# FACTSHEET – WHY CERTIFY DEFENCE AERODROMES UNDER DASR.139?

#### AIM

This factsheet describes why Defence has chosen to require certification of Aerodromes under DASR 139 Aerodrome regulations.

For information on the overall certification process, see <u>Factsheet – DASR.139 Aerodrome Certification Process</u>, and for details on the responsibilities for the safe design and construction of aerodromes, refer to <u>Factsheet –</u> <u>Responsibility for the design and construction of safe aerodromes</u>.

## INTRODUCTION

Defence has a moral and legal obligation to eliminate or otherwise minimise risks to health and safety so far as is reasonably practicable (SFARP). Since well-designed and constructed aerodromes are a direct contributor to aircraft safety, it follows that those people responsible for providing such an aerodrome must ensure the aerodrome is, so far as is reasonably practicable, free from risks that may jeopardise aircraft safety.

The Work Health and Safety Act 2011 (WHS Act 2011), the WHS Regulations 2011 and the various supporting Codes of Practice provide essential direction to anyone with a duty to ensure health and safety. However, they are necessarily generic in nature, so they don't provide contextualised direction for people responsible for providing a safe aerodrome.

So how do those people demonstrate they have met their statutory requirements under the WHS Act? After all, amongst other things, they must: identify all hazards to aircraft safety, explore all possible ways to control these hazards, and then implement all reasonably practicable measures to eliminate or otherwise minimise the resultant risks SFARP. Each of these can be a complex undertaking.

This is where the Defence Aviation Safety Regulations (DASRs) can help, since a stated role of the DASRs is that they '*amplify the WHS Act for the aviation context*'. For Defence aerodromes, this is achieved through DASR 139, *Aerodromes*.

DASR 139.80 in particular focuses on aerodrome design and construction, and supports responsible parties by:

- identifying credible standards for the design and construction of Aerodromes, and applying defensible bounds to how far these standards can be tailored.
- presenting a structured approach to demonstrating that the final aerodrome design and construction meets those standards
- requiring independent assurance (by DASA) of the above two outcomes.

Each of these elements is explored below.

## **CREDIBLE STANDARDS**

A credible standard aligns with global conventions and recognised domestic and international good practice. The application of credible standards makes a pervasive contribution to the design and construction of a safe aerodrome (and therefore meeting the requirements of the WHS Act), because they can capture 'reasonable knowledge' in the identification and minimisation of safety hazards.

DASA publishes standards for the design and construction of Defence aerodromes in Section 6 of the Airworthiness Design Requirements Manual (ADRM). However, while these standards have been adapted to Defence's expected military operating context, inevitably this process will be incomplete.

For these standards to be considered 'credible', and therefore provide a sound basis for the safe design and construction of an aerodrome, they must be assessed for compatibility with the particular configuration, role and operating environment for a particular Defence aerodrome.

DASA will assist with this process, and will finally confirm that the standards present a suitable basis for aerodrome certification.



## DEMONSTRATING COMPLIANCE WITH THOSE STANDARDS

Demonstrating that the design and construction complies with those standards will involve a detailed program of effort to generate and / or collect evidence from calculations, analysis, test or evaluations. In simple terms, there must be robust evidence that proves the product complies with the standards. Guidance on executing this process is contained in DASR 139.80, numerous documents on the DASA website, and in DASA training material.

There may be occasions, however, where non-compliance to the design standards occur. This does not necessarily preclude certification of the aerodrome by the DASA, provided robust safety risk management, meeting the requirements of the WHS Act, has been applied. This is covered extensively in other DASA documents, including the <u>Factsheet – Aerodrome Certification: Non-Compliances to Certification Basis</u>.

DASA will help guide this risk management process, and will ultimately confirm that all risk management decisions appear credible and defensible before certifying an aerodrome.

## INDEPENDENT ASSURANCE

DASA provides independent assurance that the design and construction of the aerodrome is suitable for safe aircraft operations. It does this through:

- assessing whether the standards (including tailoring) to be used for the aerodrome design and construction present a suitable safety benchmark
- inspecting compliance demonstration evidence on a non-exhaustive basis, to gain confidence that the evidence supports claims for compliance
- assessing whether all safety risk management decisions, necessary to address non-compliances to the standards, appear to be credible and defensible

The primary reason for DASA's independent assurance is to support the DASA decision to certify the aerodrome. Of course, people responsible for the design and construction of the aerodrome also gain some confidence in the sufficiency of their efforts. However, it is important that they do not become over-reliant on this independent assurance.

An aerodrome certification is issued by the DASA when assured that the design and construction of the aerodrome has met approved standards and any required risk management decisions are defensible and credible. Put another way, certification is issued if the Authority is assured that the aerodrome's design and construction is safe when operated as intended.

The previous paragraph purposely uses the word '<u>assured</u>' when describing the DASA's basis for certifying an aerodrome. The DASA does not '<u>ensure</u>' (ie make certain) that an aerodrome is safe - that duty lies squarely with other parties, per the statutory requirements of the WHS Act. For further information on responsibilities to ensure the design and construction of safe aerodromes, refer to <u>Factsheet – Responsibility for the design and construction</u> <u>of safe aerodromes</u>.

## FINALLY - WHY CERTIFY EXISTING AERODROMES TO DASR 139 ?

Subsequent to the release of the WHS Act 2011, Defence acknowledged that the previous DASR.ADR Regulations no longer aligned with international good practice. Consequently, Defence aerodromes may not be designed and constructed to credible standards, and non-compliances to credible standards may not have been subject to robust safety risk management.

DASR 139, released in April 2020, presents contemporary aerodrome regulations, aligned with contemporary domestic and international good practice. This includes a requirement for independent certification of Defence aerodromes<sup>1</sup>.

For current Defence aerodromes, DASR 139 certification provides an opportunity for those delivering and operating an Aerodrome to demonstrate they have indeed provided an aerodrome that comprehensively supports safe aircraft operations. Independent assurance and certification by DASA will provide Defence stakeholders with additional confidence.

Importantly, this does not infer a requirement to redesign all aerodromes to the latest design standards. Rather, it means risks to health and safety must be eliminated or otherwise minimised SFARP. In some circumstances,

<sup>&</sup>lt;sup>1</sup> Aerodrome Operator approval is another major pillar of DASR.139 regulations, however this Factsheet is constrained to the Certification of Aerodromes facilities and systems which support safe flight at the aerodrome.

some aerodrome redesign may indeed be found to be reasonably practicable. In other circumstances, additional risk controls may be warranted, or perhaps even risk retention.

## **USEFUL INFORMATION**

- AC 004/2020: <u>https://www.defence.gov.au/DASP/Docs/DASR-Documents/AA-Circulars/AdvisoryCircular004\_2020-</u> <u>Transition-to-DASR-139-Aerodromes.pdf</u>
- DASR.139 Regulations: <u>https://www.defence.gov.au/DASP/Docs/Manuals/8000-011/DASRWeb/index.htm#15303.htm</u>
- ADRM, Section 6: <u>https://www.defence.gov.au/DASP/Docs/Manuals/7001054/ADRMWeb/index.htm#25288.htm</u>
- AC 03/2018 <u>https://www.defence.gov.au/DASP/Docs/DASR-Documents/AA-Circulars/AdvisoryCircular003-18-</u> <u>RiskManagementintheDefenceAviationSafetyProgram.pdf</u>
- DASA Aerodrome Group Mailbox: <u>dasa.aerodromes@defence.gov.au</u>