly to minimise the risk of FOD occurring and partly to monitor and remove the FOD that nevertheless finds its way into our movement areas. A "clean-as-you-go" technique should always be employed and preventing FOD is seen as a team effort to establish a FOD-free airport together.

33.2.4 Disposing of FOD

FOD concerns everyone, is everyone's responsibility, and everyone must remove FOD that is discovered. This applies equally to pedestrians and people travelling in vehicles. In some situations, however, the action to take is to ask someone else for help. If FOD is discovered in an area to which the person discovering it does not have access, for example, the action to take is to contact the air traffic control tower, OPC or similar function, work management, etc. and make them aware of the FOD. The function contacted must arrange for an authorised person or department to be sent to remove the FOD.

33.2.5 Risks of FOD and particular areas of risk

The biggest and clearest risk of FOD is that aircraft will be damaged and aviation safety compromised as a result. FOD can also attract birds, indirectly causing a risk to aviation safety.

Particular areas of risk at an airport are construction and land projects, vehicle driving, waste from aircraft, servicing of aircraft, and the handling of baggage, products or other goods.

33.2.6 Risk management

Risk can be calculated as the product of the likelihood of damage occurring (e.g. an accident occurring) multiplied by the impact of such damage (i.e. the average amount of damage, or more conservatively the maximum plausible amount of damage).

For a visualisation of an example risk matrix, **see section 2.2.5.**

The occurrence of FOD is minimised through ongoing risk management by each individual person linked to our mission. Different types of FOD can pose different risks of serious damage to aircraft.

For example, the likelihood that a piece of paper or receipt will cause an accident of catastrophic severity is very low. However, a vehicle part is more likely to cause greater damage. There is less likelihood, however, that vehicle parts will constitute FOD compared with paper or receipts.

33.2.7 Human factors

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Within the FOD Control Programme, as in the aviation industry as a whole, we must also take human factors into account; in other words the difficulties for a human being, in the complex operations of an airport, to remain constantly vigilant regarding risks that can create FOD and to take the correct action. This means that procedures and documentation must be easy to follow so that handling FOD becomes a natural part of each employee's everyday life. It is just as important that the necessary training and meetings take place between management and employees, including workplace meetings and round table meetings.

33.3 Obligation and responsibility

As an airport operator, Swedavia must have an established FOD control programme in force where the participation of all organisations operating or providing services at the airport is required.

Swedavia must also collect and analyse data and information to identify FOD sources and trends, and implement corrective or preventive measures, or both, to improve the effectiveness of the control programme.

The Airport Regulations of the airports contain site-specific information relating to FOD regulations.

33.4 Preventive measures

33.4.1 Greater awareness among all employees

All employees who work at an airport must always be highly aware of FOD when airside, as well as preventive measures that can be taken to avoid the occurrence of FOD. More specifically, this means that pedestrians and drivers of vehicles must

always ensure that any loose objects cannot cause FOD. Examples include objects that are in a bag or on clothes or cargo that is being transported on vehicles.

33.4.2 Planning activities and establishing procedures and instructions

All operations at the airport must plan their activities and have documented procedures and instructions specifying how their operational activities are carried out. Taking an approach where areas such as risk management, human factors, training and Airport Regulations form the basis of operational activities also minimises FOD.

33.4.3 Prevention of FOD and cleaning of apron areas

The airports perform maintenance, such as sweeping and cleaning apron areas, as a preventive measure.

33.4.4 Strong wind conditions

When strong winds are forecast, all operators with operations in the movement area and other operational areas must ensure that equipment is secured and anchored so as to reduce the risk of FOD.

33.5 Inspection programme

33.5.1 Inspection of the movement area

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Inspections of the movement area are designed to ensure aviation safety and accessibility for aircraft that are taking off, landing or taxiing in the movement area, including parking stands. These inspections shall be carried out in a proactive manner, with a focus on preventing FOD. Inspections of the movement area also seek to detect any FOD. It should be remembered, however, that an increased number of inspections does not in itself reduce the risk of FOD. The outcome may even be the opposite due to additional vehicle driving.

Inspections of the movement area are performed in the following ways:

- Daily inspection of the movement area
- Weekly inspection of the movement area
- Extended inspection of the movement area
- Targeted or required inspection
- Inspection of the movement area in the event of adverse weather conditions

33.5.2 Wildlife control

The airport’s wildlife control is designed to minimise the number of collisions between aircraft and wildlife. This is achieved through systematic work in a Wildlife Risk Management Programme – a Wildlife Control Plan.

A Wildlife Control Plan is designed as a systematic risk-based programme, where risks are identified and documented and mitigating and/or corrective measures are drawn up, implemented and followed up.

Wildlife control and FOD control are interconnected as FOD in the form of waste attracts animals, while animal carcasses themselves can constitute FOD.

33.5.3 Arrival and departure inspections

Prior to the arrival of aircraft at a parking stand, an arrival inspection shall be carried out to ensure there is no FOD at the parking stand in question. To ensure that the parking stand is not contaminated with FOD after inspection, it is expected that no pedestrians or vehicles will enter the area once the inspection is complete.

Once an aircraft has left the parking stand, a departure inspection of the stand shall be carried out.

During towing operations, the operator performing the towing is responsible for ensuring that departure and arrival inspections are carried out.

33.5.4 Inspection during and after strong wind conditions

Inspections shall be carried out during and after adverse weather conditions when inspecting the movement area.

Inspection during project work

See below: FOD relating to construction and land projects

33.6 Occurrence reporting and continuous improvement

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33.6.1 FOD in occurrence reporting

The purpose of reporting FOD is to ensure that unwanted occurrences/deviations at the airport are dealt with and do not happen again. An occurrence where employees may have caused FOD or where FOD is found can be something that affects aviation safety or airport operations.

33.6.2 Which FOD should be reported or cleaned up

FOD that poses “a high risk” must be reported. FOD that is reported must also be photographed and a photo must be attached to the occurrence report.

Examples of FOD that must be reported: dead animals, stones, aircraft waste, metal, pieces of glass, hard plastic, soft plastic in larger quantities and also such items arising in the production and handling of aircraft parts. This FOD must be dealt with and placed in the FOD station/shelf and reported in the occurrence report.

Examples of FOD that are simply cleaned up: paper, bag tags, soft plastic. This FOD should be disposed of in the FOD bins/FAD boxes provided.

Note that larger quantities of paper, bag tags and soft plastics can represent a high risk and must be reported.

33.6.3 Elements forming part of an FOD investigation

- The physical object that constitutes the FOD of the reported occurrence.
- Investigation into how and why FOD has occurred.

- Review of procedures and instructions so as to minimise repetition of the same type of occurrence. This is performed together with the relevant department at Swedavia or external operator.

33.6.4 Occurrence reporting = proactive work

FOD investigations are carried out in order to define activities. The FOD investigation should lead to activities that remove the source of FOD; in other words, minimise the future risk of FOD. Reported occurrences of FOD that have been documented must be analysed to identify what can be changed and implemented. The operators concerned are involved in the investigation and communicate the outcome to their employees. It is advisable for the employees of the relevant operator to be informed, at workplace meetings for example, once the procedures and instructions that need to be reviewed have been worked through and improved.

33.6.5 Trends

Reported occurrences provide the basis for continuous trend monitoring of the type of FOD, areas, times, operators or similar so as to enable potential sources of risk to be identified and risk mitigation measures to be taken. The work of the FOD Manager focuses on measures to achieve improvements, based on reported occurrences.

33.7 Monitoring and communication

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The impact of the FOD programme is monitored and documented through the following channels:

- Trends from outside
- Trends based on the FOD grid map
- SPI
- Hazard log
- Meeting forums (SRB, SAG, LRST, ASG etc.).

33.7.1 Regular evaluation of the FOD Control Programme

The FOD Control Programme is managed through regular annual evaluation and is adapted to reflect changes in EASA requirements, site-specific conditions at the airport and any additional risk areas.

33.8 Vehicles and vehicle driving

33.8.1 Reduced driving with vehicles

Vehicles shall only be driven in connection with the performance of work duties, i.e. to and from assignments where vehicles are required.

All vehicle driving increases the risk of FOD due to vehicle parts or tools or objects that are being carried on vehicles becoming detached. It is also a common occurrence for vehicles to drag dirt, stones or gravel with them on their tyres.

33.8.2 Self-inspection of vehicles

Self-inspection must be performed once each calendar day on vehicles that are used in airport operations. Self-inspection includes checkpoints that will reduce the risk of FOD occurring.

33.8.3 Enhanced inspections related to snow removal

In order to minimise the occurrence of FOD during and after snow removal, increased attention is required when inspecting snow removal vehicles. When vehicles are washed or repaired, bolts, shear pins and bristles etc., must be checked to ensure they are not loose and thereby represent an FOD risk.

Read more about the self-inspection of vehicles in AR Part 5 chapter 16.1.6.5

33.8.4 Inspection of tools and equipment.

Tools and equipment that are used in operations at the airport must be checked on an ongoing basis with a focus on ensuring that parts and objects are secured.

33.8.5 Vehicle driving in specific areas and subsequent maintenance actions

Particular caution must be exercised when driving vehicles on terrain or in specific areas where there is a risk of FOD accompanying the vehicles. The following measures must be implemented in order to minimise the FOD risk.

A M After driving in these areas, checks must be made and other measures implemented, including cleaning away loose material, such as soil and gravel, or washing vehicles before any further driving in the airside area.

Each operator that carries out assignments in specific areas must establish procedures for driving in such areas.

33.8.6 Service and maintenance of vehicles and tools.

All vehicles and tools (both internal and external) that are used in operations at the airport must be included in a regular maintenance programme.

33.9 Emergency measures when certain types of FOD are detected

If certain types of FOD* are detected, the inspector must contact OPC or similar and/or air traffic services for further action, such as:

- Notifying the pilot, airline and ground handling company
- Notifying a technician company
- Contacting Swedavia Aviation Operations for remedying the fault (e.g. sweeping, repairs)

33.10 FOD from aircraft servicing

33.10.1 Handling FOD

When servicing or repairing aircraft, technician companies are responsible for ensuring that tools and materials are always supervised. On completion of the work, the operator shall ensure that the site where the work was carried out is inspected and cleaned of any FOD and that there are no objects at the site that can cause FOD.

If FOD from servicing an aircraft is detected, the technician company shall report this immediately as follows:

- At the parking stand – to the relevant airline, OPC and air traffic services. An occurrence report is prepared internally and, in the airline's, QR system. An occurrence report must also be filed in Swedavia's incident reporting system.
- In the hangar – to the airline in question.

If an operator other than the one referred to above discovers FOD that can be traced to the servicing of an aircraft, they must contact air traffic services immediately, followed by the relevant technician company. The discovering operator must then report the discovery of FOD in Swedavia's incident reporting system.

This handling procedure ensures that nothing of significance is missing from the aircraft that has been worked on.

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33.10.2 FOD and its resulting risk

FOD that can be traced to the servicing of aircraft, such as tools and materials, is considered to be high risk and can cause damage with a major impact.

33.11 Waste from aircraft

The airlines must ensure that the waste is delivered to and handled by a contracted handling company or cleaning company.

The contracted handling or cleaning company shall ensure that the bridge and/or parking area is free from waste after the aircraft has vacated the parking area.

Handling companies or cleaning companies that handle waste from aircraft must ensure that waste from aircraft which has already been sorted is not mixed with unsorted waste, in accordance with Swedavia's waste management system.

33.12 FOD relating to construction and land projects

Before construction and land projects are carried out in the airside area adjacent to the movement area and other operational areas, it must be ensured that materials, machinery, tools and waste are taken care of with a focus on minimising FOD.

All projects are reported to the CAM (Change Approval Meeting) or other similar function. This process identifies which compensatory measures need to be implemented and how to handle these.

Clients within Swedavia Facilities & Systems and Swedavia Projects are responsible for informing the relevant subcontractors.

33.13 FOD caused by infrastructure deficiencies

All infrastructure is included in maintenance programmes, where different inspection and maintenance intervals apply. Any FOD from infrastructure must be dealt with immediately and removed from the movement area and other operational areas. The occurrence report and any fault report must be written by the person who discovers and removes the FOD.

33.14 FOD resulting from exceptional occurrences and conditions

33.14.1 Damage to aircraft

As a general rule, all personnel working in the airside area have a duty to report if they have damaged an aircraft or if they discover that an aircraft is damaged.

It is important that any FOD resulting from the damage is removed from the area in question.

33.14.2 Collisions with wildlife

In the event of a confirmed collision with a bird or wildlife, the animal carcass must be removed from the area in question as soon as possible.

33.14.3 Heavy precipitation (rain/hail)

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Heavy precipitation, such as rain or hail, can cause loose objects to move across areas and so lead to the formation of FOD. In a situation such as this, checks must be made and any FOD removed immediately.

33.14.4 Snow removal

Snow removal entails risks in terms of the occurrence of FOD. Below is a description of objects that may constitute FOD in connection with snow removal, along with the activities required to prevent the occurrence of FOD or remove FOD that has occurred.

- Lights and other infrastructure that are run over and broken during the course of snow removal

Activity: Checks on the alarm systems for lights and targeted FOD checks in the event of an alarm

Bolts, wire bristles and other parts that detach from the equipment

Activity: Use of magnetic sweeper

Lumps of ice, snowbanks, etc., which may constitute FOD, and which are hidden in snowbanks and emerge and spread when the snow melts

Activity: Extended checks of the paths and shoulders when the snow melts

Granulate lumps, i.e. granules that are packed together and do not “precipitate” and constitute FOD on surfaces that have been treated with anti-skid measures.

Activity: Extended checks when inspecting the movement area.

Large snow and ice accumulations can build up on vehicles during snow removal, which may dislodge during driving and pose FOD hazards on the movement area.

Activity: Enhanced inspection, where vehicle operators shall remove snow and ice accumulations at regular intervals.

33.15 Training

The following training ensures that all personnel with authorisation to be in the airside area are aware of what FOD is and its consequences and that they must act responsibly to reduce the occurrence of FOD and remove it when discovered:

- Security & Safety training including FOD (and Pedestrian)
- Driving Permit Basic, and in some cases Driving Permit Manoeuvring Area, at Swedavia's airports
- Training on inspection of the movement area
- Inspection of aircraft parking stands (before turnaround)
- Contractor training
- Vehicle-specific training (e.g., airside maintenance vehicles)

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