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Aerodrome Safety Publications are published by the CAAS for purposes of promulgating supplementary guidance materials to the Standards and Recommended Practices (SARPs) in the Manual of Aerodrome Standards. The publications are intended to provide recommendations and guidance to illustrate a means, but not necessarily the only means, of complying with SARPs. Aerodrome Safety Publications may explain certain regulatory requirements by providing interpretive and explanatory materials.

## 1 Purpose

- 1.1 The purpose of this Aerodrome Safety Publication (ASP) is to promulgate supplementary guidance material to guide aerodrome operators in complying with Section 5.1.2 *Submission of documents for development and modification works and Section 5.1.9 Completion* of the Manual of Aerodrome Standards (MOAS).

## 2 Applicability

- 2.1 This publication applies to all aerodrome operators certified under Paragraph 67 of the Singapore Air Navigation Order carrying out works at an aerodrome that affect the physical characteristics of a (i) runway; (ii) taxiway; or (iii) aircraft parking stand.

## 3 Introduction

- 3.1 From time to time, the aerodrome operator may intend to carry out works that affect the physical characteristics of the aerodrome and/or affect aerodrome operations. These works include development of new infrastructure, modifications or maintenance of existing infrastructure at the airside. To ensure that the physical characteristics of critical airside infrastructure *viz.* runways, taxiways and aircraft parking stands comply with the MOAS, the aerodrome operator would be required to notify and submit documents demonstrating the design compliance of the new or modified infrastructure prior to construction and also, obtain approval of completion before commencing operations.

## 4 Submission of design compliance documents

- 4.1 In accordance with MOAS Chapter 5.1.2, the aerodrome operator shall submit a set of documents demonstrating the design compliance of the proposed new or modifications to existing infrastructure to CAAS AAR Division.
- 4.2 The aerodrome operator should provide hardcopy documentation that provides clear evidence that the proposed new or modified infrastructure complies with the relevant requirements in the MOAS. The documentation should include, at the least, the following:

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- (a) Completed form that includes a brief description and the scope of the proposed new development/modification works, reason for the works, name and designation of the project manager and the expected start and end date. Refer to **Appendix A** for Form A – *Notification of proposed changes to aerodrome infrastructure*;
  - (b) Compliance matrix to demonstrate compliance with the relevant clauses in the MOAS; and
  - (c) Scaled drawings of the proposed new development or modification.
- 4.3 The aerodrome operator shall inform CAAS AAR division of any changes to the initial submission using Form B – *Notification of variations to proposed changes to aerodrome infrastructure* (see **Appendix B**). As a result of such changes or any changes to the MOAS, CAAS AAR division may require the aerodrome operator to re-submit design compliance documents as necessary. In accordance with MOAS Chapter 5.1.2.3, the aerodrome operator shall not commence any works in the affected areas where any non-compliance is not resolved.
- 4.4 Submission of design compliance documents is not required for the activities that do not affect the physical characteristics of a runway, taxiway or aircraft parking stand. Some examples are as follows:
- a. Routine maintenance works on runway, taxiway/taxilane or aircraft parking stand such as repainting, replacement of lights and removal of rubber deposits ;
  - b. Installation of new Airfield Ground Lightings (AGL) and other visual aids;
  - c. Installation of new FOD fences, jet blast fences;
  - d. Construction of new ILS buildings;
  - e. Runway, taxiway re-surfacing; and
  - f. Replacement of Passenger Loading Bridges, Aircraft Docking Guidance System
- 4.5 Submission of design compliance documents is required for activities that affect the physical characteristics of a runway, taxiway or aircraft parking stand. Examples of such activities are:
- a. Introduction of new runway, taxiway/taxilane;
  - b. Extension of runway, taxiway/taxilane;

- c. Reconfiguration of aircraft parking stands for instance, single aircraft bay to Multiple Aircraft Receiving Stands (MARS); and
  - d. Construction of new aircraft parking stands
- 4.6 Notwithstanding Paragraph 4.4 and 4.5, the aerodrome operator shall notify CAAS AAR division and submit associated risk assessment for aerodrome activities that are classified as major or significant in accordance with Paragraph 5.1.3.3 and 5.1.3.4 of the MOAS by the stipulated deadline.

## 5 Approval of completion

- 5.1 In accordance with MOAS Chapter 5.1.1.1, the aerodrome operator is responsible for ensuring that the new or modified infrastructure complies with the MOAS. On completion of the aerodrome works and at least one month prior to operational use, the aerodrome operator shall submit Form C - *Application for approval of completion of infrastructure* (see [Appendix C](#)) and associated evidence demonstrating such compliance which include, but are not limited to:
- (a) Safety case;
  - (b) Aeronautical studies;
  - (c) Site survey reports for example, as-built topographical surveys;
  - (d) Computer simulation reports and test results for example, runway friction values, aircraft wheelpath simulations, jet blast effect simulations;
  - (e) Demonstrations for example, AES response time, generator cut-over time, lighting controls; or
  - (f) Inspection reports including testing and commissioning for example, pavement strength, AGL systems
- 5.2 The aerodrome operator is encouraged to indicate the methods demonstrating compliance with the MOAS for a particular works early to CAAS AAR Division using the compliance checklist. Depending on the complexity of the works, CAAS AAR Division may request for additional documents to be submitted.

- 5.3 For works that will be completed in phases, CAAS AAR Division may grant approval of completion in a progressive manner to allow the aerodrome operator to commence operational use of certain parts of the works, subject to the submission of a detailed project plan. The project plan should include, at the least, the following information (See **Appendix D** for a sample document):
- a. Description of works;
  - b. Record of revisions;
  - c. Compliance checklist detailing the relevant MOAS clauses, method of compliance and reference documents as necessary; and
  - d. Estimated schedule of completion;
- 5.4 For major works that have significant impact on aircraft operations, such as introduction of a new runway or apron, CAAS AAR Division may request the aerodrome operator submit a safety case, in consultation with other relevant stakeholders, detailing the safety assessment and mitigation strategies to manage the safety risks associated with operating the new infrastructure.
- 5.5 In accordance with MOAS Chapter 5.1.9.1, no new or modified infrastructure and associated systems shall be utilised for operations without the prior approval of CAAS AAR Division.

## 6 References

MOAS Section 5.1.2 and 5.1.9

## 7 Queries

If there are any queries with regard to this Aerodrome Safety Publication, please address them to:

Mr Nick Leow  
Senior Inspector (Aerodromes)  
Aerodrome and Air Navigation Services Regulation Division  
Civil Aviation Authority of Singapore  
Email: [nick\\_leow@caas.gov.sg](mailto:nick_leow@caas.gov.sg)

Issued under the Authority of:




Chew Choong Cheng

Director


Aerodrome & Air Navigation Services Regulation Division

Civil Aviation Authority of Singapore

**FORM A - NOTIFICATION OF PROPOSED CHANGES TO  
AERODROME INFRASTRUCTURE**


<b>Notification of proposed changes to aerodrome infrastructure</b>			
Aerodrome Name:		Date of submission:	
<b>Project Details</b>			
Title of Works:			
Reason for Change:			
Brief Description of proposed change:			
Planned Commencement Date of Works:			
Estimated Completion Date of Works:			
<b>Supporting Documents to be attached with this submission:</b>			
1. Compliance Matrix			
2. Scaled Drawings			
<b>Declaration</b>			
I hereby declare that the above information and all documents submitted in this form are true in every respect.			
Name of Project Manager/Signature: _____			
Designation: _____			
Contact number/Fax:		E-mail:	
<b>For official use only:</b>			
Reference no:		Received by:	
Verified by:		Date:	
Name of Aerodrome Inspector/Signature:			
Designation		Contact number/Fax/E-mail:	

**FORM B- NOTIFICATION OF VARIATIONS TO PROPOSED CHANGES TO AERODROME INFRASTRUCTURE**

<b>Notification Of Variations To Proposed Changes To Aerodrome Infrastructure</b>		 <small>Civil Aviation Authority of Singapore</small>	
Aerodrome Name:		Revision no. and Date of submission:	
<b>Project Details</b>			
Title of Project:			
Brief Description of the Variations:			
Reason for Variations:			
Is there any non-compliance with relevant requirements of the MOAS as a result of the variations? <input type="checkbox"/> No <input type="checkbox"/> Yes (Please provide details of the potential non-compliance including any supporting documents)			
Does the variation (s) affect the planned commencement and completion date of Works? <input type="checkbox"/> No <input type="checkbox"/> Yes (Please indicate the revised dates) .....			
Planned Commencement Date of Works:			
Estimated Completion Date of Works:			
<b>Supporting Documents Attached</b>			
<b>Declaration</b>			
I hereby declare that the above information and all documents submitted in this form are true in every respect.			
Name of Project Manager/Signature: _____			
Designation: _____			
Contact number/Fax:		E-mail:	
<b>For official use only:</b>			
Reference no:		Received by:	
Verified by:		Date:	
Name of Aerodrome Inspector/Signature:			
Designation:		Contact number/Fax/E-mail:	



**FORM C- APPLICATION FOR APPROVAL OF COMPLETION OF INFRASTRUCTURE**

<b>APPLICATION FOR APPROVAL OF COMPLETION OF INFRASTRUCTURE</b>		 <small>Civil Aviation Authority of Singapore</small>	
Aerodrome Name:		Submission Reference Number:	
		Date of submission:	
<b>Work Details</b>			
Title of Works:			
Areas where approvals are sought for:			
Planned Commencement Date of Operations in these areas:			
<b>Supporting Documents demonstrating compliance with MOAS</b>			
<b>Declaration</b>			
I hereby declare that the above information and all documents submitted in this form are true in every respect.			
Name of Project Manager/Signature: _____			
Designation: _____			
Contact number/Fax:		E-mail:	
<b>For official use only:</b>			
File no.			
Approved by:		Date:	
Name of Aerodrome Inspector/Signature:			
Designation		Contact number/Fax/E-mail:	

PROJECT PLAN FOR  
<<TITLE OF PROJECT /WORKS>>

Document Number:	Revision:	Date:

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RECORDS OF REVISIONS

<u>Revision</u>	<u>Date</u>	<u>Description of revisions</u>	<u>Submitted by</u>

COMPLIANCE CHECKLIST

Description of works: .....

SUBJECT: PHYSICAL CHARACTERISTICS		RESPONSE BY OPERATOR				
QUESTIONS	REF TO MOAS	YES	NO	N.A.	METHOD OF COMPLIANCE (To indicate the method to demonstrate compliance at completion eg. tests, survey reports, aeronautical studies, etc )	REFERENCES & REMARKS (Include reference to documentation or reason for non-compliance / non-applicability)
1.						
2.						

ESTIMATED SCHEDULE OF COMPLETION

S/N	Description of works	Estimated completion date