Australian Government
Department of Defence

ADVISORY CIRCULAR

AC 001/2024 v1.0

Global Reporting Format – Runway Surface Condition

BP42338522

V1.0 – August 2024

An Advisory Circular is issued by the Authority to promulgate important information to the Defence Aviation community, but does not mandate any action. This includes informing the community on aviation safety / airworthiness matters, information that enhances compliance understanding for existing regulation, or policy guidance for aviation issues not yet regulated that requires further understanding.

Audience

This Advisory Circular (AC) is relevant to:

- Defence Aerodrome Operators (AD OPRs) of land-based Aerodromes
- organisations providing support to Defence AD OPRs
- Defence Air Navigation Service Providers (ANSPs) providing an Air Traffic Service (ATS)
- Military Air Operators (MAOs)
- Non-Defence Registered Aircraft (NDRA) Sponsors operating on Defence Aerodromes.

Purpose

The purpose of this Advisory Circular (AC) is to provide guidance on implementation of the Global Reporting Format (GRF) at Defence Aerodromes. It invokes the Civil Aviation Safety Authority (CASA) *Multi-Part Advisory Circular 91-32* and *139-22 Global Reporting Format – Runway surface condition*—as supporting material to inform compliance with the elements of AMC 139.50 that relate to GRF requirements. Further, this AC provides a transition period[1] before AD OPRs must implement the GRF requirements specified in CASA *Part 139 (Aerodromes) Manual of Standards 2019*.[2]

Further information

For further information on this AC, contact: dasa.davnopsanspad@defence.gov.au

[1] Bound by conditions (eg ability of the Defence ATIS to broadcast GRF terminology) and not a specified date.
[2] IAW AMC 139.50.

Status

This AC will remain current until cancelled by DASA.

Version	Date Approved	Approved By	Details
1.0	August 2024	GPCAPT C Pouncey DAVNOPS	Initial release

Contents

1 Reference material

1.1 Acronyms

The acronyms and abbreviations used in this AC are listed in the table below.

Acronym	Description
AC	Advisory Circular
ADATS	Australian Defence Air Traffic System
AD OPR	Aerodrome Operator
AIP	Aeronautical Information Publication
AIS	Aeronautical Information Service
ANSP	Air Navigation Service Provider
ARO	Aerodrome Reporting Officer
ATC	Air Traffic Control
ATIS	Automatic Terminal Information Service
ATS	Air Traffic Service
CASA	Civil Aviation Safety Authority
CMATS	Civil Military Air Traffic System
DASA	Defence Aviation Safety Authority
DASDRM	Defence Aviation Safety Design Requirements Manual
DASR	Defence Aviation Safety Regulation
ERSA	En Route Supplement Australia
GRF	Global Reporting Format
ICAO	International Civil Aviation Organization
MAO	Military Air Operator
MOS	Manual of Standards
NDRA	Non-Defence Registered Aircraft
NOTAM	Notice to Airmen
RCR	Runway Condition Report
RWYCC	Runway Condition Code

1.2 Definitions

Terms that have specific meaning within this AC are defined in the table below.[3]

Term	Definition
Automatic Terminal Information Service (ATIS)	The provision of current, routine information to arriving and departing aircraft by means of continuous and repetitive broadcasts during the hours when the unit responsible for the [air traffic] service is in operation.
contaminated runway	A runway is contaminated if more than 25% of the surface area required for a take-off or landing is covered by any of the following: (a) water or slush more than 3mm deep (b) loose snow more than 20mm deep (c) compacted snow or ice.
dry runway	A runway is dry if the surface area required for a take-off or landing: (a) has no visible moisture (b) is not contaminated.
Global Reporting Format (GRF)	A globally harmonised methodology for assessing and reporting runway surface conditions.
Runway Condition Code (RWYCC)	The number used in a Runway Condition Report to describe the runway surface condition.
Runway Condition Report (RCR)	A comprehensive standardised report relating to runway surface conditions, and their effect on aircraft landing and take-off performance.
wet runway	A runway is wet if the surface area required for a take-off or landing: (a) is not dry (b) is not contaminated.

[3] All definitions from CASA *Multi-Part Advisory Circular AC 91-32 and 139-22 v1.0 Global Reporting Format – Runway surface condition*.

1.3 References

1.3.1 *Defence Aviation Safety Regulation 139 – Aerodromes (DASR 139)*

1.3.2 CASA *Part 139 (Aerodromes) Manual of Standards 2019* (as amended 2024)

1.3.3 CASA *Manual of Standards Part 172 (MOS 172)—Air Traffic Services*, version 2.2

1.3.4 CASA *Multi-Part Advisory Circular AC 91-32 and AC 139-22 v1.0 Global Reporting Format – Runway surface condition*

1.3.5 *DASA Factsheet – Information Guide on Interpretation of CASA Part 139 MOS* (BP37430159)

1.3.6 *ICAO Doc 10004 Global Aviation Safety Plan 2023-2025*

Unless specified otherwise, all regulation references in this AC refer to the *Defence Aviation Safety Regulation* (*DASR*).

2 Introduction

2.1 Global Reporting Format

2.1.1 The International Civil Aviation Organization (ICAO) introduced the Global Reporting Format (GRF) for runway surface conditions in November 2021. The GRF enables a harmonised assessment and reporting of runway surface conditions and an improved flight crew assessment of take-off and landing performance, in an effort to mitigate the risk of runway excursions.[4]

2.1.2 Specifically, the GRF:

- establishes a standard process on how to inspect, assess, report and use wet and contaminated runways
- provides uniformity and consistency in the assessment and reporting of runway surface conditions when contamination—mainly due to adverse weather conditions—is present
- provides organisations the ability to correlate the reported runway surface condition with aircraft performance data.

2.1.3 In accordance with the GRF, AD OPR personnel must assess and report runway surface conditions whenever water or contaminants are present on an operational runway. The AD OPR will disseminate a Runway Condition Report (RCR) to Air Traffic Control (ATC) or Aeronautical Information Service (AIS) providers when there is a significant change in the runway surface condition.

2.1.4 The Automatic Terminal Information Service (ATIS) is the primary means for communicating runway surface conditions at controlled Aerodromes. ATIS broadcast is an ATC responsibility. Some ATC units can also disseminate ATIS information via computerised or digital means.

2.2 GRF implementation in Australia

2.2.1 On 10 Feb 24, CASA amended CASA *Part 139 (Aerodromes) Manual of Standards 2019* (*Part 139 MOS*) Chapter 12—to include requirements for civil Certified Aerodromes to implement the GRF when assessing and reporting runway surface conditions. All civil certified controlled Aerodromes must implement *Part 139 MOS* GRF requirements by 01 Aug 24. The CASA *Multi-Part Advisory Circular AC 91-32 and AC 139-22* contains further information on GRF implementation in Australia for civil aviation organisations.

[4] Mitigating the risk of runway excursions is one of ICAO's top aviation safety priorities. *ICAO Doc 10004 Global Aviation Safety Plan 2023-2025* refers.

2.3 Relationship between *DASR 139* and *Part 139 MOS*

2.3.1 The Defence Aviation Safety Authority (DASA) prescribes *DASR 139 – Aerodromes*, and design standards (Section 6 of the *Defence Aviation Safety Design Requirements Manual* (*DASDRM*))—to establish a framework for design, construction, maintenance and operation of Defence Aerodromes. To harmonise with civilian practice and standards:

2.3.1.1 *DASR 139* prescribes *Part 139 MOS* as AMC

2.3.1.2 Section 6 of the DASDRM establishes *Part 139 MOS* as the 'baseline Aerodrome design standard for land based Aerodromes'.[5]

2.3.2 AMC 139.50.13.a states: 'Aerodrome Serviceability Inspection requirements should be carried out to align with MOS 139 Chapter 12 where practical'. AD OPRs could comply with GRF requirements.[6] However, Defence ATS cannot yet broadcast ATIS in a GRF compliant format.[7] The following sections of this AC provide specific guidance to Defence AD OPRs, ANSPs, MAOs and NDRA Sponsors regarding the implementation of the GRF requirements at Defence Aerodromes; and associated transition arrangements.

[5] *DASA Factsheet – Information Guide on Interpretation of CASA Part 139 MOS* refers.
[6] IAW *Part 139 MOS* Chapter 12.
[7] This limitation is likely to remain until ADATS is replaced/upgraded.

3 Defence Aerodrome Operators

3.1 GRF applicability

3.1.1 In accordance with DASR AMC 139.50.13.a, Defence AD OPRs should carry out Aerodrome Serviceability Inspection requirements to align with *Part 139 MOS* Chapter 12 where practical. *Part 139 MOS* Chapter 12—specifically section 12.04A—now contains GRF requirements for reporting runway surface conditions.

3.1.2 DASA does not require Defence AD OPRs to comply with the *Part 139 MOS* GRF requirements at this time. DASA intends to incorporate *Part 139 MOS* GRF requirements into the *DASR 139* once:

- Defence ATS units are equipped to broadcast GRF Runway Condition Codes (RWYCCs)[8]
- Defence AD OPR organisations have:
  - implemented Aerodrome Reporting Officer (ARO) (or equivalent) training to support GRF reporting
  - updated relevant OIP to define GRF reporting requirements
  - established documented agreements with relevant ATS units to define the division of responsibility regarding various GRF reporting elements.

3.1.3 Defence AD OPRs, where practical, should:

- familiarise themselves with the *Part 139 MOS* GRF requirements
- prepare for GRF implementation, including training and education for AD OPR personnel at Defence Aerodromes identified for *DASR 139* certification.[9]

3.1.4 **Training and education.** Appendix D of the CASA *Multi-Part Advisory Circular AC 91-32 and AC 139-22* contains an example syllabus for runway-surface-condition-assessment-and-reporting training. ICAO has also developed online GRF courses and resources, including implementation checklists, available on the ICAO website. Defence AD OPRs may determine the most suitable and effective means for implementing GRF training and education to comply with *DASR 139.100 – Personnel Competency*.

[8] The Australian Defence Air Traffic System (ADATS) does not have this functionality.
[9] The DASA Aerodromes & Heliports Authorisations Information webpage contains a list of Defence Aerodromes identified for *DASR 139* certification.

3.1.5 **Agreements with ATC units.** *Part 139 MOS* Chapter 12 requires AD OPRs to assess and report WET and DRY runway conditions to ATC—unless there is an agreement in place for ATC to provide the assessment and report for these conditions. Defence AD OPRs should initiate agreements with relevant ATS units to enable ATC to continue reporting WET and DRY runway conditions.

3.1.6 Annex A provides an example agreement between an AD OPR and a Defence ATS unit for runway condition reporting arrangements. The AD OPR and ATS unit may vary the wording according to the stage of GRF implementation and specific arrangements at the relevant Aerodrome.

3.1.7 DASA will advise Defence AD OPRs of a date for GRF compliance, once SRG and AD OPRs advise the timing of resolution of the limiting factors at para 3.1.2.

4 Defence Air Navigation Service Providers

4.1 GRF applicability

4.1.1 *Part 172* of the *Civil Aviation Safety Regulations* (*CASR*), and corresponding MOS, prescribe requirements for the provision of civil ATS in Australia. Defence ANSPs providing an ATS are not subject to *CASR Part 172* requirements (nor *Part 139 MOS* requirements). However, in the interest of civil military harmonisation, DASA will require both Defence AD OPRs and Defence ANSPs providing an ATS to implement the GRF requirements concurrently.

4.1.2 The Australian Defence Air Traffic System (ADATS) does not have the functionality to broadcast GRF terminology via the ATIS (eg the surface condition code). Future upgrades to ADATS could enable the ATIS to broadcast GRF terminology. Alternatively, the Civil Military Air Traffic System (CMATS) will include this functionality when introduced into service.[10]

4.1.3 Prior to Defence Air Traffic Management (ATM) systems receiving the functionality to broadcast GRF terminology via the ATIS, the ANSP should risk manage the change through its Safety Management System and prepare air traffic controllers by delivering relevant training and education.

4.1.4 In the meantime, Defence ATS units should:

- support AD OPRs' preparation for GRF implementation, including coordinating agreements to continue current arrangements where ATC Towers are responsible for assessing wet and dry runway conditions, and promulgating this information via the ATIS
- plan to deliver training and education to controllers prior to GRF implementation.

4.1.5 **Training and education.** Appendix D of the CASA *Multi-Part Advisory Circular AC 91-32* and *AC 139-22* contains an example syllabus for runway-surface-condition-assessment-and-reporting training. ICAO has also developed online GRF courses and resources, including implementation checklists, available on the ICAO website. The ANSP may determine the most suitable and effective means for implementing GRF training and education to ensure compliance with *DASR ANSP.80 – Personnel Competency and Licensing.*

[10] AIR5431 currently schedules CMATS introduction into service not before 2028.

4.1.6 ANSPs can find further information on the GRF for runway surface conditions in *Aeronautical Information Package (AIP)* Part 3 – Aerodromes 1.2 Section 3.

4.2 Civil-military joint user Aerodromes

4.2.1 CASA has certified civil elements of civil-military joint user Aerodromes (ie Darwin and Townsville) under Part 139 of *the Civil Aviation Safety Regulations 1998*. Therefore, the civil AD OPR for these Aerodromes are required to comply with the *Part 139 MOS* GRF requirements WEF 01 Aug 24—regardless of the respective Defence ATS units' ability to broadcast GRF terminology via the ATIS at those Aerodromes.

4.2.2 Consequently, Defence ATS units at Darwin and Townsville can expect civil AD OPR personnel at those Aerodromes to conduct Aerodrome serviceability inspections in accordance with *Part 139 MOS* Section 12.04A, which includes providing RCRs to ATC and/or the Notice to Airmen (NOTAM) Office as required.

4.2.3 There are no regulatory requirements for Defence ATS units to implement the GRF for runway condition reporting, including at joint user Aerodromes. However, Defence ATS units should cooperate with civil AD OPRs at joint user Aerodromes to support the civil AD OPR's compliance with *Part 139 MOS* GRF requirements. This is likely to include developing agreements detailing relevant points of contact and runway condition reporting arrangements.

4.2.4 Defence ATS units at Darwin and Townsville should consult the relevant civil AD OPR at those locations—as well as other relevant stakeholders—to determine which elements of the GRF ATC will transmit via the ATIS and how deviations from the GRF are notified to Aircraft operators. Considerations may include:

- the feasibility and utility of Defence ATC publishing GRF RCRs via the Comsoft Aeronautical Data Access System (CADAS), including the RWYCC
- using GRF contamination phraseology in directed transmissions to pilots
- implementing risk controls to ensure aircraft operators are aware of the ATIS limitation (for example, via NOTAM or the Aerodrome's *En Route Supplement Australia* entry).

5 Military Air Operators and Non-Defence Registered Aircraft Sponsors

5.1.1 MAOs and NDRA Sponsors should expect to receive RCRs at Australian civil certified Aerodromes from 01 Aug 24. MAOs and NDRA Sponsors can find further information for aircraft operators in *AIP Part 3* – Aerodromes 1.2 Section 3, in addition to the CASA *Multi-Part Advisory Circular AC 91-32* and *AC 139-22*.

5.1.2 MAOs and NDRA Sponsors should expect Defence AD OPRs to commence preparation for GRF implementation. However, AD OPRs will not implement the GRF at Defence Aerodromes until resolution of the limiting factors at para 4.1.2.

5.1.3 **Training and education.** Appendix E of the CASA *Multi-Part Advisory Circular AC 91-32* and *AC 139-22* contains an example training syllabus for contaminated runway operations, aimed at aircraft operators and pilots. ICAO has also developed online GRF courses and resources, available on the ICAO website.

Annex A: Example Letter of Agreement between AD OPR and ATC

A.1 ATC runway surface condition reporting

A.1.1 When the ATC Tower observes a change to runways conditions, not associated with a contaminant, ATC will:

- assess the runway surface conditions as 'WET' or 'DRY' on behalf of [the AD OPR organisation]
- provide advice to aircraft of [Runway Condition Code (RWYCC) 5 or 6][11] (or) [the 'WET' or 'DRY' runway surface condition] as appropriate.

A.1.2 [The AD OPR organisation]:

- will advise the ATC Tower of any relevant factors which will affect the RWYCC for a WET runway
- is responsible for assessing runway conditions and providing a Runway Condition Report (RCR) in all other circumstances.

A.2 Exchange of information

A.2.1 [The AD OPR organisation] will provide a designated Point of Contact for exchange of all runway surface condition related information.

A.2.2 [The AD OPR organisation] will provide an RCR to the ATC Tower:

- [when required by *Part 139 MOS* reporting criteria, ie GRF requirements]
- when a pilot report indicates that braking conditions are worse than the current RCR
- on request from ATC.

A.2.2.1 [The AD OPR organisation] will also provide advice to the ATC Tower on surface conditions for taxiways and apron areas when significant, or if [the AD OPR organisation] assesses the surface condition as 'POOR'.

[11] Only when compatible with Defence ATIS functionality

A.2.2.2 On becoming aware of significant surface conditions on a taxiway or apron through visual observation or pilot report, ATC will advise aircraft pending advice from [the AD OPR organisation].

A.2.2.3 The ATC Tower will advise [the AD OPR organisation]:

- when a runway is known or expected to be contaminated
- pilot reports of braking action while a runway is contaminated
- when a pilot reports braking action as being less than ‘GOOD’
- when observed or reported conditions contradict information provided in the RCR
- when ATC observes, or a pilot reports, significant conditions on aprons or taxiways.

A.2.2.4 When ATC observes, or a pilot reports, runway conditions that contradict the information provided by [the AD OPR organisation], ATC will relay information to affected aircraft using the plain language runway surface condition descriptors and/or braking action descriptors.

A.2.2.5 [The AD OPR organisation] is not required to provide advice to the ATC Tower on runway surface conditions outside of Tower hours or when the ATC Tower is unavailable.

A.3 Runway Condition Report format

A.3.1 [The AD OPR organisation] must provide RCRs to the ATC Tower in the following format:

> RUNWAY[S] (number) [AND (number)] SURFACE CONDITION CODES (number, number, number)

followed by contaminant or surface description as (*part of* runway) (contaminant) (depth) (coverage):

> DEPTH (*number*) MILLIMETRES, COVERAGE (*number*) PER CENT

A.3.1.1 Reports may combine the surface descriptors, depth and coverage statements into whole of runway, thirds or two thirds as required. For example:

> RUNWAY 17 SURFACE CONDITION CODE 2,5,5 FIRST THIRD STANDING WATER DEPTH 5 MILLIMETERS, COVERAGE 50 PER CENT, LAST TWO THIRDS WET