SAFETY MANAGEMENT MANUAL

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Reviewer: Safety Manager

9/14/20

SCAA

SAFETY MANAGEMENT SYSTEM

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SCAA ISMS ACCEPTANCE LETTER

SCAA
SEYCHELLES CIVIL AVIATION AUTHORITY

Our Ref: SCAA/SR/ISMS/01

Date: 29TH DECEMBER 2014

The Aviation Safety Manager
SCAA
P.O. Box 181
Seychelles International Airport

Dear Sir,

SCAA INTEGRATED SAFETY MANAGEMENT SYSTEM ACCEPTANCE

The SCAA Integrated Safety Management System (ISMS) is hereby accepted for implementation by Air Navigation Services and Aerodrome Services of the Seychelles Civil Aviation Authority based on the ICAO Basic Safety Management System Framework of Annex 19 and Document 9859.

The SCAA ISMS will be subject to safety oversight in due course, by Air Navigation Standards and Aerodrome Safety and Standards of the Safety Regulation Division to ensure it is effectively implemented.

Yours faithfully

G Sicobo
Deputy General Manager
Safety Regulation
For: CHIEF EXECUTIVE OFFICER

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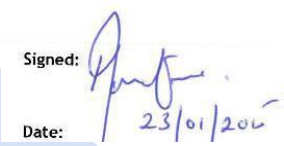
DOCUMENT AUTHORISATION

Document Owner	Signed:	Document Custodian	Signed: 
Accountable Executive	Date: 23/1/2015	Aviation Safety Manager	Date: 23/01/2015

REVISION HISTORY

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1.0		CJ Stock Air Risk International Ltd	Complete rewrite after completion of GAP analysis
2.0	October 2017	CJ Stock Air Risk International Ltd Revised by ASM	Revised for continuous improvement
3.0	2020	CJ Stock Air Risk International Ltd Revised by ASM	Revised for continuous improvement

DISTRIBUTION LIST

Copy Number	Owner
Master copy	Safety Manager
01	CEO SCAA/ Accountable Executive
02	Safety Management System Office
03	Executive Team
04	SAG
05	All SCAA staff (via SCAA Website)

NOTE: SCAA Safety Management Manual is distributed electronically and is also available on the SCAA website

Divisions/Sections/units are free to print their own copy

RELATED DOCUMENTS AND REFERENCES

Related Documents	
Seychelles Legislation	Civil Aviation Authority Act 2005
ICAO SARPs	Annexes 1, 2, 11, 13, 14, 15 and 19
ICAO Docs	Doc 9859, 4444, 8168
SCAA Docs	H&S, HR Policy
Airport Documents	SCAA (Aerodrome) ORDERS 2010, inclusive Aerodrome Emergency Plan, Aerodrome Manual
ATC Documents	SSI,UTP, TTM, UCS
Other Documents	ISO 9001 - 2008 ISO19011 – 2011 ISO 9001-2015 Directive 2003/42/EC. UK CAP 382 The Mandatory Occurrence Reporting Scheme. CAP 642 Airside Safety Management. Regulation (EU) N1035/2011. GAIN (Global Aviation Information Network) Working Group E (iii) Report. Euro Control Generic Safety Management

Amendment List

Edition NO:	Amendment NO:	Amendment Date	Page Amended	Description of Amendment	Comment
V.3	1		All	Fonts/Spacing and document review of the whole document	Accordingly the page numbers have changed
V.3	2		Page 5	Distribution list of manual	1.Accountable Executive removed 2.Name change from Safety office to SMS office
V.3	3		Page 9/10	Added: ALoS, Investigation, Investigator in charge, Investigation subject expert, Safety Investigator	Missing from previous version
V.3	4		Page 24	SCAA organization chart	Replaced previous with new updated chart
V3	5		Page 26	Delegation of Accountable Executive responsibilities	Removed entirely
V.3	6		Page 26/27	Responsibility of CEO	Previous Accountable Executive responsibilities modified and taken up by CEO
V.3	7		Page 27/28 4.5	Appointment of Key personnel	Table amended to reflect changes in Organisational structure
V.3	8		Page 27	ASM – SAR Safety Audit & Safety Investigation	In line with Safety Manager SAR guideline in ICAO Doc 9859 - SMM
V.3	9		Page 52-55	SMP 05 – Safety Reporting and Investigation	Clarity of procedure and responsibilities for initializing and conducting of investigation.
V.3	10		Page 76	SAR for GMANS (ATM	As per change in Name of the

				replaced with ANS)	department
V.3	11		Page 77	SAR for GMAM	Added to reflect organizational structure following internal promotion
V.3	12		Page 80	Safety accountabilities for GMHRA	Name changed to reflect new post holder
V.3	13		Page 81	Safety accountabilities for Chief Finance Officer (CFO)	SAR amended and name changed to reflect new appointment of CFO
V.3	14		All relevant pages	SCAA Integrated safety Management System (ISMS) to SCAA SMS	To avoid confusion with the ICAO definition of ISMS which imply integration of SMS with other Management functions such as HR and Finance
V.3	15		Appendix 6 Page 109 - 110	Technical Hazard Identification Taxonomy	As per directive from SRD
V.3	16		Annex to the SMM Page 111 - 117	Centrik User guide	Easy to remove if and when replaced by another system

SMS TERMS AND DEFINITIONS

Term	Definition
Accountable Executive	A single, identifiable person having final responsibility for the effective and efficient performance of an organization's SMS. Depending on the organization's size and complexity, the Accountable Executive may be: a) the Chief Executive Officer (CEO); b) the Board of Directors' Chairperson; c) a partner; d) the proprietor; or other top management
ALoS	Acceptable Level of Safety
Best Practice	A method or technique that has consistently shown results superior to those achieved with other means, and that is used as a benchmark.
Consequence	Actual or potential impact of a hazard that can be expressed qualitatively and/or quantitatively. More than one consequence may evolve from an event.
Contractor	A person, company or agency that undertakes a contract with SCAA to provide the service or a product that is required at Seychelles airports.
Corrective Action	Action to eliminate the cause of or reduce the effects of a detected hazard or potentially hazardous situation in order to prevent its recurrence.
Emergency Response Plan	A written approach addressing the organisational structure, external/ internal systems, responsible parties and their roles, communication procedures, safety, equipment, and actions to be taken in reacting to an occurrence, to ensure that there is an orderly and efficient transition
Error	Non-intentional action or inaction by a person that may lead to deviations from accepted procedures or regulations.
Failure	The inability of a system, subsystem, component, or part to perform its required function within specified limits, under specified conditions for a specified duration.
Gap Analysis	A technique that assists in identifying the disparity between the current and the desired future state.
Hazard	Any existing or potential condition that can lead to injury, illness, or death to people; damage to or loss of a system, equipment, or property; or damage to the environment
Hazard Analysis	Analysis performed to identify hazards, hazard effects, and hazard causal factors used to determine system risk.
Hazard Identification	A process to establish a list of hazards relevant to the activity and the causes/threats that could release them.
Investigation	A process conducted for the purpose of accident prevention. It includes the gathering and analysis of information, the drawing of conclusions, the determination of causes

	and the making of safety recommendations
Investigation subject Expert	A person invited to participate in an investigation, on the basis of his or her specialized knowledge, skills or experience.
Investigator in Charge	A person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation.
Management of Change	Managing the implementation of change in an organisation in a planned and communicative manner to minimize any negative consequences and maximize the opportunities presented. A synonym for Change Management.
Safety	Freedom from unacceptable risk of harm.
Safety Management Function	A business unit within an organisation which is dedicated to the oversight of safety and its management.
Safety Management System	An organisation approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures.
Safety Assurance	All planned and systematic actions necessary to afford adequate confidence that a product, a service, an organisation or a functional system achieves acceptable or tolerable level of safety
Safety Case	A document which clearly and comprehensively presents sufficient arguments, evidence and assumptions that system hazards have been identified and controlled for both engineering and operational areas to demonstrate that a facility, facilities or organisation is/are adequately safe in air traffic service requests.
Safety Directive	A document issued or adopted by SCAA which mandates actions to be performed on a system to restore a tolerable level of safety, when evidence shows that aviation safety may otherwise be compromised.
Safety Investigator	A person trained to carry out safety investigation on behalf of the operator
Safety Objective	A qualitative or quantitative statement that defines the maximum frequency or probability at which a hazard can be expected to occur.
Safety Oversight	The function undertaken by SCAA SRD to verify that safety regulatory objectives and requirements are effectively met
Safety Policy	A safety policy is a declaration of a general plan of action set by the authority of management.
Safety Regulation	The process of rule -making for and oversight of all the safety related aspects of the systems, procedures, practices and personnel under the control of the service provider.
Safety Regulatory audit	A systematic and independent examination conducted by, or on behalf of, SCAA SRD to determine whether complete safety-related arrangements or elements thereof, to processes and their results, products or services, comply with required safety-related arrangements and whether they are implemented effectively and are suitable to achieve expected results.
System Safety Requirements	Those requirements that define the safety behavior of the System. Each System Safety Requirement is specified in terms of the Behavioral At tributes.

GLOSSARY

Accuracy	A degree of conformance between the estimated or measured value and the true value. (ICAO) **Note**: For measured positional data the accuracy is normally expressed in terms of a distance from a stated position within which there is a defined confidence of the true position falling
Aerodrome	A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft. (ICAO)
Aeronautical Fixed Service	A telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services. (ICAO)
Aerodrome Traffic Density	*Light*. Where the number of movements in the mean busy hour is not greater than 15 per runway or typically less than 20 total aerodrome movements. *Medium*. Where the number of movements in the mean busy hour is of the order of 16 to 25 per runway or typically between 20 to 35 total aerodrome movements. *Heavy*. Where the number of movements in the mean busy hour is of the order of 26 or more per runway or typically more than 35 total aerodrome movements. **Note 1.** — The number of movements in the mean busy hour is the arithmetic mean over the year of the number of movements in the daily busiest hour. **Note 2.** — Either a take-off or a landing constitutes a movement.
Aeronautical Ground Lighting	Any light specifically provided as an aid to air navigation, other than a light displayed on an aircraft. (ICAO)
Aeronautical Information Service	A service established within the defined area of coverage responsible for the provision of aeronautical information and data necessary for the safety, regularity, and efficiency of air navigation
Aeronautical Mobile Service	A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radio beacon stations may also participate in this service on designated distress and emergency frequencies. (ITU RR S2) (ICAO)
Aircraft Classification Number	A number expressing the relative effect of an aircraft on a pavement for a specified standard subgrade category. **Note.** — The aircraft classification number is calculated with respect to the center of gravity (CG) position which yields the critical loading on the critical gear. Normally the aft most CG position appropriate to the maximum gross apron (ramp) mass is used to calculate the ACN. In exceptional cases the forward-most CG position may result in the nose gear loading being more critical.

Air-Ground Communication	Two-way communication between aircraft and stations or locations on the surface of the earth. (ICAO)
Air Navigation Services	Air traffic services; communication, navigation and surveillance services; meteorological services for air navigation, aeronautical information services and Search and Rescue
Apron Management Service	A service provided to regulate the activities and the movement of aircraft and vehicles on an apron.
Air Traffic	All aircraft in flight or operating on the manoeuvring area of an aerodrome. (ICAO)
ANS System	The part of the ANS system composed of a ground based ANS component and an airborne ANS component. The ANS system includes human, technical systems and procedures, and assumes the existence of a supporting CNS system.
Auditor	Authorised person carrying out a safety audit on behalf of SCAA
Declared Distances	Take-off run available (TORA).The length of runway declared available and suitable for the ground run of an aeroplane taking off. Take-off distance available (TODA).The length of the take-off run available plus the length of the clearway, if provided. Accelerate-stop distance available (ASDA).The length of the take-off run available plus the length of the stop-way, if provided. Landing distance available (LDA).The length of runway which is declared available and suitable for the ground run of an aeroplane landing.
Hazard	Any condition, event, or circumstance which could induce an incident
Hazard Analysis	A systematic investigation of the hazards posed by a system, in terms of likely effects of system behavior.
Instrument runway	One of the following types of runways intended for the operation of aircraft using instrument approach procedures: Non-precision approach runway. An instrument runway served by visual aids and a non- visual aid providing at least directional guidance adequate for a straight-in approach. Precision Approach runway, category. An instrument runway decision served by ILS and/or MLS and visual aid intended for operation with a height not lower that 60m (200ft) and either a visibility not less than 800m or runway visual range not less than 550m.
Integrity (aeronautical data)	A degrees of assurance that an aeronautical data and its value has not been lost nor altered since the data origination or authorised amendment.

Mitigation	Steps taken to control or prevent a hazard from causing harm and reduce risk to a tolerable or acceptable level.
Notified Body	An organisation able to carry out tasks related to the Seychelles assessment of conformity or suitability of constituents of technical systems and/or Seychelles verification of technical systems.
Pavement Classification Number	A number expressing the bearing strength of a pavement for unrestricted operations.
Qualitative Processes	Those analytical processes which are subjective and non-numerical in manner.
Quantitative Processes	Those analytical processes which are numerical in manner.
Recognised Organisation	A recognised Organisation is one which has already been assessed and certified by SCAA as capable of conducting regulatory oversight assessment of ANS providers to verify compliance.
Risk	The combination of the probability, or frequency of occurrence of a defined hazard and the magnitude of the consequences of the occurrence.
Risk Assessment	Assessment to establish that the achieved or perceived risk is lower or equal to an acceptable or tolerable level.
Rulemaking	The process by which safety objectives and requirements are set.
Runway End Safety Area (RESA)	An area symmetrical about the extended runway center line and adjacent to the end of the strip primarily intended to reduce the risk of damage to an aeroplane undershooting or overrunning the runway.

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SECTION 1 - SAFETY MANAGEMENT MANUAL (SMM)

1 Compliance with International Standards

Introduction

1.1.1 The Seychelles Civil Aviation Authority (SCAA) was established under the Civil Aviation Authority Act of 2005, as an independent administrative and financial body to provide for the services, facilities and regulation of civil aviation activities in Seychelles and is administered by a CEO reporting to a Board of Directors appointed by the Minister responsible for Civil Aviation.

1.1.2 The SCAA, in accordance with the Seychelles Civil Aviation Act 2005, is directed to comply with ICAO Standards and Recommended practices. Annex 19 – Safety Management mandates that each Contracting State shall produce State Safety Programme (SSP).

1.1.3 Annex 19 Chap 3 paragraph 3.1.3 states that as part of the SSP, each State shall require that the following service providers under its authority implement a Safety Management System (SMS):

- Air Traffic Services (ATS) providers in accordance with Annex 11; and
  (Note. — The provision of AIS, CNS, MET and/or SAR services, when under the authority of an ATS provider, are included in the scope of the ATS provider's SMS. When the provision of AIS, CNS, MET and/or SAR services are wholly or partially provided by an entity other than an ATS provider, the related services that come under the authority of the ATS provider, or those aspects of the services with direct operational implications, are included in the scope of the ATS provider's SMS.)
- Operators of certified aerodromes in accordance with Annex 14

1.1.4 The Safety and Security Regulatory Department of SCAA, operating on behalf of the State through the CEO shall establish requirements for the service providers' SMS that meet, as a minimum, the ICAO Framework for a SMS as detailed in Annex 19 Appendix 2. It is the responsibility of the Safety and Security Regulatory Department to ensure that the service providers' SMS is acceptable through compliance and will provide continuing oversight that the service providers' SMS implementation plan is effected.

1.1.5 The SCAA is a combined Air Navigation Services (ANS) provider and an operator of certified aerodromes therefore the SCAA SMS applies to both ANS and airport operations.

2. Characteristics of SCAA SMS

2.1 To achieve its safety objective, the SCAA SMS be able to demonstrate that it is:

- Systematic because safety management activities are in accordance with a pre-determined plan and applied in a consistent manner throughout the ANS and airport operations of SCAA.
- Proactive because it builds upon an approach that emphasises hazard identification and safety risk control and mitigation, before events that affect safety occur; and
- Explicit because all safety management activities are documented through the Service Provider's Safety database (Centrik) system, visible and therefore defensible. These principles underpin the SCAA Aviation SMS policy and procedures.

3. Structure of the SCAA Safety Management Manual (SMM)

3.1 The SCAA SMS is mandated by the Civil Aviation Authority ACT 2005 which establishes that SCAA must comply with ICAO SARP's, specifically Annex 19 – Safety Management. The framework for the SMS is detailed in Annex 19 appendix 2 which is comprised of 4 components and 12 elements as follows:

A) Safety Policy and Objectives
   - i) Management commitment and responsibility
   - ii) Safety accountabilities
   - iii) Appointment of key safety personnel
   - iv) Coordination of emergency response planning
   - v) SMS documentation

B) Safety risk Management
   - i) Hazard Identification
   - ii) Safety Risk Assessment and Mitigation

C) Safety Assurance
   - i) Safety Performance Monitoring and measurement
   - ii) The Management of Change
   - iii) Continuous improvement of the SMS

D) Safety Promotion
   - i) Training and Education
   - ii) Safety Communication

3.2 This document will detail policies and procedure to implement the SCAA SMS in compliance with the ICAO framework described above.

4. Combining ANS provider and Aerodrome Operator's Safety Management System

4.1 SCAA is the provider for ANS and the certified airport operator therefore it could implement a separate SMS for both functions, however, the existing organisational structure provides synergies for managing risks across each area of operation. Therefore, the SCAA SMS as detailed in this manual is implemented as a combined Safety Management System for both the ANS provider and the Aerodrome operator.

4.2 It should be noted that management of safety risk is also a core activity of Occupational Health and Safety (OH&S) therefore it is essential that there is no ambiguity between the hazard identification and risk management (HIRM) processes for the two systems. SMS is concerned with aviation system risks whereas OH&S is focused on risks to the individual in the organisation. Where safety risks associated with compound hazards may impact on aviation as well as on OH&S then separate but parallel risk mitigation processes will be employed to separate the aviation and OH&S consequences respectively.

4.3 Quality management systems (QMS) are widely used in aviation and SMS utilises a number of quality procedures particularly in the Safety Assurance component therefore QMS and SMS are complementary. However the outcome of each system differs in that QMS is focused on compliance with prescriptive regulations and requirements to meet customer expectations and contractual obligations while the SMS is focused on safety performance.

4.4 Although integration of QMS and SMS is not proposed, the benefits of the complementary nature of the two systems should be established and are summarised as follows:

i) An SMS is supported by QMS processes such as auditing, inspection, investigation, root cause analysis, process design, statistical analysis, data control and preventive measures;

ii) QMS may anticipate safety issues that exist despite the organisation's compliance with standards and specifications; and

iii) Quality principles, policies and practices are linked to the objectives of safety management.

4.5 It is recognised that there are both benefits and limitations to integrating these management systems, encouragingly with benefits outweighing the limitations. However the integration process is complex and needs a structured change process which, on balance, should be undertaken when the SCAA SMS has reached a stage of maturity to ensure a level of resilience. During the early stages of SMS implementation, due diligence shall be applied to the hazard identification and risk management (HIRM) processes to ensure hazards are not missed due to lack of interface with other management systems.

5. Safety Procedure Format and Content

5.1 The 12 elements of the SMS are supported by safety procedures which give the method and guidance to ensure the objectives and requirements are achieved. Effective operation of the SCAA SMS requires sufficient allocation of human, time, physical, and financial resources to achieve the intended safety outcome of each procedure therefore the procedures are formulated to produce a consistent structure. The procedure format is made up of the following parts:

- **OVERVIEW:** This explains the **"WHY"** or purpose of the Procedure in the overall aviation SMS including the Safety Objective

- **REQUIREMENTS:** This explains **"WHAT"** is required to be implemented in the aviation SMS procedure and identifies Management Responsibilities.

- **PROCESS:** This explains **"HOW"** the aviation SMS procedure/ activity is to be implemented or conducted.

- **REFERENCES:** This explains to the reader **"WHERE"** to look for further implementation information in other SCAA documentation or external aviation publications and requirements.

5.2 Figure 1 details the hierarchy of SMS procedures broken down into their respective groupings in line with ICAO framework.

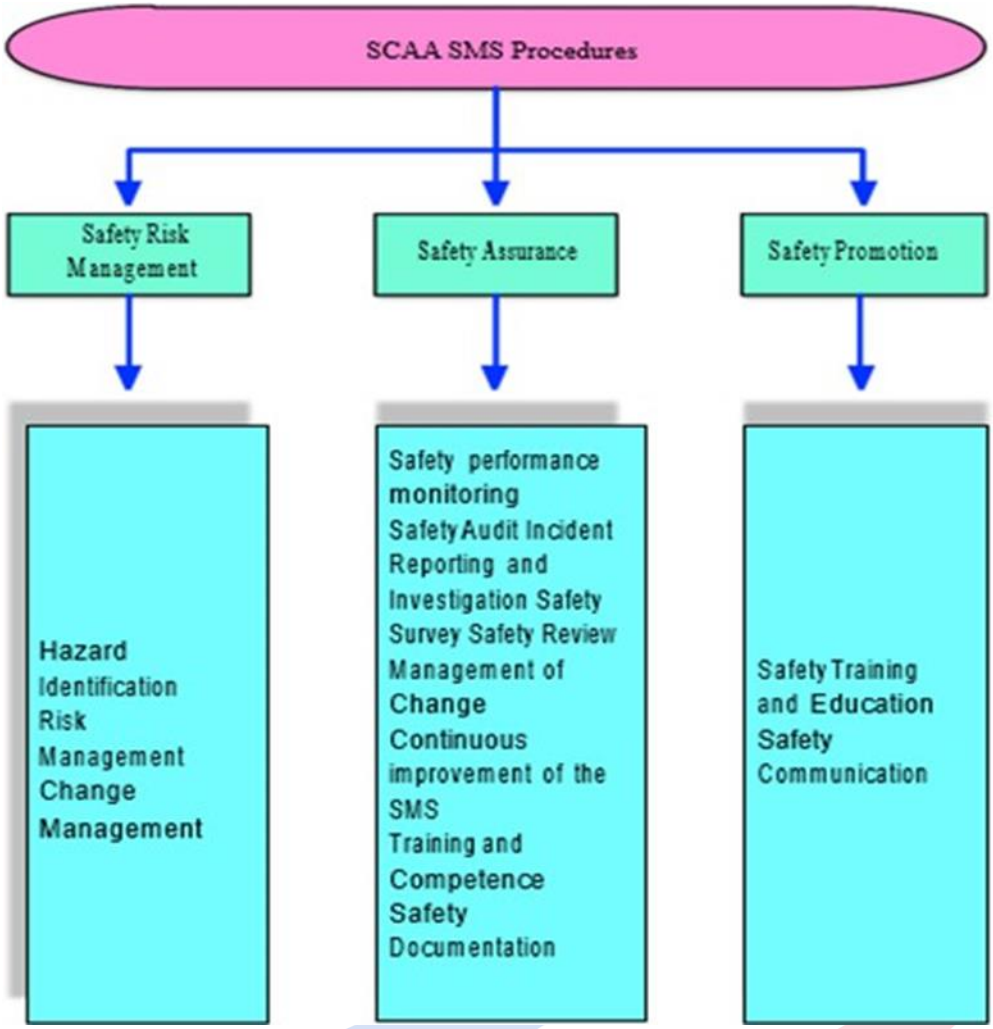


Figure 1- SCAA SMS Procedures

6.0 Interface with Contractors

6.1 Contractors

All Contractors or Sub-Contractors working within the airport shall be required to comply with the requirements of the SCAA SMS unless the Contractors have their own Safety Management System in place operating effectively and is acceptable to SCAA. Where Contractors have an SMS, this will be subject to audit as determined by SCAA.

There shall be a single person identified within the Contracting organisation responsible for safety acting as the point of contact with the SCAA Safety manager.

All staff working on the Airport site shall receive safety training appropriate to the areas in which they will be working. Any staff that need short-term access to airside areas, including the apron, runway and taxiways shall receive basic airside safety briefing and will be supervised by a nominated airport representative. Staffs that require long-term access to airside areas shall receive full safety training and be assessed as competent before being issued with a permanent Airport Entry Permit (AEP).

7.0 SMS Monitoring and Review

7.1 Safety assurance ensures control of safety performance, including regulatory compliance, through constant verification and upgrading of the operational system. These objectives are achieved through the application of similar tools: independent audits (both internal and external), recommendations from safety surveys, unit investigations, strict document controls and ongoing monitoring of safety controls and mitigation actions.

7.2 SCAA SMS is to establish the principle of safety monitoring through the use of Safety Performance Indicators (SPIs). The Safety Manager is responsible for collating of safety data measuring safety performance which is then presented to the Safety Review Board (SRB) for evaluation and action as required. Any degradation of safety performance i.e. not meeting safety objectives, as measured using Safety Performance Indicators (SPIs) is to be addressed by the SRB and, where it is applicable, will implement changes to improve the SMS.

7.3 SCAA senior management acknowledge that continuous improvement can occur only when the organization displays constant vigilance regarding the effectiveness of its technical operations and its corrective actions. Also, it is recognised that without ongoing monitoring of safety controls and mitigation actions, there is no way of telling whether the SMS implementation is meeting its objectives.

7.4 The effectiveness of the review process is dependent on the quality of the information collated through the Service Provider's Safety database (Centrik) system for the regular meetings of the Safety Committee and the Safety Review Board and the validity of their consequential actions.

8.0 **Distribution and Amendment**

8.1 The master copy of the SCAA SMM is held by the Safety Manager who is responsible for all amendments.

8.2 Whenever amendments are necessary they are incorporated by publication of a new issue. Pertinent changes are included in the *Amendment Li*st.

9 Interpretation

9.1 In this document the recommendations for a course of action are made with varying degrees of emphasis and mandate. As a rule:

- **'Shall' / 'must'** indicates a required course of action at all times, with mandatory status within SCAA, and a good practice.

- **'Should'** indicates a preferred course of action, and a best practice.

- **'May' / 'can'** indicates a possible, optional, and/or supplementary course of action.

SECTION 2 - SAFETY POLICY AND OBJECTIVES

1. Leadership and Commitment

1.1 SCAA promotes a strong culture of commitment to safety management through:

- Its core values of honesty, integrity, and respect for people
- Valuing trust and pride in SCAA, and
- Openness, teamwork, and professionalism.

1.2 The leadership in SCAA is responsible to promote, discuss, provide, and set proper safety management examples and behaviors. SCAA leaders demonstrate their commitment through various walk-the- talk activities. For example involvement in safety trainings, meetings, safety reviews, etc.

Leaders / Leadership

A leader is a person who motivates a group of people towards achieving a common goal. In SCAA, there are leaders at all levels from the Chief Executive Officer to the Supervisor. Leadership is the collective function of all leaders.

2. SCAA Safety Policy

2.1 Safety is one of our core business functions. We are committed to developing, implementing, maintaining and constantly improving strategies and processes to ensure that all our aviation activities take place under an appropriate allocation of organisational resources, aimed at achieving the highest level of safety performance and meeting regulatory requirements, while delivering our services.

All levels of management and all employees are accountable for the delivery of this highest level of safety performance, starting with the Chief Executive Officer (CEO).

Our commitment is to:

- Support the management of safety through the provision of all appropriate resources that will result in an organisational culture that fosters safe practices, encourages effective safety reporting and communication;
- Ensure the management of safety is a primary responsibility of all managers and employees;
- Clearly define for all staff, managers and employees alike, their accountabilities and responsibilities for the delivery of the organisation‘s safety performance and the performance of our safety management System.

- Establish and operate hazard identification and risk management processes, including a hazard reporting system, in order to eliminate or mitigate the safety risks of the consequences of hazards resulting from our operations or activities to achieve continuous improvement in our safety performance;
- Ensure that no action will be taken against any employee who discloses a safety concern through the hazard reporting system, unless such disclosure indicates, beyond any reasonable doubt, gross negligence or a deliberate or willful disregard of regulations or procedures;
- Comply with and, wherever possible, exceed, legislative and regulatory requirements and standards;
- Ensure that sufficient skilled and trained human resources are available to implement safety strategies and processes;
- Ensure that all staff are provided with adequate and appropriate aviation safety information and training, are competent in safety matters, and are allocated only tasks commensurate with their skills;
- Establish and measure our safety performance against realistic safety performance indicators and safety performance targets;
- Continually improve our safety performance through continuous monitoring and measurement, regular review and adjustment of safety objectives and targets, and diligent achievement of these;
- Ensure SMS procedures and guidance are made available to support the effective implementation of the SCAA Safety Policy, and
- Ensure externally supplied systems and services to support our operations, meet our safety performance standards.

Garry Albert

Chief Executive Officer

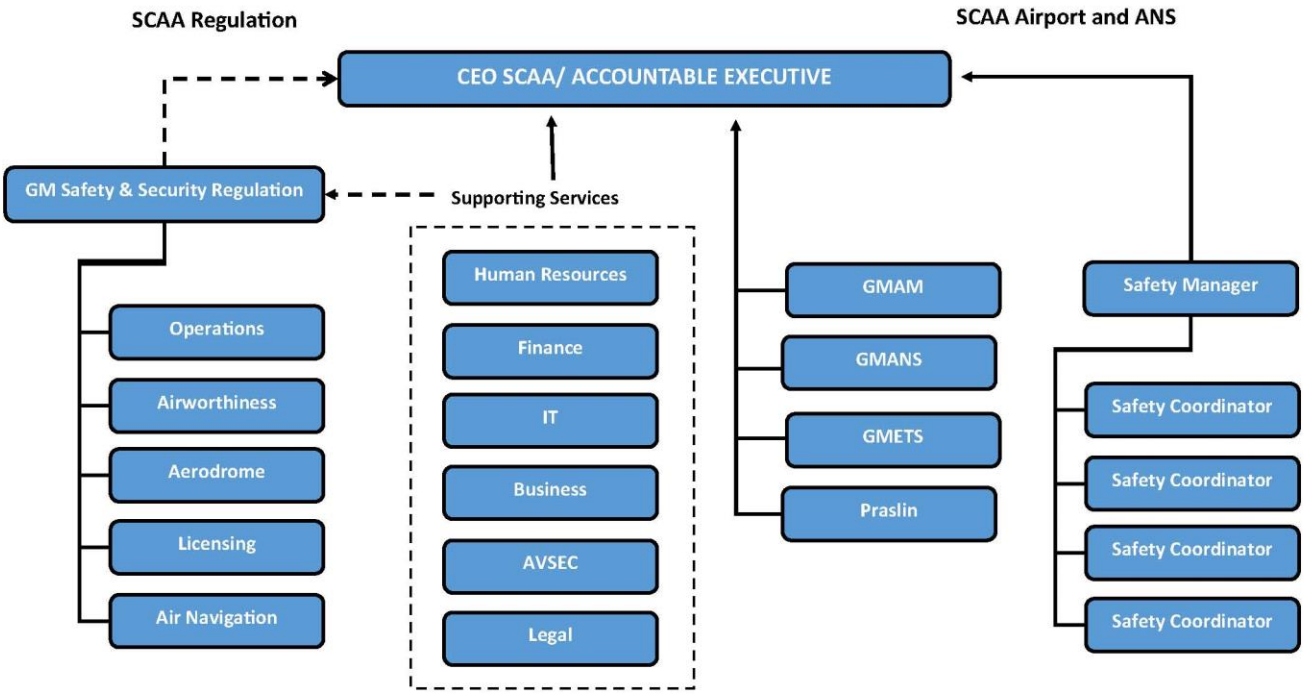
SCAA

Dated: 16th September, 2019

2.2 A signed copy of SCAA Safety Policy shall be displayed in a prominent area within all the SCAA departments. Each SCAA department should develop the means to display safety information to all staff

to ensure that safety in day- to-day activities is given its due respect. There should never be any complacency about safety at any level in the organisation.

3. SCAA Safety Organisation:



4. Safety Accountabilities and Responsibilities

4.1 Definitions

4.1.1 Within the SMS framework, it is essential that all individuals who have a safety function whether management or operators should be fully aware of their safety accountabilities and responsibilities. Furthermore these safety accountabilities and responsibilities should be clearly defined, communicated and followed up for all disciplines within the SCAA aviation activities if they are to be carried out as intended.

4.1.2 **Safety accountability** is the obligation to demonstrate task achievement and take responsibility for safety performance in accordance with agreed expectations and to answer for an action. Safety accountability cannot be delegated

4.1.3 **Safety responsibility** is the obligation to carry out a safety related task to its successful conclusion. Safety responsibility can be delegated or cascaded down within the scope of job responsibilities provided such delegation is documented.

4.1.4 Individual safety accountabilities and responsibilities for the safety of operations shall be as defined in Appendix 1. However, the key individual safety accountabilities and responsibilities with regard to the implementation and operation of SCAA aviation SMS are listed below

4.2 Chief Executive Officer (CEO)

Safety Accountability

The Chief Executive Officer is accountable to the SCAA Board of Directors, and ultimately the Minister, for ensuring that the safety performance of the SCAA Provider functions, namely ANS and airport services, meet the Acceptable Level of Safety (ALoS) to be established by the Seychelles State Safety Programme.

Safety Responsibilities

The Chief Executive Officer is responsible for:

- Appointing of key safety personnel
- Ensuring that safety remains a core organisational function and that the maintenance of a safety performance is achieved through the effective direction and management of the SCAA Safety Policy and procedures
- Promoting a positive safety culture supported by a clearly defined Just Culture
- Ensuring that SCAA provide sufficient resources to meet the Safety Policy requirements;
- Instilling in Level one Management the need to put safety as an absolute priority

Delegation of Safety responsibility to respective GMs

The Accountable executive delegate safety responsibilities to respective GMs as per appendix 1

The CEO also discharges the function of Accountable Executive, hence is responsible for:

- Ensuring that aviation safety is a core organisational value and has overriding priority within all SCAA aviation activities;
- Ensuring that a systematic and pro-active approach is taken to safety through the application of the SMS policy and its procedures and that the aviation activities comply with, and where possible exceed, legislative and regulatory requirements;
- Ensuring that all necessary resources are made available to achieve the SCAA safety objectives
- Establishing safety objectives and safety targets to measure safety performance;
- Appointing Aviation Safety Manager and ensuring that the SMS office is allocated appropriate adequate resources to fulfil its obligation
- Ensuring that all managers are trained and competent to achieve the highest level of safety performance,
- Taking final responsibility for the resolution of all aviation safety issues.
- Provide independent advice to the Board of Directors, senior SCAA managers and service providers' managers on safety-related matters.

4.3 **Aviation Safety Manager**

Safety Accountability

The Safety manager is accountable to the Accountable Executive for the implementation, development, and maintenance of the aviation SMS to ensure effective operation and consistency throughout the SCAA provider functions.

Safety Responsibilities

The Safety Manager is responsible for:

- Ensuring that the safety risks associated with SCAA ANSP and airport operations have been identified by the appropriate SCAA division, and have been assessed and, where necessary, satisfactorily reduced or mitigated;
- Acting as the focal point for the development, administration and maintenance of the SMS including the interface with contractors' SMS;
- Monitoring the effectiveness of corrective actions;

- Maintaining all internal and external safety documentation in a safety library or applicable Safety Information System
- Providing periodic reports on safety performance;
- Attending ANS and airport safety committees and other relevant external safety committees as agreed with the Accountable Executive;
- Acting as a focal point for other aviation organisations and the regulatory authorities, to address safety concerns, collate and disseminate safety information;
- Fostering and developing Industry best practice, and developing and delivering training courses and presentations on safety management.

Authority

Authority to conduct safety audits and investigations as directed by the accountable executive. (Guidance ICAO DOC 9859 – SMM, Chapter 8 Appendix 2)

4.4 **Other management positions**

Appointment of Key Safety Personnel

SCAA Positions	Name
CEO/ Accountable Executive	Garry Albert
Manager - Safety Management System	Kisnan Tamatave
GM Air Navigation Services	Esmee Samson
GM Airport Management	Colin Chang Tave
GM Eng./Technical Services	Darel Boniface
Airport Chief Fire Officer	Bernard Henriette
Acting Airport Manager Praslin	Tony Larue
General Manager Human Resources/ Administration	Lorella Uranie
Chief Financial Officer	

Safety accountabilities and responsibilities of Senior SCAA Managers are detailed in Appendix 1 to this Manual.

5. Co-ordination of Emergency Response Planning

5.1 SCAA shall ensure that an emergency response plan is properly coordinated with the emergency response plans of those organisations it must interface with during the provision of its services.

5.2 An Airport Emergency Plan documents actions to be taken by all responsible personnel during aviation-related emergencies. The purpose of an Airport Emergency Plan is to ensure that there is an orderly and efficient transition from normal to emergency operations, including assignment of emergency responsibilities and delegation of authority. Authorisation for action by key personnel is also contained in the plan, as well as the means to coordinate efforts necessary to cope with the emergency. The overall objective is to save lives, the safe continuation of operations and the return to normal operations as soon as possible.

There are three elements which need to be considered:

i) the airport emergency response plan is documented in the Airport Emergency Plan (AEP);

ii) the ANS contingency plan identifies the actions to be taken when part or all of the ANS services are effected;

iii) Each airline operator will have their own respective emergency plans.

To ensure that the emergency responses from each of these documents are understood and coordinated, an emergency co-ordination committee shall be established for the purpose of co-ordination and updating of actions to be taken in the event of an emergency.

5.3 The objective of this co-ordination process is to ensure that the emergency response procedures and an emergency response plan as documented in the Airport Emergency plan are coordinated for orderly and efficient transition from normal to emergency operations and return to normal operations.

5.4 The Airport Emergency Plan shall be tested through emergency exercises as per schedule established in the Airport Emergency Plan. The co-ordination and planning of these exercises is the responsibility of the aerodrome operator and the SAG shall be responsible to monitor for compliance and report to the SRB. The Airport Emergency Plan shall be periodically reviewed.

6. Safety Documentation

6.1 One of the three characteristics of the SCAA SMS is that it is explicit because all safety management activities are documented digitally through the Service Provider's Safety database (Centrik) system, visible and therefore defensible. Each element of the SMS will generate a level of documentation including risk assessments, audit reports, incident reports and investigation and routine reports from airport activities. All such documentations require to be managed and monitored in order to provide good evidence of levels of compliance with SCAA SMS. The key to good records management can be summed up in the following “5D” statement:

"Diligent Documentation Delivers Due Diligence."

6.2 SCAA Safety Manager shall establish and maintain procedures for the identification, maintenance and disposition of SMS records, as well as the results of audits and reviews. SMS records shall be legible, identifiable and traceable to the activities involved. SMS records shall be stored and maintained in such a way that they are readily retrievable and protected. All records shall be retained in the live system for a minimum of 5 years before being archived.

6.3 The SMS records should include, inter alia:

- SCAA Safety Management Manual
- Hazard Identifications
- Risk Assessments
- Safety Cases
- Safety performance indicators and related charts
- Change procedure evaluations
- External and internal audit reports
- Corrective actions
- Safety surveys and recommendations
- Occurrence reports (mandatory and voluntary)
- Occurrence investigations and recommendations
- Safety reviews
- Safety promotion records
- Staff Competence and Training Records
- Safety Committees minutes
- SMS implementation plan

SECTION 3 - SAFETY MANAGEMENT PROCEDURES

1 SMP 01 Hazard Identification and Risk Management

1.1 Overview

The safety objective of safety risk management is to assess the risks associated with identified hazards and their consequences and develop and implement effective and appropriate mitigations.

Safety risk management is therefore a key component of the safety management process for SCAA as a service provider.

1.2 Requirements

International regulations and standards require that any change to a system that has an impact on the safety of aerodrome operations or Air Traffic Services (ATS) shall be subject to a risk assessment and mitigation process to support its safe introduction and operation. The result of the assessment should be documented and this is typically achieved by developing a Safety Case. The term 'Safety Case' is used in respect of a set of one or more documents that include claims, arguments and evidence that a system is safe. The primary documentation for the risk management process is the Hazard Log. (Appendix 2: SP Safety database (Centrik) Safety Module)

For conciseness, the terms 'system' and 'project' are used throughout this procedure and should be considered to include the following constituents:

- any equipment;
- any procedure (e.g. operational procedure used by either of the SCAA functions or, alternatively, a maintenance procedure for related equipment); and
- The people involved and their organisation.

This procedure combines the elements of hazard identification and risk management into one process and in the case of SCAA SMS documented through Safety database (Centrik).

1.3 Process

1.3.1 All changes to the SCAA airport and air traffic services operations, including the human, procedure and equipment elements, shall be subject to the safety assessment process which is comprised of the following stages:

- System Description
- Hazard Identification

- Estimation of the Likelihood of the Hazard developing into a consequence;
- Estimation of the of the severity of the Consequence;
- Evaluation of the Risk;
- Risk Mitigation
- Documentation of the safety assessment before any change to organisation, personnel, procedures or equipment is made, a safety assessment must be undertaken to ensure that hazards and associated risks have been identified and, where necessary, reduced to a tolerable level.

1.3.2 The seven stages of the safety assessment are:

Step 1 – System Description (Reference SP Centrik Set-Up page in Risk Module)

The key activities in Step 1 are to describe:

- The system/change
- The purpose of the system.
- How the system will be used (concept of operation).
- The system functions (operational requirements).
- The boundaries of the system
- The environment including the interface with any larger system.

If all potential hazards are to be identified, the people involved in the safety assessment must have a good understanding of the proposed new system or change to the existing system, and how it will interface with the other components of the overall airfield system of which it is a part.

Step 2 – Hazard and Consequence Identification (Reference SP Centrik Evaluation page Risk Module)

The key activities in Step 2 are:

- Identify the hazards
- Identify the consequences of each hazard.

A hazard can be considered as a dormant potential for harm which is present in one form or another within the aviation system or its environment. This potential for harm may be in the form of a natural hazard such as weather, or a technical hazard such as wrong runway markings.

Hazards identification is the act of recognising the failure conditions or threats (Safety Events), which could lead to undesirable Events and defining the characteristics of these undesirable events in terms of

their potential safety outcomes (likelihood) and of the magnitude of these safety outcomes (Severity). Threats, hazards, and their consequences can be identified and assessed in a number of ways, ranging from the simple to the complex, as shown in the order below:

- Through experience and judgment.
- Using checklists
- By referring to regulations, codes, and/or standards.

It should be remembered that any system or operation comprises:

- People;
- Procedures
- Equipment; and
- An environment of operation

All these elements must be considered during the hazard identification process.

The main techniques for hazard identification within SCAA are:

- Brainstorming
- Checklists

Brainstorming is an unbounded but facilitated discussion within a group of experts. A facilitator prepares prompts or issues ahead of the group session and then encourages imaginative thinking and discussion between group members during the session.

Checklists are lists of known hazards or hazard causes that have been derived from past experience. The past experience could be previous risk assessments of similar systems or operations, or from actual incidents that have occurred in the past.

This technique involves the systematic use of an appropriate checklist and the consideration of each item on the checklist for possible applicability to a particular system.

When specialist teams are used for complex projects, other methods of hazard identification may be used.

This first stage in risk management also begins the formal process of documenting and recording the risk management process. This is an important activity in that it creates a “risk history” for the organisation, and provides traceability when managing risk overall. (Appendix B SP Centrik Risk Module)

Step 3 - Estimation of the Likelihood of the Hazard Consequences Occurring (Reference SP Centrik Evaluation page Risk Module)

The process of controlling safety risks starts by assessing the probability that the consequences of hazards will occur during SCAA operations.

Safety risk probability is defined as the likelihood or frequency that a safety consequence or outcome might occur. The determination of likelihood can be aided by questions such as:

- Is there a history of occurrences similar to the one under consideration, or is it an isolated occurrence?
- What other equipment or components of the same type might have similar defects?
- How many personnel are following, or are subject to, the procedures in question?
- What percentage of the time is the suspect equipment or the questionable procedure in use?
- To what extent are there organisational, managerial or regulatory implications that might reflect larger threats to public safety?

Any factors underlying these questions will help in assessing the likelihood that a hazard may exist, taking into consideration all potentially valid scenarios. The determination of likelihood can then be used to assist in determining safety risk probability.

Table 1 presents a typical safety risk probability table, in this case, a five-point table. The table includes five categories to denote the probability related to an unsafe event.

Likelihood	Meaning	Value
Frequent	Likely to occur many times (has occurred frequently)	5
Occasional	Likely to occur sometimes (has occurred infrequently)	4
Remote	Unlikely to occur during but possible (has occurred rarely)	3
Improbable	Very unlikely to occur (not known to have occurred)	2
Extremely improbable	Almost inconceivable that the event will occur	1

Table 1 Risk Likelihood

Step 4 – Estimation of the severity of the Consequences of the Hazard Occurring (Reference SP Centrik Evaluation page Risk Module)

Safety risk severity is defined as the extent of harm that might reasonably occur as a consequence or outcome of the identified hazard. The severity assessment can be based upon:

Fatalities/Injury: How many lives may be lost (employees, passengers, bystanders and the general public)?

Damage: What is the likely extent of aircraft, property or equipment damage?

The severity assessment should consider all possible consequences related to an unsafe condition or object, taking into account the worst foreseeable situation. Table 2 presents a typical safety risk severity table. It includes five categories to denote the level of severity, the description of each category and the assignment of a value to each category.

Definition	Meaning	Value
Catastrophic	➞ Equipment destroyed ➞ Multiple deaths	A
Hazardous	➞ A large reduction in safety margins, physical distress or a workload such that the operators cannot be relied upon to perform their tasks accurately or completely ➞ Serious injury ➞ Major equipment damage	B
Major	➞ A significant reduction in safety margins, a reduction in the ability of the operators to cope with adverse operating conditions as a result of increase in workload, or as a result of conditions impairing their efficiency ➞ Serious incident ➞ Injury to persons	C
Minor	➞ Nuisance ➞ Operating limitations ➞ Use of emergency procedures ➞ Minor incident	D
Negligible	➞Little consequence	E

Table 2 – Risk Severity

Step 5 – Evaluation of the Risk (Reference SP Centrik Evaluation page Risk Module)

By combining the results of the Severity and Probability tables, the risk will be either Acceptable (Low), or Review (Medium) or Unacceptable (High).The outcome of these findings will determine whether the hazard can be mitigated to ALARP or, if unacceptable (High), an alternative needs to be found before the project can enter operational use.

Risk Probability	Risk Severity				
	Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent 5					
Occasional 4					
Remote 3					
Improbable 2					
Extremely Improbable 1					

Table 3- Risk Tolerability

Each consequence should be checked against the above table for tolerability by placing the consequence in the correct Table Cell that line up the Likelihood and Severity.

The consequence will fall in one of the three regions:

➞ Acceptable (Low) - the consequence is so unlikely or not severe enough to be of concern. The risk is tolerable and the Safety Objective has been met. However, consideration should be given to reducing the risk further to As Low as Reasonably Practical (ALARP) in order to further minimise the risk of an accident or incident.
➞ Review (Medium) - the consequence and/or likelihood is of concern; measures to mitigate the risk to ALARP should be sought. Where the risk still lies within the 'Review' region after ALARP risk reduction has been undertaken, then the risk may be accepted provided that the risk is understood and has the authorisation of the ANSP representative as the person ultimately for safety within the ANS sector.
➞ Unacceptable (High) - the likelihood and/or severity of the consequence is intolerable. Major mitigation or redesign of the system may be necessary to reduce the likelihood or elimination of the severity of the consequences associated with the hazard.

Step 6 - Mitigation and Safety Requirements (Reference SP Centrik Decision page Risk Module)

The key activities in Step 6 are:

- Mitigate those risks identified as Unacceptable.
- Apply 'As Low as Reasonably Practicable' principles generally.

When a risk has been found to be unacceptable, control measures need to be introduced. The level of risk can be lowered by:

- Reducing the severity of potential consequences;
- Reducing the probability of occurrence harmful effects;
- Reducing the exposure to that risk.

Unless the risks are either eliminated or managed to an extent that they are no longer a factor, then the risk has to be managed to a level known "As Low as Reasonably Practicable" or ALARP. This means that the risk must be balanced against time, cost, and difficulty of taking measures to reduce or eliminate the risk.

Mitigation measures may include a number of alternatives including, but not limited to, modifications to existing operating procedures, training programs, or equipment used in the delivery of aviation products or services.

Additional alternatives may include the introduction of new operating procedures, training programs, technologies or supervisory controls. Almost invariably these alternatives will involve deployment or re-deployment of the three traditional aviation safety defenses - technology, training and regulations. A determination of any unintended consequences, particularly the introduction of new hazards, should be made prior to the implementation of any risk mitigation measures.

The three generic safety risk mitigation approaches include:

- **Avoidance.** The activity is suspended, either because the associated safety risks are intolerable or deemed unacceptable vis-à-vis the associated benefits.
- **Reduction.** Some safety risk exposure is accepted, although the severity or probability associated with the risks are lessened, possibly by measures that mitigate the related consequences.
- **Segregation of exposure.** Action is taken to isolate the potential consequences related to the hazard or to establish multiple layers of defenses to protect against them.

A risk mitigation strategy may involve one of the approaches described above, or may include multiple approaches.

It is important to consider the full range of possible control measures to find an optimal solution. The effectiveness of each alternative strategy must be evaluated before a decision can be taken.

Step 7 - Documentation of the safety assessment

The complete process of hazard identification and risk management shall be documented and recorded to ensure that the analysis of each hazard and management is available for future reference.

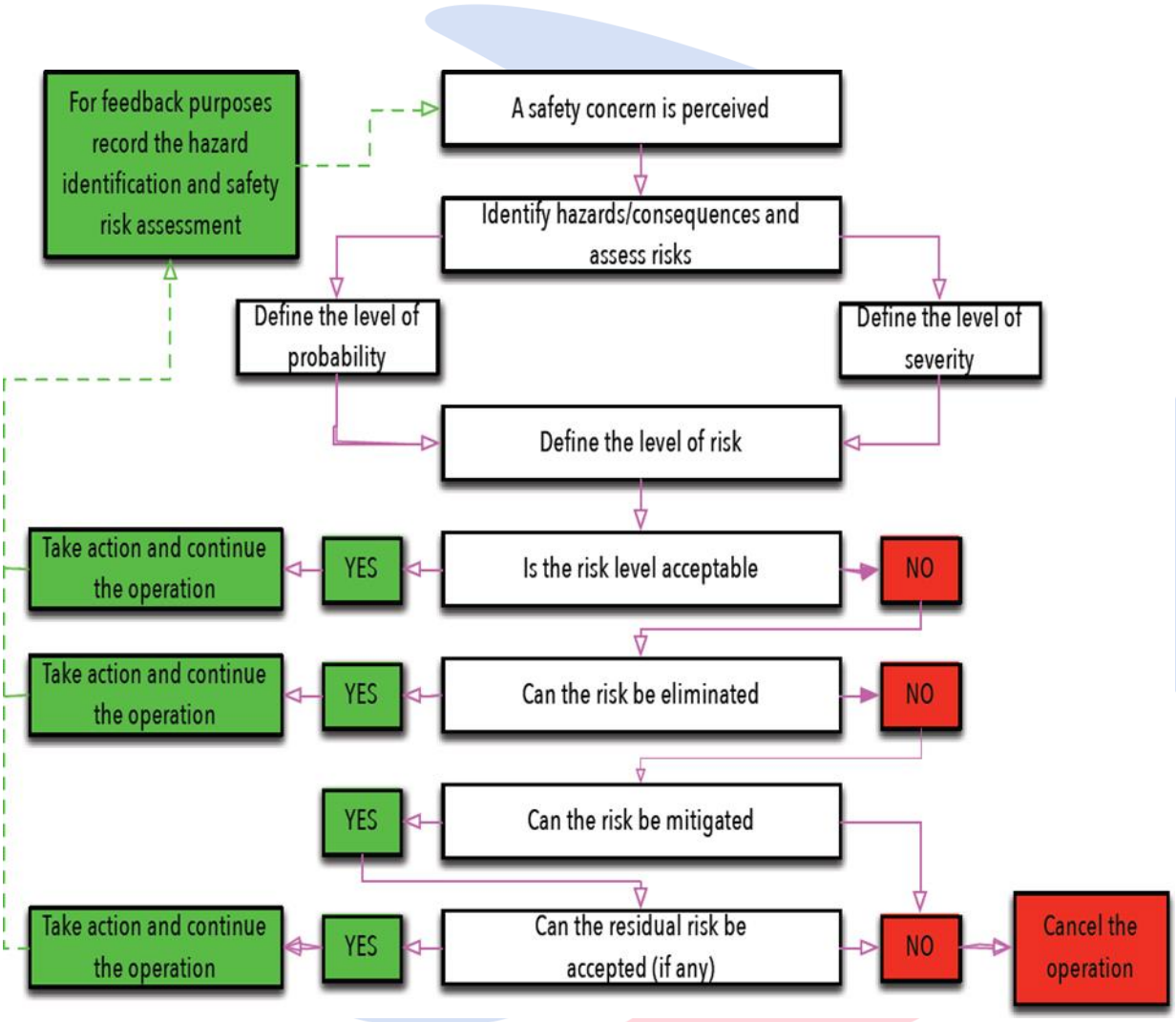


Figure 3 - Risk Management flow diagram

1.4 References

The following documents provide further / related information on Hazard Identification and Risk Management:

ICAO Doc 9859	Safety Management Manual	Version 3
UK CAA CAP 760	Guidance on the Conduct of Hazard Identification, Risk Assessment and the Production of Safety Cases	Issue 1 Amdt 1 10 Dec 2010
ECAST SMS WG	Guidance on Hazard Identification	Mar 09
FAA/Euro control	ANS Safety Techniques and Toolbox	Version 1 24 Jan 2005
CASA	SMS for Aviation - A Practical Guide Safety Risk Management	www.casa.gov.au 2012
CENTRIK	Learn Centrik	Scaa-sp.centrik.net/learn/learndashboard.aspx
ANNEX 19	Safety Management System	2ND Edition 2016

2 SMP 02 Change Management - Personnel and Organisation (Reference SP Centrik Start Safety Case SMF02)

2.1 Overview

The Safety Objective for the Change Management procedure involving personnel and organisation changes is to ensure that such changes are implemented only after a satisfactory completion of the Hazard Identification and Risk Management (HIRM) process.

Whenever a management or organisational change takes place within SCAA, it will have an impact on the operation of ANS and/or the airport. Under SMS, it is a requirement that the impact of such changes must be subject to HIRM to identify hazards and risk assess their consequences. The most likely areas of concern are in the case of personnel whether there is an impact on safety accountabilities and responsibilities or the creation of skills gap but in the case of the organisational change, the concerns may be in the area of unintended consequences with other ANS or airport stakeholders.

The change should only be implemented after any mitigations identified in the HIRM process have been concluded satisfactorily. It shall also be communicated to Safety and Security Regulatory Department as well as any other aviation undertakings/stakeholders.

2.2 Requirements

Any safety-related key personnel, organisational or system change within the SCAA airport and ANS operations including, inter alia:

- The implementation of a new post;
- Modification of existing posts;
- Organisational re-structuring

Shall be subject to the change management assessment.

Such changes shall only be effected after a safety assessment has demonstrated that the identified risks are tolerable

2.3 Process

All safety significant posts have Safety Accountabilities and Responsibilities described within the SMS.

Changes to these safety accountabilities and responsibilities or the person undertaking the post must be subject to a change management assessment. Also, any structural changes within the SCAA such as new posts will be subject to the same process.

The assessment will be in the form of a HIRM assessment which will include details such as a skills gap analysis for identifying areas where further training/skills are required. The assessment will identify safety related short falls from the requirements set out in the appropriate posts safety accountabilities and responsibilities.

Key assessment criteria shall include:

- Training
- Education
- Experience
- Competence

On completion of the risk assessment including satisfactory mitigations, the change proposer (accountable person) must document his justification for the change with an appropriate recommendation(s).The Accountable Executive shall sign off the change approval.

The flowchart below identifies the stages of the Change process which shall be reorder on the SMS Form SMF 02 which can be found in Appendix 2. **N.B: Safety and Security Regulatory Department shall be notified of the proposed change as well as be part of the approval with Accountable Executive**.

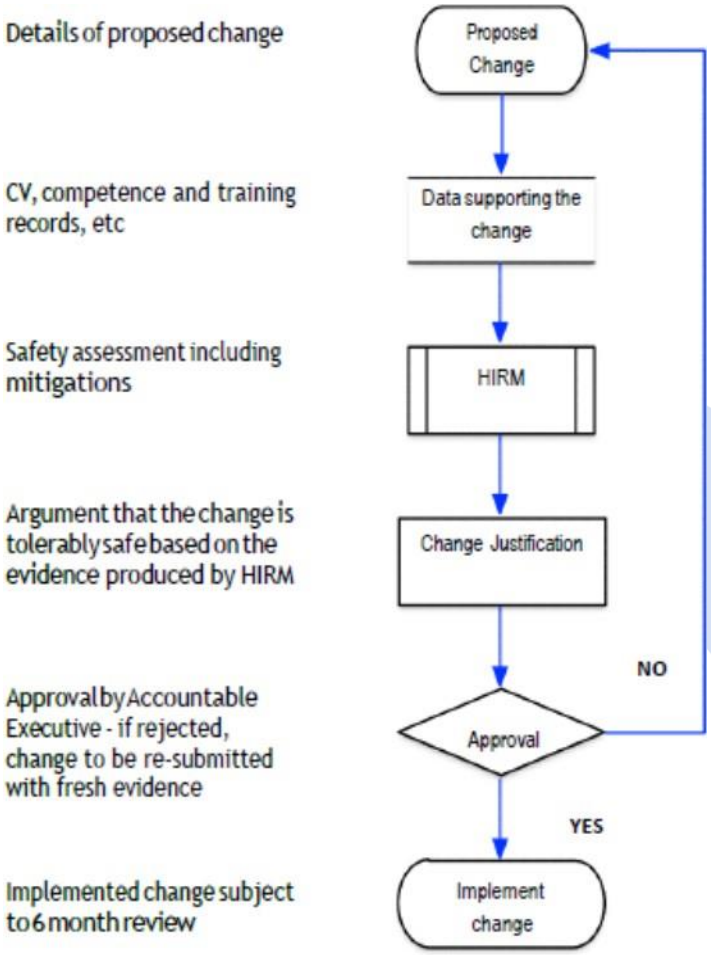


Fig 4 – Organisational Change flowchart

2.4 References

The following documents provide further / related information on Change Processes

ICAO Doc 9859	Safety Management Manual	Version 3
UK CAA CAP 760	Guidance on the Conduct of Hazard Identification, Risk Assessment and the Production of Safety Cases	Issue 1 Amdt 1 10 Dec 2010
ANNEX 19	Safety Management System	2ND Edition 2016

3 SMP 03 Change Management - Systems (Reference SP Centrik Start Safety Case SMF03)

3.1 Overview

The Safety Objective is that all system changes within SCAA which are safety significant shall be implemented in a systematic manner using HIRM to ensure that hazards have been identified and controlled and that the changes are tolerably safe.

All aviation organisations experience change due to expansion and contraction as well as changes to existing systems, equipment, policies, programmes, services and regulations. Hazards may inadvertently be introduced into the aviation system whenever such changes take place. Therefore, the SCAA Safety Management System (SMS) must ensure that hazards resulting from change be systematically identified and any additional mitigations and strategies to manage the safety risks arising as a result of that change be developed, implemented and subsequently evaluated.

The purpose of this procedure is to ensure that whenever changes take place in SCAA whether it be changes to people and/or organisation, equipment or procedures then such changes will be subjected to Hazard Identification and Risk Management (HIRM) as detailed in SMP 01 and documented in SP Centrik Risk Module. Also, changes should be communicated to all parties concerned.

3.2 Requirements

Any safety-related key personnel, organisational or system change within the SCAA airport and ANS operations including, inter alia:

- Implementation of a new procedure;
- Modification of existing systems, and
- The introduction of new systems,

Shall be subject to the change management assessment.

Such changes shall only be effected after a safety assessment has demonstrated that the identified risks are tolerable.

3.3 Process

During the operational life cycle of a system, many changes take place to ensure its continuing safety, efficiency, and effectiveness. These can take the form of operational changes generated for either internal or external reasons such as regulatory requirements, procedures change, equipment updates

and organisational re-structuring. Therefore change is embedded in the operation; each change has the potential to introduce new hazards and shall be subject to risk assessment and mitigation.

As a result of the number of changes that will take place, it is necessary to categorise them so that the necessary risk assessments do not place an unnecessary workload on the ANS and airport Operations and therefore should remain proportionate to the identified change. SCAA has determined that any aviation system change will be categorised as either **MINOR** or **MAJOR.**

The change categories are described as follows:

MINOR

A change which can be effectively managed at ANS and Airport level. The responsibility for management of the change is initially assigned to the Head of Department. Such changes will relate to items such as operating procedures (temporary or permanent) and working practices.

MAJOR

A change to such an extent that the ANS and Airport resources are unable to manage it. Responsibility for management of the change is initially assigned to the Accountable Executive (see Note below). Such changes will relate to areas such as ANS and airport equipment (new, modifications and decommissioning) and introduction of new aircraft. All changes to nominated post holders and/or their safety accountabilities/responsibilities within the SMS are included in this category.

NOTE: Subsequent allocation of responsibilities will be agreed by the appointment of Management of Change process owner.

When a system change is planned for whatever reason, the change process will be activated. The first stage is to carry out an impact assessment to determine the category of change. Many factors such as safety criticality, complexity and the effect on operations must be considered. If the impact assessment concludes that the system change is MAJOR e.g. introduction of new equipment or change of airspace or procedures then SCAA will initiate a dedicated project management programme to manage the process.

The outcome of the dedicated project will be a documented record of claims, arguments, and evidence to demonstrate that the major change is tolerably safe in that hazards have been identified and that the risks associated with the hazard consequences have been controlled. This document shall be presented as the Project Safety Case (see Appendix 3 - Guidance for Safety Cases). Depending on the complexity of the safety case it can be either documented in SP Centrik or as a separate document.

When change involves software, the risks associated with deploying any software used in a safety related ANS system must be reduced to a tolerable level. Whenever such changes involving software are to take place, technical advice will be required to ascertain the safety assurance levels that are required by international standards. It is anticipated that the provision of technical advice will require the services of a competent contractor. All such changes are by nature to be classified as Major, and supported by a Project Safety Case (see previous paragraph).

When the outcome of the change impact assessment is classified as MINOR then the Change Proposer (or Sponsor) will activate the following change process as in indicated in the flow chart below.

The Change Proposed is responsible for:

- Ensuring that the change process is documented on the appropriate forms (Appendix 2 SMF 01 and SMF 03)
- Informing the relevant Safety Regulation Inspector about the change
- Inform other relevant stakeholders/undertakings

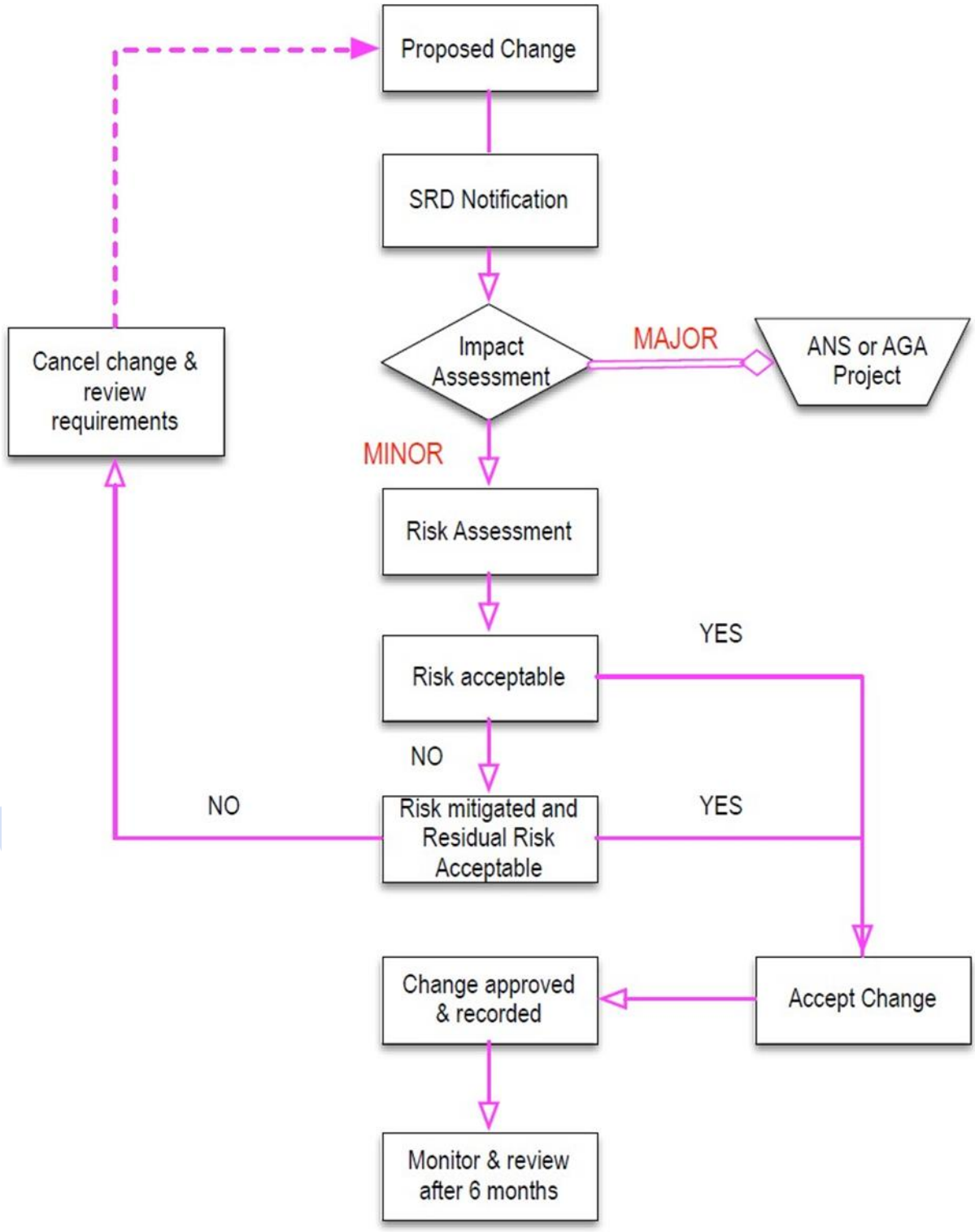


Figure 5 – Change flowchart

3.4 References

The following documents provide further / related information on Change Processes

ICAO Doc 9859	Safety Management Manual	Version 3
UK CAA CAP 760	Guidance on the Conduct of Hazard Identification, Risk Assessment and the Production of Safety Cases	Issue 1 Amdt 1 10 Dec 2010
CENTRIK	Safety Module	SMF 02/SMF 03
ANNEX 19	Safety Management System	2ND Edition 2016

4 SMP 04 Safety Performance Monitoring and Measurement

4.1 Overview

The Safety Objective is that:

SCAA shall develop and maintain the means to verify the safety performance of the organisation and to validate the effectiveness of safety risk controls.

SCAA safety performance shall be verified in reference to the safety performance indicators and safety performance targets of the SMS

The majority of information for the measurement of the SCAA safety performance is generated through its safety reporting systems. To be effective, safety reporting tools need to be readily accessible to operational personnel who should be educated on the benefits of safety reporting systems and provided with positive feedback regarding remedial actions taken in response to the report.

Other sources of safety information to support safety performance monitoring and measurement may include:

- Hazard reporting
- Audits
- Safety surveys
- Safety reviews
- Internal investigations and recommendations

The final output of a safety performance monitoring and measurement process is the development of safety performance indicators (SPI) based on analysis of data collected through the sources referenced above. The monitoring and measurement process involves the use of selected safety performance indicators, corresponding safety performance targets and alert levels.

4.2 Requirements

Effective implementation of the SCAA SMS requires both pro-active and reactive safety performance indicators for monitoring.

Leading indicators are pro-active measuring and monitoring criteria, and provide input or activity-based information in the absence of any accident, damage to equipment and/or significant reduction in safety margins. Leading indicators are forward looking and predictive; they are aimed at raising the awareness

of the possibility of incidents that might happen. These indicators measure and monitor what should be done for managing the SMS.

Lagging indicators are reactive measuring and monitoring criteria, providing output-based information on incidents that have occurred and in addition providing insights into means of preventing similar incidents in the future. Lagging indicators provide evidence of deficient SMS performance. These indicators identify weaknesses in the SMS.

The Safety Manager is responsible for collating the safety data from all sources in order to construct meaningful Safety targets and Safety performance Indicators (SPIs).

4.3 Process

At this early stage of the development and implementation of the SCAA SMS, it must be recognised that limited aviation related data is available from the SCAA reporting systems therefore the establishment of safety performance indicators will take time until the SMS and its associated reporting procedures produce more data.

The responsibility for the development and establish of future safety performance indicators must be shared between the Accountable Executive and the Aviation Safety Manager. The lack of data or safety performance indicators should not preclude any monitoring of performance which remains within the remit of the Airport Safety Committee.

For any performance indicator to be effective, it is important that it is:

- Objective and easy to measure and collect,
- Relevant to the SCAA operation or its departments whose performance are being measured,
- Providing immediate and reliable indications of the level of performance,
- Cost efficient in terms of the equipment, personnel and additional technology required to gather the information,
- Understood and owned by the workgroup whose performance is being measured.
- In addition to these general requirements, some additional characteristics that leading performance indicators must have if they are to be useful:
- There must be a connection between the leading information and the outcomes that are of interest.
- The reasons behind the indicators and their benefit must be understood by line management and the workforce affected.

- The indicators must provide information that can guide future actions to either improve desired outcomes, or provide warning of potential weaknesses and allow action to avoid undesirable outcomes.

Therefore, in addition to the points above, effective leading performance indicators must also:

- relate to activities considered to be important for future performance
- be amenable to intervention / influence by the workgroup whose performance is being measured
- relate to something where there is scope to improve
- provide a clear indication of a means to improve performance.

The focus on using leading performance measures to influence future actions means that it is important to think about leading performance indicators as part of a process, and careful thought is required to identify what information will be most useful.

When setting performance indicators for the effectiveness of the SMS, it is necessary to establish that SCAA and its departments are compliant with Annex 19 and the acceptable SCAA SMS. Examples of indicator can relate to:

Whether safety policy has been published and displayed throughout SCAA

- % of safety training completed for SCAA staff
- % of HIRM procedures conducted for system changes
- % of HIRM procedures conducted for organisational change
- Number of staff with Safety Accountabilities and responsibilities having signed for them
- % of audits conducted by departments against the annual audit plan
- Number of management visits completed against the number planned
- Number of staff suggestions for safety improvement
- Safety audit corrective actions completed on time
- Number of occurrence investigations carried out into the number of reported occurrences

When considering operational safety indicators (as opposed to SMS), examples of these could be established for:

- Monthly/quarterly number of runway incursions per X’000 movements
- Monthly/quarterly number of ground accident/incidents per X’000 movements
- Monthly/quarterly number of bird strikes per X’000 movements

- Monthly/quarterly number of loss of separation in flight per X'000 flights
- Monthly/quarterly number of accidents/incidents in flight per X'000 flights

The last set require high levels of reporting and if achieved, this data can be migrated to operational leading indicators setting performance targets to be achieved by SCAA.

The process for effective use of leading performance indicators can be summarised as:

- Identify main threats to future performance and opportunities for improvement
- Identify actions that can be taken to remove threats or develop opportunities
- Create performance indicators based on the actions to be taken
- Set a performance standard for each indicator
- Monitor performance against the desired standards
- Take corrective actions to improve performance against standards as necessary
- Periodically review linkage between performance against leading indicators and lagging performance indicators
- Once performance standards are met, consider raising the standards required, developing alternative improvement actions, or identifying other threats and opportunities that could be addressed.

Although the Accountable Executive and the Aviation Safety Manager are responsible for the development and establishment of performance indicators, the process must be understood and owned by those who will implement the actions. They must be involved in the process of identifying the actions and setting the performance standards. They must receive regular feedback on their performance against the standards.

Effective use of leading performance indicators can help to take the 'luck' out of safety.

4.4 References

The following documents provide further / related information on Safety performance Monitoring and measurement:

ICAO Doc 9859	Safety Management Manual	Version 3
Euro control	Measuring Operational ANS performance at Airports	09 May 2011

5 SMP 05 - Occurrence Reporting and Investigation

5.1 Overview

The Safety Objective is that all operational and technical occurrences that are considered to have significant safety implications shall be reported and are to be investigated as soon as possible and that any necessary corrective action is taken.

A major source of data used to support safety management processes is occurrence reporting. This may range from the higher consequence occurrences (accidents, serious incidents) to lower consequence events such as operational incidents, system/ equipment failures or defects, etc. SCAA operates a mandatory occurrence reporting scheme (MORS) for the high consequence occurrences which are subject to investigation (see Appendix 4.)

However, a developing safety management environment will encourage the reporting of lower consequence events as well. This procedure establishes the necessary monitoring mechanisms to address all potential high consequence outcomes. The trend (rate of occurrences) of lower consequence events is inevitably a precursor of higher consequence outcomes to come.

All safety significant incidents which do not fall into the high consequence category should be subject to investigation with the objective of not only determining causal and contributory factors but also the uncovering of hazards/threats. The findings and recommendations become significant safety data to be made available for a wider dissemination among operations staff and for use, where applicable, in future hazard identification processes.

5.2 Requirements

Any person employed by SCAA or its contractors is to report any occurrence in which he or she was involved or witnessed and which he or she believes it poses a potential threat to safety or compromises the ability to provide a safe service.

To achieve a good reporting culture requires a high level of trust within SCAA. Senior management is responsible for establishing the foundations of a Just Culture in which SCAA staff are encouraged to make reports on unsafe acts without fear of “punishment’. However it is incumbent on senior management to agree with the operational staff where the line between acceptable and unacceptable behavior is drawn.

Composition of a Safety Investigation Team

All occurrences shall be investigated by an Investigation team comprising of an Investigator in charge, investigator and/or subject experts who shall make recommendations for immediate remedial action if necessary, or to make improvements to existing procedures where required.

The causal and contributory factors identified by the investigation shall be subject to the HIRM process to establish the safety significance of the event and to enable the Safety Manager to collate data to identify possible trends and to determine future performance indicators.

5.3 Process

Reporting Action

When reporting an occurrence, the reporter is to complete one of the following forms found on Safety database (Centrik):

- SR ADR FORM 01 - Aerodrome occurrences
- SR SMDA 1602 - Air Traffic Services occurrences
- SR SMDA 1603 - CNS Engineering occurrences

In accordance with the instructions held on unit. These forms are to be completed when the reporter considers that it meets the requirements of the SCAA Mandatory Reporting Scheme (see Appendix 4 for details of occurrences to be reported).

Action following an Occurrence

When an ATCO is involved in a reportable occurrence, he/she should be relieved as soon as possible in accordance with the requirements of the manual of operations. The same is applied in other departments/section of operations. Where ATC and/or airport equipment, procedures and/or an ATC or Aerodrome service staff acts or omissions have (or may have) contributed to an incident, the Regulator shall be informed and the required actions in line with the SCAA SMS shall be followed. The accountability for notifying the Regulator and the SMS office about the occurrence at the earliest opportunity lies with the Head of the involved Department who shall delegate the responsibility as required.

The Safety Manager should ensure that all occurrences are graded and if required investigated as soon as possible.

Occurrence Severity

1. Each occurrence should be graded according to its severity and the potential outcome and the likelihood of it being repeated. The Safety Manager shall appoint a team to analyse each occurrence for the purpose of grading. This is carried out as a reactive process in the reporting system. In the absence of a digital reporting system, Appendix 5 contains further guidance on establishing the severity significance. All occurrences considered to have significant safety implications should be investigated as soon as possible. The investigation is to make recommendations and propose corrective actions to reduce the probability of the event repeating itself.

   The report and findings are to be passed to the Accountable Executive and the ANS and/or AGA Inspector, together with a record of actions taken to remedy any problems and/or to improve procedures.

Initial Investigation

Following an occurrence, an initial investigation is to be instigated either by the Safety Manager, GMANS, or GMAM. The primary aim of this investigation is establish the facts of the occurrence and identify any obvious shortcomings. The establishment of the Investigation team for the conduct of the investigation shall be the responsibility of GMANS in the event the Safety report originates from ANS and GMAM in the event the Safety report originates from Aerodrome Operations. This investigation is to include reference to all the Contributory Factors shown on form SMF 06. The respective management should not interfere with the investigation process. The investigation report is to be passed to the Safety Manager and the ANS and/or the AGA Inspector as appropriate.

Members of the investigation team should comprise of at least one safety Investigator and other investigation subject experts as deemed required. The investigation team should not be restrictive to the department/section from which the report(s) originate and should be composed of three (3) to five (5) members.

Further Investigation

Dependent on the type of occurrence and the findings of the initial investigation, the Safety Manager in consultation with the Accountable Executive may conduct a further in-depth investigation. The Accountable Executive is responsible to appoint the investigation team. When completed, the Safety Manager shall present the investigation report and findings to the Accountable Executive and to the ANS and/or the AGA Inspector as appropriate.

Safety Monitoring

Any action taken following an occurrence including recommendations for improvement is to be subjected to HIRM assessment (SMP 01) and monitored over a period of six months. Monitoring is to be undertaken by the appropriate Head of Department and reported back to the Safety Review Board.

Lesson Dissemination

All occurrences which raise safety issues should be given as much publicity as possible either internally or externally if considered to be of a wider interest. The decision as whether to disseminate the information lies initially with the Safety Manager and for wider distribution with the Safety Review Board.

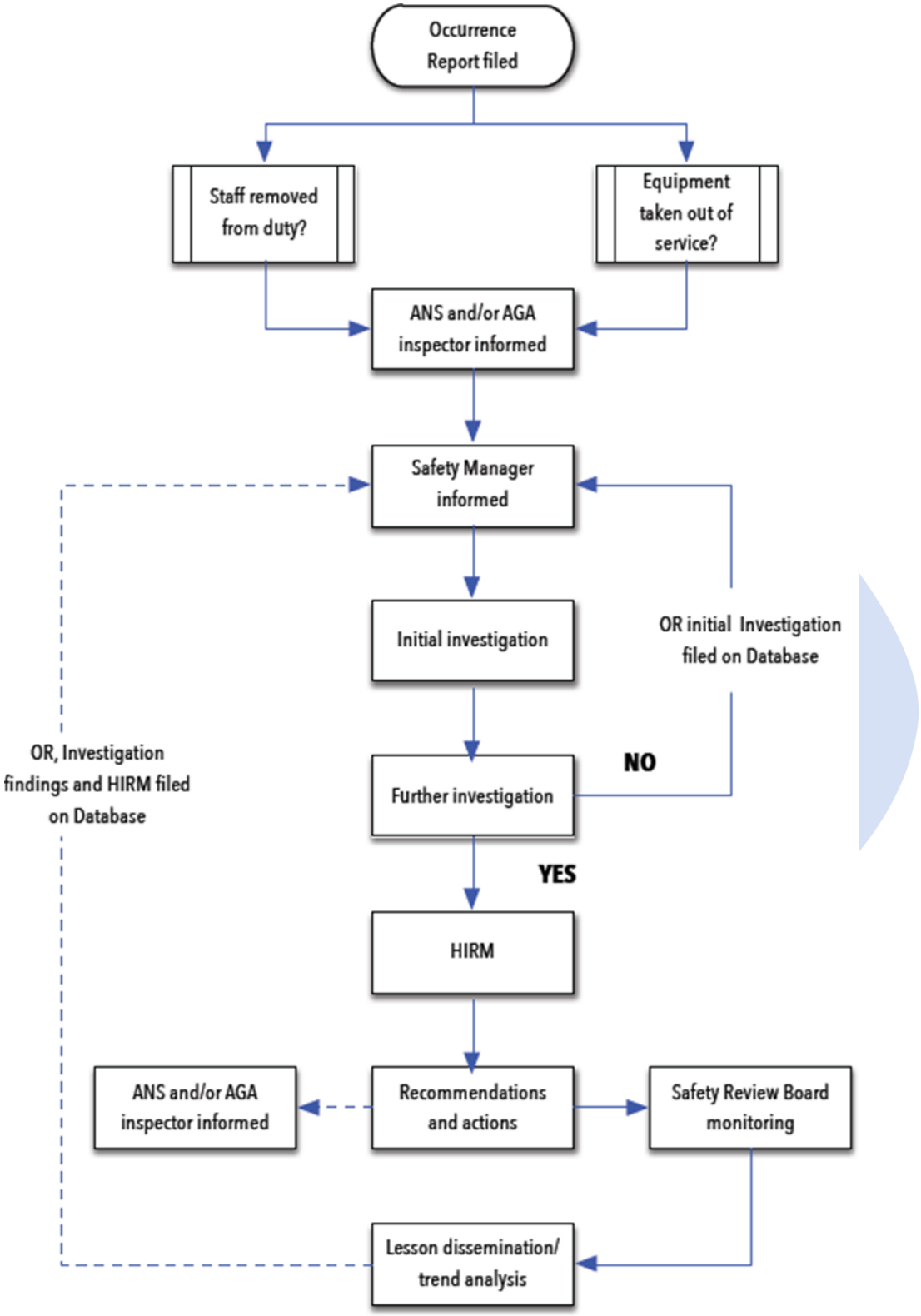


Fig 6 - Occurrence report and investigation flow chart

5.4 References

The following documents provide further / related information on Occurrence Reporting and Investigation:

ICAO Doc 9859	Safety Management Manual	Version 3
DIRECTIVE 2003/42/EC	Regulation on occurrence reporting in civil aviation	13 June 2003
UK CAP 382	Mandatory Occurrence Reporting Scheme	18 March 2011
GAIN Working Group E	A Roadmap to a Just Culture	September 2004
ANNEX 19	Safety Management System	2ND Edition 2016

6 SMP 06 - Safety Audits

6.1 Overview

The Safety Objective is to carry out internal safety audits routinely to:

- **Recommend improvements where needed;**
- **Provide assurance to managers that their safety activities within their areas are meeting the required standards;**
- **To confirm compliance with applicable parts of the SMS and regulatory requirements.**

Audits are an essential part of the safety assurance activities that are required to monitor and evaluate the safety performance of the SCAA operation and of the SCAA SMS. SCAA conducts the airport audit programme at 2 levels:

Level 1: An internal audit in which auditors are to undertake audit tasks as determined by the Safety Manager. Each task is to be recorded on the Audit Form and each non-compliance, together with agreed corrective, is to be recorded separately on the NCR Form.

Level 2: SCAA compliance audit in which auditors (either the Safety Manager or his nominee) are to undertake audit tasks which verify or otherwise that the non- compliances and corrective actions arising from the Level 1 audits have been addressed by the relevant SCAA departments.

The purpose of the SCAA audit programme and procedures for the routine internal audits is to determine whether or not the SMS:

- Conforms to planned arrangements for safety management including the requirements within Safety Management System (this document);
- Has been properly implemented and maintained;
- Is effective in meeting SCAA safety policies and objectives;
- Review the results of previous audits, and
- Provide information on the results of audits to management.

6.2 Requirements

The audit programme shall be based on the results of risk assessments of activities at each airport, the results of previous audits and in taking into account operational experience at similar facilities.

Audit procedures shall cover the scope, frequency, methodologies and competencies, as well as the responsibilities and requirements for conducting audits and reporting results.

Wherever possible, audits shall be conducted by personnel who have received audit training and are independent of those having direct operational responsibility for the activity being examined.

6.3 Process

Annual Audit Programme

Internal safety audits are to be planned and conducted systematically with the least possible disruption to the departments' routine day-to-day operations. The audit programme will ensure core operational components are audited within an agreed timescale.

Each SCAA department shall submit their internal audit programme to the Safety Manager at 4 weeks prior to commencement of the audit year. The audit programme shall systematically cover all elements of the SCAA SMS procedures as implemented by the respective departments.

The Safety Manager will ensure that the departmental audit programmes include each SMS procedure so that the resulting audit findings should present an accurate view of the efficacy of the SCAA SMS methodologies. Any deficiencies can be brought to the attention of the Safety Review Board for further action.

All completed departmental audit documentation is to be copied to the Safety Manager who shall monitor the corrective actions.

Nomination of Auditors

Individuals with appropriate operational experience are selected as auditors following successful completion of a course of audit training and competence assessment prior to carrying out audit duties.

Planning and Notification

The level of audit is to determine the amount of planning required and the time allowed for notification. Level 1 audits conducted within ATS and airport departments require adequate

planning. However, notification can be reasonably short because it is internal and the task will be nominated by the SATCO or Head of Department through the annual audit plan.

Level 2 audits should be more formalised in structure particularly those involving contractors therefore an audit plan dedicated to a specific audit should be produced at least 4 weeks in advance of the audit and include the following:

- Date and time of audit
- Audit objective and scope
- Documents required
- Timetable of audit areas to be sampled
- List of personnel to be interviewed
- Pre-audit meeting to agree with auditee, the scope, criteria, timetable, and audit areas to be covered.
- Arrangements for post audit meeting

Audit Report

On completion of level 1 and 2 audits, the findings are to be recorded on the Audit Form SM F04. All non-conformances are to be recorded separately on the NCR Form SM F05 which also detail the agreed corrective actions.

Audit Findings

The audit findings are to be recorded on the report form and be categorised as conformity, non- conformity or observation.

Non-conformity is defined as an audit finding that identifies areas where national or unit regulations and requirements are not implemented.

An observation is defined as an audit finding not amounting to non-conformity where the interpretation of national or unit regulations or requirements may be in doubt.

Categorisation of Non-Conformities

When the auditor identifies a non-conformity it shall be categorised as follows:

Category	Description	Timescale for Corrective Action
1	Any non-conformity with a regulation, or requirement, or SCAA arrangements or procedures which creates a significant safety hazard.	The timescales for the corrective action must be related to the significance of the safety hazard. This may result in the need for immediate corrective action or corrective action within very short timescales, such as 3 days.
2	Any non-conformity with a regulation or requirement or the SCAA arrangements Or Any shortcoming with SCAA arrangements or procedures which is likely to have a significant or adverse impact on safety.	The auditor and auditee, and if appropriate, in conjunction with Safety Manager, are to agree an appropriate timescale for implementing corrective action which takes account of the potential impact on safety due to the non- conformity.
2*	Any non-conformity with a regulation or requirement or the SCAA arrangements Or Any shortcoming with SCAA arrangements or procedures that may not have a direct impact on safety but must be corrected.	The auditor and auditee, and if appropriate, in conjunction with Safety Manager, are to agree an appropriate timescale for implementing corrective action.
3	Identification of a potential non-conformity or where further information or clarification is required.	Follow up action by the auditee is encouraged. As a minimum an acknowledgement is required in the relevant section of the Audit Report Form.
4	The sample tested was in conformance	No action required

6.4 References

ICAO Doc 9859	Safety Management Manual	Version 3
ISO 9001-2015	Quality Management Systems - Requirements	ISO
ISO 19011 - 2011	Guidelines for auditing management systems	ISO
Euro control EAM1/GUI3	Guidelines for Safety Regulatory Auditing	17 October 2005
ANNEX 19	Safety Management System	2ND Edition 2016

7 SMP 07 - Safety Surveys

7.1 Overview

The Safety Objective is to review a particular area of safety concern where hazards appear, or are suspected.

Safety surveys may also be used as a monitoring tool to confirm that an existing situation is satisfactory.

Safety surveys are one way to systematically examine particular organisational elements or the processes used to perform a specific operation, either generally or from a particular safety perspective. Surveys of operations and facilities can provide management with an indication of the levels of safety and efficiency within its organisation. Understanding the systemic hazards and inherent risks associated with everyday activities allows an organisation to minimise unsafe acts and respond proactively by improving the processes, conditions and other systemic issues that lead to unsafe acts.

Safety surveys can provide a mechanism to obtain significant information regarding many aspects of the organisation, including:

- Perceptions and opinions of operational personnel;
- Level of teamwork and cooperation among various employee groups;
- Problem areas or bottlenecks in daily operations;
- Corporate safety culture;
- Current areas of dissent or confusion; and
- Proposals for solutions from the staff and line management

7.2 Requirements

The Safety Manager is responsible for the planning of Safety Surveys, to this end the Safety Manager shall:

- Publish the annual safety survey programme
- Liaise with individuals nominated as surveyors; and
- Liaise with the Units to be surveyed

With regards to Targeted Safety Surveys, the Safety Manager will have to prepare a detailed plan comprising:

- A thorough description of the safety issue to be addressed;
- A list of sites and persons to be visited/interviewed; and
- Any other information pertinent to the task to be performed.

7.3 Process

The activities associated with safety surveys can span the complete risk management cycle from hazard identification, through risk assessment, to safety oversight. They are most likely to be conducted by organisations that have made the transition from a reactive to a proactive safety culture.

Safety Surveys to be conducted should cover the following ANS/Airport system components and related elements:

- Operations
- Equipment (hardware and software)
- Personnel (training-staffing-etc.)
- Environment
- Relations with users
- SCAA Safety culture

The Safety Manager shall take these components into account when planning the SCAA Safety Survey programme. It should be noted that the Safety Review Board may from time to time direct the Safety Manager to implement a survey on a safety issue which has given concern during their review of the safety data.

Safety Survey Team

The Safety Manager shall identify individuals that have the required personal traits, motivation and experience and following acceptance by those individuals, make arrangements for training and participation in safety surveys.

Surveys are conducted as part time work, i.e. surveyors are taken (within the pool of trained surveyors) from their departments after prior coordination with the Heads of Units. Randomly selecting those to be surveyed will reduce the risks of bias in information collected.

Report Content

The gathering and analysis of the information, development of the recommendations and preparation of the final report of a survey will take time. It is therefore desirable to conduct a brief review with those responsible as soon as the survey has been completed. If any conclusions are immediately obvious, they should be discussed informally and if safety critical, the team leader should advise the Safety Manager as soon as possible and prior to the completion of the survey report.

During the survey, the team may identify hazards or make recommendations for improvement. In the first cases, a risk assessment is to be carried out using SMP 01.The assessment needs to consider the potential consequences on the air and ground elements attributable to the identified hazards.

Recommendations should be practical and within the scope and ability of SCAA to act upon. Sensitive issues must not be avoided, but the team should exercise care to ensure that they are presented in a fair, constructive and diplomatic manner.

The final report is to contain the following:

- Introduction
- Objective
- Scope
- Standards to be compared against
- Methodology used in the survey
- Details of the survey
- Risk assessments where applicable
- Conclusions
- Result of the survey and recommendations

There are no standard forms associated with this process, however the final report will follow the format above.

Each Safety Survey is to be presented for review by the Safety Review Board

7.4 References

The following documents provide further / related information on Safety Surveys

ICAO Doc 9859	Safety Management Manual	Version 3
Euro control	Euro control Generic Safety Management Manual (EGSMM)	2 October 2009
Regulation (EU) No 1035/2011	Provision of Air Navigation Services	17 October 2011

8 SMP 08 - Safety Related Committees

8.1 Overview

The Safety Objective is

- **To assess the effectiveness and efficiency of any mitigation strategies used to achieve the agreed safety performance targets for SCAA**
- **To co-ordinate the implementation of safety strategies throughout SCAA**

Through the safety monitoring and collection processes, significant amounts of useful safety data will be produced to enable senior SCAA managers determine the effectiveness of the SMS implementation plan and capability to monitor safety performance.

This data generally requires some analysis before it can be presented to the various safety committees. This task will normally be of the safety manager's responsibilities. There are two levels of committee, the high level one known as the Safety Review Board (SRB) and a second level, Safety Action Group (SAG). In terms of function, the SRB is considered to be a high level strategic committee whereas the SAG is tactical and deals with implementation issues to meet the directives of the SRB.

8.2 Requirements

As part of the safety performance monitoring and safety assurance processes, the collection and analysis of safety data on hazards, and the distribution of safety information on hazards and the safety risks of the consequences of hazards is effected through the safety committees, SRB and SAG. These committees are required to meet at regular intervals or whenever there are exceptional circumstances.

8.3 Process

The SRB is a high-level committee, chaired by the Accountable Executive and composed of senior managers, including line managers responsible for functional areas. Although the safety manager participates in the SRB in an advisory capacity only, he/she is responsible for collating the necessary data and producing it in a concise, logical and coherent manner. The SRB is eminently strategic, deals with high-level issues in relation to policies, resource allocation and organisational performance monitoring, and meets annually, unless exceptional circumstances dictate otherwise.

The SRB:

- Monitors the effectiveness of the SMS implementation plan;
- Monitors that any necessary corrective action is taken in a timely manner;

- Monitors safety performance against the SCAA safety policy and objectives;
- Monitors the effectiveness of the SCAA safety management processes which support the declared corporate priority of safety management as another core business process;
- Monitors the effectiveness of the safety supervision of subcontracted operations;
- Ensures that appropriate resources are allocated to achieve safety performance beyond that required by regulatory compliance; and
- Gives strategic direction to the SAG.

In addition to his/her responsibilities, the Safety Manager will act as Secretary to the SRB, taking and circulating the committee meeting minutes.

The SAG is composed of line managers and front-line personnel and are normally chaired by a designated line manager. The safety manager will attend by invitation only. The SAG is tactical entity that deals with specific implementation issues per the direction of the SRB.

The SAG has the following objectives:

- To comply with any strategic directives issued by SRB
- To promote a safe airside environment at the Airport;
- To review operational safety matters;
- To promote the continuous improvement culture in safety matters;
- To promote effective liaison between all parties involved at the airport.

At every meeting the committee will review:

- Any Accident or Incident reports and investigations that have occurred;
- Any Safety Issues that have been reported;
- Any new or existing risks assessments and mitigations relating to the Airport to ensure they remain valid and that they are prioritised according to their level of consequence;
- Proposed updates/amendments to procedures;
- Safety issues arising from external sources

In addition on an annual basis the committee will:

- Review the Aerodrome Emergency Plan;
- Review the Aerodrome Manual and ATC Local Instructions
- Participate in safety audits as required including follow up of non-compliances and observations
- Participate in the planning and organizing of Emergency Exercises.

Where appropriate the committee will bring safety issues to the attention of the ANS and/or AGA Inspectors.

Minutes of SAG meetings shall be produced and circulated to all committee members as well as the SCAA Safety Manager

Runway Safety Team: The Safety Manager shall ensure that the Runway Safety Team is in place and functioning.

8.4 References

The following documents provide further / related information on Safety Related Committees

ICAO Doc 9859	Safety Management Manual	Version 3

9 SMP 09 - Training and Competence

9.1 Overview

The Safety Objective is to ensure that all SCAA management and operations staff are adequately trained and competent to:

- Perform their SMS duties
- Perform their professional specialisations

The human component is essential to the aviation system. Humans have unrivalled abilities such as the ability to learn how to perform challenging tasks under time pressure. However they also have weaknesses such as humans are prone to slips and lapses especially under stress or high workload. Therefore, there is a need to verify at regular intervals that operators keep the knowledge, understanding and skills that their own job responsibilities and accountabilities require.

The purpose of staff training and competency management is to enable all those engaged in work within SCAA to:

- Safely and competently carry out their work responsibilities;
- Comply with relevant provisions of the SCAA Safety Management System;
- Comply with any statutory training or licensing requirements;
- Comply with SCAA OHS (Organisational Health and Safety) training requirements;
- Ensure the safety of all users of the airports and the surrounding airspace.

9.2 Requirements

All staff prior to working either airside or within ATC are required to have completed training courses to a satisfactory standard and where applicable, hold a license or certificate issued by the regulatory authority. Before operating without supervision, staff must have been assessed as competent to perform those duties for which they are trained by an approved assessor or examiner.

To ensure continuing competence, all staff shall receive regular refresher training in all matters relevant to their duties, both in normal roles and any roles for which they might act as deputies.

All staff shall have SMS training appropriate to their level of safety accountability and responsibility.

9.3 Process

The Head of each SCAA Department is responsible for ensuring that all staff are suitably trained and qualified. A detailed list of staff training requirements shall be maintained by the departmental training

officer. All staff shall receive initial and regular refresher training in all matters relevant to their duties, both in normal roles and any roles for which they might act as deputies. All training undertaken shall be recorded in an individual's staff training record.

On an annual basis the Head of Department shall ensure that an Assessment of Training Needs is conducted for all staff. Individual line managers will normally undertake this. This Assessment will identify any training required to enable staff to work safely and to support SCAA's efforts to maintain a safe place of work.

The assessment will take into account matters including:

- Duties and responsibilities, including any changes
- Mandatory legal training requirements.
- Statutory licensing requirements
- Known or anticipated workplace risks.
- Plant, machinery or other equipment used.
- Organisational requirements.
- Prior training, skills and experience. Staff training and records will be checked by internal and external audits on a regular basis. The Safety Manager shall be responsible for the scheduling and completion of such audits.

9.4 References

The following documents provide further / related information on Training and Competence

ICAO Doc 9859	Safety Management Manual	Version 3
ANNEX 19	Safety Management System	2ND Edition 2016

10 SMP 10 - External Services

10.1 Overview

The Safety Objective is that the performance of any contractor shall meet the SCAA safety performance requirements. A contractor could be either a person or company that has been awarded a contract to provide a service or a product

It is essential for SCAA SMS to interact as seamlessly as possible with the safety systems of subcontractors that provide products or services pertinent to the safe operation of aircraft. The interface between the SCAA SMS and that of the sub-product or sub-service provider's safety systems must address the identification of hazards, assessment of risk and development of risk mitigation strategies where applicable.

10.2 Requirements

Before contracting external services, the SCAA management should ensure that:

- There is a policy clearly establishing a safety accountability and authority flow between SCAA and the subcontractor;
- The subcontractor has a safety reporting system commensurate with its size and complexity that facilitates the early identification of hazards and systemic failures of concern to the SCAA;
- The SCAA safety review board includes subcontractor representation, where appropriate;
- Safety/quality indicators to monitor subcontractor performance are developed, where appropriate;
- The SCAA safety promotion process ensures subcontractor employees are provided with the SCAA applicable safety communications; and
- Any subcontractor roles, responsibilities and functions relevant to the SCAA emergency response plan are developed and tested.

10.3 Process

The provision of external works and services requires that:

- All products and services provided by contractors shall be supplied in accordance with a SCAA Requirement specification;
- All proposed work shall have a method statement or description of intended work, approved by SCAA;
- All proposed work shall be risk assessed and approved by SCAA; and
- All external services provided shall have a Transition Plan approved by SCAA.

The transition plan shall include details of, inter alia:

- Requirement and description for the service
- Work schedule
- Risk assessments and method statements
- Operational impact assessment
- Training requirements for working airside.
- Emergency strategies and training.
- Daily safety briefings.
- Designated coordinator for the services provided.

- List of safety accountabilities and responsibilities
- Communication strategy and contact details.
- Procedural changes and their implementation.
- Safety audit strategy to assess the safety performance of external service providers.

All external services and products shall be audited by SCAA against the requirement specification and whether fit for purpose.

10.4 References

The following documents provide further / related information on External Services

ICAO Doc 9859	Safety Management Manual	Version 3
UK CAP 642	Airside Safety Management	28 February 2003

11 SMP 11 - Safety Training and Education

11.1 Overview

The Safety Objective is to:

- **Develop and maintain a safety training programme that ensures that personnel are trained and competent to perform their SMS duties.**
- **To ensure that the scope of the safety training programme shall be appropriate to each individual's involvement in the SMS.**

Safety promotion is one of the four components of the ICAO SMS model. For the purposes of the SCAA SMS, this component is divided into two elements:

- Safety Training and Education, and
- Safety Communication

Safety promotion encourages a positive safety culture, and creates an environment that is conducive to achievement of the service provider's safety objectives. This is achieved through the combination of technical competence that is continually enhanced through training and education, effective communications, and information sharing. Senior management provides the leadership to promote the safety culture throughout an organisation.

11.2 Requirements

To meet the ICAO requirement, SCAA shall develop and maintain a SMS training programme that ensures that personnel are trained and competent to perform the SMS duties. The scope of the training shall be appropriate to each individual's involvement in the SMS.

All levels of SCAA staff with safety related tasks are required to undergo such training, appropriate to their company position, to ensure a level of competency to undertake SMS procedures when required.

11.3 Process

The provision of training to aviation staff, regardless of their level in SCAA, is an indication of management's commitment to an effective SMS. SMS training and education syllabus should consist of the following:

- SCAA safety policies, goals and objectives
- SCAA safety roles and responsibilities related to safety;
- Basic safety risk management principles;

- Safety reporting systems;
- Safety management support (including evaluation and audit programmes);
- Lines of communication for dissemination of safety information;
- A validation process that measures the effectiveness of training;
- Documented training needs and recurrent training requirements;

Training requirements consistent with the needs and complexity of the SCAA operation should be documented for each area of activity. Heads of Department shall maintain a record of the safety training needs for all personnel within their department and encourage further advanced training as and when required. All new recruits are required to carry out introductory SMS as soon as possible after arrival.

The Safety Manager is responsible, in co-operation with the Heads of Department and SCAA Training Manager to identify the Safety Management training needs of SCAA staff and develop an appropriate SMS training to match individuals appropriate to their duties.

Certain staff may be selected to undertake specialist SMS procedures. The Safety Manager will arrange such courses as required. These will include, inter alia:

- Hazard identification and Risk Management
- Safety Case development
- Safety Audit
- Occurrence Reporting and Safety Investigation

11.4 References

The following documents provide further / related information on Safety Training and Education

ICAO Doc 9859	Safety Management Manual	Version 3
ANNEX 19	Safety Management System	2ND Edition 2016

12 SMP 12 - Safety Communication

12.1 Overview

The Safety Objective is that SCAA shall develop and maintain formal means for safety communication that:

- Ensures personnel are aware of the SMS to a degree commensurate with their positions;
- Conveys safety-critical information;
- Explains why particular safety actions are taken; and
- Explains why safety procedures are introduced or changed

One of the primary means for improving safety performance is to ensure that lessons learnt from its safety occurrence investigations, and the case histories or experience from other organisations, are distributed widely and, where appropriate, actioned to minimise the risk of recurrence. Including the results of such lessons in training programmes will raise staff awareness levels.

12.2 Requirements

SCAA must ensure that all information in whatever media format, related to the SCAA SMS and/or safety related topics affecting the SCAA operations, is made available to SCAA staff, contractors and other airport stakeholders.

12.3 Process

Safety information is available from many sources including the Safety Management Manual, incident reports and investigations, and safety recommendations made from audits, surveys, reviews and external bodies such as the accident investigation boards and other civil aviation authorities, providers and operators. The means of processing this information is through various channels including:

- Safety Action Group – The committee will meet regularly and provide a forum where issues can be discussed and resolved together with airport stakeholders.
- Intranet - SCAA staff and contractors will have access to SCAA policies and documentation via the SCAA intranet.
- Safety Notice Boards - these are used to display safety information, posters, bulletins etc. in a centralised location in each airport department.
- Notices and Warnings - these include regulatory notices such as video surveillance advice and emergency exits signs.

- Safety Bulletins - these might include changes to procedures and operations or advice on specific safety related matters.
- Video Screens - these are installed in the airport buildings and can be used to display safety information
- Newsletters - these can be published internally and distributed either electronically or in hard copy

In addition to these forms of communication, a SCAA safety library is to be established to keep all information relating to SCAA activities in a central and accessible area. The library will also contain aviation literature and information from external sources. The Safety Manager will be responsible for development and maintenance of the library.

12.4 References

The following documents provide further / related information on Safety Communication

ICAO Doc 9859	Safety Management Manual	Version 3
ANNEX 19	Safety Management System	2ND Edition 2016

APPENDICES

APPENDIX 1 – SCAA Senior management Safety Accountabilities and Responsibilities

Signed copies are kept and documented by the Safety Manager, scanned signed copies located

Safety Accountabilities and Responsibilities General Manager Air Navigation Services

The GM ANS is accountable to the Accountable Executive for the safety performance of the ANS Division in that it meets, or improves on, the acceptable level of safety as determined by the SCAA Safety Review Board (SRB) through the establishment of agreed Safety Performance Targets (SPT) and Safety Performance Indicators (SPIs).

The GM ANS is responsible to:

- Ensure that safety is given the highest priority in the ANS Division and that risk to aircraft and associated operations is reduced to an acceptable level through the application of the SCAA Policy and Procedures;
- Define clearly for all ANS Divisional managers and staff their safety accountabilities and responsibilities for the conduct and delivery of safe practices and procedures;
- Ensure that sufficient skilled, trained, and competent (licensed where applicable) staff are available to undertake Departmental operations and tasks in a safe and efficient manner **(SMP09)**
- Provide Departmental staff, in conjunction with the SCAA Safety Manager, adequate and appropriate Safety management training and safety information to enable them to carry out safety activities in accordance with the SCAA SMS **(SMP11);**
- Ensure that all changes to ANS Divisional equipment, procedures and organisation are subject to formal safety assessment and risk reduction measures and, where applicable, regulatory approval obtained before being put into operation **(SMP 02/03);**
- Establish a culture which enables positive reporting through a transparent application of a Just Culture in which reporters can expect a high level of trust without fear of punishment subject only to the clearly defined line between acceptable and unacceptable behavior(SMS App 4);
- Ensure that all safety related incidents are investigated and any findings and recommendations are made widely available to foster a learning culture for benefit of safe practice within and external to the ANS Division using facilities available through the SCAA Safety Manager **(SMP05)**;
- Ensure that whenever contractors and non-SCAA entities are employed for Departmental tasks and assistance that they are clear about their safety responsibilities and the requirement to comply with the SCAA SMS policy and procedures **(SMP10);** and
- Provide adequate support and resources to the ANS Division Safety Co-coordinators to enable them to fulfil their safety tasks on behalf of the ANS Division.

Esmee Samson

General Manager

ANS Department

Safety Accountabilities and Responsibilities General Manager Airport Management (GMAM)

The GMAM is accountable to the Accountable Executive for the safety performance of the Operations Department in that it meets, or improves on, the acceptable level of safety as determined by the SCAA Safety Review Board (SRB) through the establishment of agreed Safety Performance Targets (SPT) and Safety Performance Indicators (SPI).

The GM Operations is responsible to:

- Ensure that safety is given the highest priority in the Operations Department and that risk to aircraft and associated operations is reduced to an acceptable level through the application of the SCAA Policy and Procedures;
- Define clearly for all Operations Departmental managers and staff their safety accountabilities and responsibilities for the conduct and delivery of safe practices and procedures;
- Ensure that sufficient skilled, trained, and competent (licensed where applicable) staff are available to undertake Departmental operations and tasks in a safe and efficient manner **(SMP09);**
- Provide Departmental staff, in conjunction with the SCAA Safety Manager, adequate and appropriate training and safety information to enable them to carry out safety activities in accordance with the SCAA SMS **(SMP11);**
- Ensure that all changes to Operations Departmental equipment, procedures and organisation are subject to formal safety assessment and risk reduction measures and, where applicable, regulatory approval obtained before being put into operation **(SMP 02/03**);
- Establish a culture which enables positive reporting through a transparent application of a Just Culture in which reporters can expect a high level of trust without fear of punishment subject only to the clearly defined line between acceptable and unacceptable behavior(SMS App 4);
- Ensure that all safety related incidents are investigated and any findings and recommendations are made widely available to foster a learning culture for benefit of safe practice within and external to the Operations Department using facilities available through the SCAA Safety Manager **(SMP05**);
- Ensure that whenever contractors and non SCAA entities are employed for Departmental tasks and assistance that they are clear about their safety responsibilities and the requirement to comply with the SCAA SMS policy and procedures **(SMP10);** and
- Provide adequate support and resources to the Operations Department Safety Co-coordinator to enable him/her to fulfil his/her safety tasks on behalf of the Operations Department.

Colin Chang Tave

General Manager Airport Operations

Safety Accountabilities and Responsibilities (Praslin Airport Manager)

The Praslin Airport Manager is accountable to the Accountable Executive for the safety performance of the Praslin Airport in that it meets, or improves on, the acceptable level of safety as determined by the SCAA Safety Review Board (SRB) through the establishment of agreed Safety Performance Targets (SPT) and Safety Performance Indicators (SPI).

The Praslin Airport Manager is responsible to:

- Ensure that safety is given the highest priority at Praslin Airport and that risk to aircraft and associated operations is reduced to an acceptable level through the application of the SCAA Policy and Procedures;
- In collaboration with appropriate SCAA department Head, define clearly for all Praslin Unit supervisors and staff their safety accountabilities and responsibilities for the conduct and delivery of safe practices and procedures;
- Ensure that sufficient skilled, trained, and competent (licensed where applicable) staff are available to undertake Praslin Airport operations and tasks in a safe and efficient manner (SMP09);
- Provide Praslin Airport staff, in conjunction with the SCAA Safety Manager, adequate and appropriate training and safety information to enable them to carry out safety activities in accordance with the SCAA SMS (SMP11);
- Ensure that all changes to Praslin Airport equipment, procedures and organisation are subject to formal safety assessment and risk reduction measures and, where applicable, regulatory approval obtained before being put into operation(SMP 02/03);
- Establish a culture which enables positive reporting through a transparent application of a Just Culture in which reporters can expect a high level of trust without fear of punishment subject only to the clearly defined line between acceptable and unacceptable behavior(SMS App 4);
- Ensure that all safety related incidents are investigated and any findings and recommendations are made widely available to foster a learning culture for benefit of safe practice within and external to the Operations Department using facilities available through the SCAA Safety Manager (SMP05);
- Establish, in conjunction with Praslin Airport Safety Co-coordinator and the SCAA Safety Manager, a safety auditing plan to identify any non- conformities with the SCAA SMS and carry out corrective actions, if any, promptly and effectively (SMP06);
- Ensure that whenever contractors and non SCAA entities are employed for the airport tasks and assistance that they are clear about their safety responsibilities and the requirement to comply with the SCAA SMS policy and procedures (SMP10); and
- Provide adequate support and resources to the Praslin Airport Safety Co-coordinator to enable him/her to fulfil his/her safety tasks on behalf of the Praslin Airport.

Tony Larue

Acting Airport Manager (Praslin)

SCAA

Safety Accountabilities and Responsibilities (GM ETS)

The GM Engineering &Technical Services is accountable to the Accountable Executive for the safety performance of the ETS Department in that it meets, or improves on, the acceptable level of safety as determined by the SCAA Safety Review Board (SRB) through the establishment of agreed Safety Performance Targets (SPT) and Safety Performance Indicators (SPI).

The GM ETS is responsible to:

- Ensure that safety is given the highest priority in the ETS Department and that risk to aircraft and associated operations is reduced to an acceptable level through the application of the SCAA Policy and Procedures;
- Define clearly for all ETS Departmental managers and staff their safety accountabilities and responsibilities for the conduct and delivery of safe practices and procedures;
- Ensure that sufficient skilled, trained, and competent (licensed where applicable) staff are available to undertake Departmental operations and tasks in a safe and efficient manner **(SMP09**);
- Provide Departmental staff, in conjunction with the SCAA Safety Manager, adequate and appropriate training and safety information to enable them to carry out safety activities in accordance with the SCAA SMS **(SMP11);**
- Ensure that all changes to ETS Departmental equipment, procedures and organisation are subject to formal safety assessment and risk reduction measures and, where applicable, regulatory approval obtained before being put into operation **(SMP 02/03);**
- Establish a culture which enables positive reporting through a transparent application of a Just Culture in which reporters can expect a high level of trust without fear of punishment subject only to the clearly defined line between acceptable and unacceptable behavior(SMS App 4);
- Ensure that all safety related incidents are investigated and any findings and recommendations are made widely available to foster a learning culture for benefit of safe practice within and external to the ETS Department using facilities available through the SCAA Safety Manager **(SMP05**);
- Ensure that whenever contractors and none SCAA entities are employed for Departmental tasks and assistance that they are clear about their safety responsibilities and the requirement to comply with the SCAA SMS policy and procedures **(SMP10);** and
- Provide adequate support and resources to the ETS Department Safety Co-coordinator to enable him/her to fulfil his/her safety tasks on behalf of the ETS Department.

Darel Boniface

General Manager

ETS Department

SCAA

Safety Accountabilities and Responsibilities (General Manager Human Resources/Administration)

GMHRA is accountable to the Accountable Executive for allocation of Human resources for SCAA Operations and Safety Management programmes to ensure that operational safety risks are kept at the acceptable level of safety as determined by the SCAA Safety Review Board (SRB) through the establishment of agreed Safety Performance Targets (SPT) and Safety Performance Indicators (SPI).

The GM HR/A is responsible to:

- Ensure that safety is given the highest priority in the organisation and adequate human resources are available and for provision of Air Navigation Services and Aerodrome Operations.
- Provide adequate support and resources to the implementation of SCAA Safety Management system
- Ensure that sufficient skilled, trained, and competent (licensed where applicable) staff are available to undertake operational tasks in a safe and efficient manner **(SMP09);**
- Provide Departmental staff, in conjunction with the SCAA Safety Manager, adequate and appropriate training and safety information to enable them to carry out safety activities in accordance with the SCAA SMS **(SMP11**);
- Support the establishment of a culture which enables positive reporting through a transparent application of a Just Culture in which reporters can expect a high level of trust without fear of punishment subject only to the clearly defined line between acceptable and unacceptable behavior **(SMS App 4**);
- Ensure that whenever contractors and non-SCAA entities are employed for Departmental tasks and assistance or delivering a service on the airport related to aircraft operations, that they are clear about their safety responsibilities and the requirement to comply with the SCAA SMS policy and relevant procedures **(SMP10);**

Lorella Uranie

General Manager

Human Resources/ Administration

Safety Accountabilities and Responsibilities Chief Finance Officer

The Chief Finance Officer (CFO) is accountable to the Accountable Executive for allocation of resources for SCAA Safety Management programmes to ensure that operational safety risks are kept at the acceptable level of safety as determined by the SCAA Safety Review Board (SRB) through the establishment of agreed Safety Performance Targets (SPT) and Safety Performance Indicators (SPI).

FC is responsible to:

- Ensure that safety is given the highest priority in SCAA Budget allocation so that risks to aircraft and associated operations are reduced to an acceptable level through the application of the SCAA Policy and Procedures;
- Provide adequate resources to facilitate Safety training and dissemination of safety information in accordance with the SCAA SMS
- Ensure that safety performance standards are included in contracts awarded for externally supplied systems and services to support our operations.

Chief Finance Officer

Finance Department

SCAA

APPENDIX 2 - SMS Forms - In the event of unserviceability of the Centrik System, Manual forms (SMFs) are to be used to Document the HIRM/Audit and safety Investigation Processes.

SMF 01 - Hazard Log

<table>
<tr><td colspan="6">HAZARD LOG</td></tr>
<tr><td colspan="3">System or Procedure</td><td colspan="3">Proposed Start date</td></tr>
<tr><td>Hazard Ref:</td><td colspan="2">Hazard Ref:</td><td colspan="3">Date of Assessment</td></tr>
<tr><td colspan="6">Hazard Description</td></tr>
<tr><td colspan="6">Hazard Cause</td></tr>
<tr><td colspan="6">Hazard Consequence</td></tr>
<tr><td colspan="6">Existing Mitigations</td></tr>
<tr><td colspan="3">Hazard Severity</td><td colspan="3"></td></tr>
<tr><td colspan="3">Hazard Probability</td><td colspan="3"></td></tr>
<tr><td colspan="3">RISK CLASSIFICATION</td><td>Acceptable</td><td>Review</td><td>Unacceptable</td></tr>
<tr><td colspan="6">Further Action/Mitigation if required</td></tr>
<tr><td colspan="3">Hazard Severity</td><td colspan="3"></td></tr>
<tr><td colspan="3">Hazard Probability</td><td colspan="3"></td></tr>
<tr><td colspan="3">RISK CLASSIFICATION</td><td>Acceptable</td><td>Review</td><td>Unacceptable</td></tr>
<tr><td colspan="3">Action Taken</td><td colspan="3">Date</td></tr>
<tr><td colspan="3">Assessor(s) 1.
2.</td><td colspan="3">Signature</td></tr>
<tr><td colspan="2">Management Sign Off Name:</td><td colspan="2">Signature:</td><td colspan="2">Date:</td></tr>
<tr><td colspan="6">Continuation Sheet (Yes or No)</td></tr>
</table>

SMF02 - Change Procedure Form

CHANGE MANAGEMENT – PERSONNEL/ORGANISATION		Change Ref:
CATEGORY OF CHANGE Details to be entered in the white	Post holder Accountabilities and/or Responsibilities to be changed Organisation	
Reasons for change		
Effective date for change		
New Post holder New Accountabilities and/or Responsibilities New organisation		
New Post holder's Competence, Experience and Qualifications		
New Post holder Safety Accountabilities and Responsibilities (as detailed in SMS)		
New Post holder Competencies (if appropriate)		
Risk Assessment for all changes Name(s) of Assessor(s) to be entered in box.		

Hazard		Risk	Mitigations
Haz 1			
Haz 2			
Haz 3			

(List all hazards as required)

Gap analysis (with reference to Mitigations arising from RA).		
Justifications for change		
Recommendations		
Change Proposer	Name and Position	
	Signature	
	Date	
Accountable Executive Comments		
Approved/Not Approved Acc Exec	Name	

SMF03 - Change Procedure Systems Form

CHANGE MANAGEMENT –SYSTEMS		Change Ref:
CHANGE DESCRIPTION Details to be entered in the white boxes		
Reasons and Justification for change		
Effective date for change		
Notify ANS/AGA Inspector of planned change Name and Date		
Risk Assessment for all changes (following Steps in SMP 01). Name(s) of Assessor(s) to be entered in box.		
Risk Assessment and Mitigation using procedure and detailed on Form SMF01 (attached as an appendix to this form).		
Actions arising from mitigations and safety requirements.		
Verification of actions/Mitigation(s) sign off (if required) Assessor(s) Name(s)		
Document Impact	SI/TOI required? ATC orders? Aerodrome Manual? Other documents?	
Change Proposer	Name and Position	
	Signature	
	Date	
Accountable Executive Comments		
Approved/Not Approved Acc Exec	Name	
	Signature	
	Date	
Submission of documents to SRD Date sent		
ANS/AGA Inspector Acceptance Date Date		
Implementation Date		
Date for System Change Review		

SMF 04 - Audit Form

Location:	Audit Reference/Date:
Audit Scope:	
Auditor Name:	Auditee Name:
Standard/Procedures Audited;	

NCR/Observations Summary

NCR No	Category	NCR No	Category	Obs No.	Obs No.	Obs No.	Review Date

Audit Comments (summary of audit):	
Auditor's Findings:	NCR no.
Auditors Signature:	Date of Report:

Distribution: Delete as applicable	*Auditee	*Dept. Mgr.			

Audit Findings (cont.)	NCR No.

SMF 05 - Non-conformity Audit Report Form

NCR/ Obs No

Audit date *		Linked NCR No*	
Audit No*		Audit No*	

Description of Non Conformity/Observation	
Recommended/Agreed Corrective Action	
Latest date for completion of action:	
Auditor/Originator:	Signed:
Auditee*	Signed:
Note: Signature of Auditor and Auditee required if NCR/Observation is raised by audit, otherwise just signature of originator of NCR.	

To be completed by the recipient of the non-Conformity/observation report form

The action is now complete/reference documents attached.....delete as appropriate	
Signed:	Date:

On completion, this form and any reference documents are to be returned to the originator.

The action taken has been verified as satisfactory/unsatisfactory - delete as appropriate Comments as required:			
Signed			Date
Further NCR raised?	Yes/No ...delete as appropriate	Serial Number of new NCR	

Copy to recipient of NCR. Original to file.

SMF06 - Occurrence Investigation Form

SMF 06 - OCCURRENCE INVESTIGATION FORM		
This is SCAA investigation into an occurrence as detailed below.		
Ref:	Occurrence Details	Date of Occurrence
Investigator(s)	Name(s)	Job Title(s)
Date of Investigation		
Documentation provided as evidence		
Tape Transcript		
Occurrence Report		
Written Reports from involved persons		
Copy of relevant flights strips (ATC only)		
Copy of relevant Watch Log entries		
Relevant Meteorological reports		
Relevant pages/instructions from unit documents		
Aircrew report		
Other (details)		
Frequencies (if appropriate)		
ATC/Ground/RFFS		
Sequence of Events - reconstruction of occurrence using all available evidence		
Diagram - include photos/drawings (supporting evidence)		

Investigation - analysis of event evidence	
Initiating event	
Examination of the initiating event factors	
Identification of recovery factors	
Failure of recovery factors	
Operational Factors	
Other factors	
Contributory Factors	
Staffing - A report of staffing and how long the personnel had been on duty; plus any other factors which have contributed to the individual(s) performance	
Workload – An indication of the traffic density /complexity/environmental factors and whether this was a contributing factor in the incident	
Flight Progress Strip (FPS) Board Management – Details of whether strips were correctly marked etc. and whether this was a factor in the incident (ATC only)	
Post Incident Action Taken Actions of staff post incident. Subsequent actions taken e.g. were they relieved from operational duty pending investigation	
Equipment – Any equipment factors that may have contributed to the incident	
Other – Any other factors that may have contributed to the incident	
Conclusion The findings of the investigation allocating causal and contributory factors as required	

Recommendations Actions to be taken e.g. debriefing, period of retraining, competence assessment, modification or introduction of new procedures, safety promotion and communication	

The contents of this Occurrence Investigation Report are a true and accurate record of the findings of the Incident Investigation Board

Investigator(s) Names	Signature	Date

Head of Department Acceptance/Non Acceptance (Reasons for Decision)
Report Accepted/Not Accepted

Accountable Executive Acceptance/Non Acceptance (Reasons for Decision)
Report Accepted/Not Accepted

Implementation of Recommendations	
Recommendation Action	Time to be completed

Recommendations Completed Sign off by Safety Manager

Name	Signature	Date

SMF 06A RTF Transcript				
Occurrence Reference				
Date/Time	Aircraft or Vehicle C/S	Receiving unit ID	Details	Remarks

SMF 06B Ground Comms. Transcript				
Occurrence Reference				
Date/Time	Aircraft or Vehicle C/S	Receiving unit ID	Details	Remarks

I verify that the above transcript is a true and accurate record of the RT and Ground communications recordings as heard		
Name	Signature	Date

APPENDIX 3 – SAFETY CASE GUIDANCE

1 Introduction

The ANSP and/or the Aerodrome Operator may decide that the best way to provide assurance that the operation is safe is to present safety assurance documentation in the form of a Unit Safety Case. This documentation contains argument and evidence that the unit meets or exceeds the appropriate standard of safety. Unit safety assurance documentation will be supported by individual safety documentation that describes projects or changes which occur during the lifetime of the unit.

Contents of Unit Safety Case

Current Operations

The current operations of the unit should be described in the Unit safety assurance documentation. The purpose of this documentation is to provide assurance that the operations are safe and will continue to be safe.

The documentation is used for managing operational safety. It may be accepted by the regulator as a prime regulatory document within the context of a formal SMS.

In order to provide the necessary assurance, the documentation should present evidence and arguments that demonstrate the safety adequacy of existing operations for their role. The following areas should be addressed:

i. SMS
ii. Description of operation
iii. Safety assessment of operation
iv. Compliance with regulations
v. Safety performance
vi. Operational procedures
vii. Safety accountabilities
viii. Safety communications

2 Project Safety Case

Safety Related Changes to Current Operations

Changes to the current operations, which may have an impact on the safe operation of SCAA service provision, should be notified to the ANS and/or AGA Inspector. These changes will be the subject of a separate safety case

and will become part of the overall Unit Safety Case. The following illustrates but is not limited to, the anticipated activities requiring such notification:

i. The installation and commissioning of a system

ii. A modification to a piece of equipment which is in service

iii. A change to maintenance arrangements

iv. The withdrawal of a service or facility

v. The introduction of a new, or a change to an existing, ATS procedure

The safety assurance documentation supporting the proposed activity should consider all aspects of the proposal, from inception through to routine operational use. Typically the following areas should be considered:

i. The identification of operational and functional requirements

ii. The management of the implementation of the activity;

iii. The completion of a risk assessment and identification of the safety requirements to be satisfied. The presentation of evidence that the system design will achieve the safety, operational and functional requirements identified;

iv. The presentation of measures to control any risks which cannot be satisfactorily mitigated by the system design;

v. The presentation of measures taken to achieve an equivalent level of safety where identified requirements cannot be satisfied by the system design;

vi. Evidence that no unpredicted impact will occur to other components of the system as a result of the change;

vii. Evidence that operating and maintenance procedures are acceptable for routine operation.

3 Part Safety Case

A commonly used format for a major change safety case is delivered in 4 parts:

i. System Requirements
ii. Design Safety
iii. Transition to Operation
iv. Operation and Through Life Support

3.1 System Requirements

These requirements can be defined as:

i. Regulatory

These requirements are determined by international standards and regulations such as ICAO Annexes and national statutory obligations

ii. Functional and performance

These requirements include items such as staffing arrangements, training, administration, and documentation.

iii. Derived

Requirements that have been derived from meeting the Safety Objectives through a detailed system hazard identification and risk assessment process.

3.2 Design Safety

This part requires an analysis of the system design to confirm that it meets the safety requirements and if necessary, consider options to reduce the risk in order to meet the stated requirements. It is also necessary to consider the means to assure safety during installation.

The evidence to support the claim that the design meets the safety requirements can be produced in a range of classifications:

i. Reliability and integrity calculations.
ii. Confirmation that calculations are applicable (i.e. consistent with proposed configuration)
iii. Evidence of good design.
iv. Justification for assumptions.
v. Details of contractors experience.
vi. Proposed schedule of works and how safety is to be maintained during transition (NOTAM etc.).

3.3 Transition to Operation

Before putting a system into service an acceptable safety case for the system should be in place. The safety case should demonstrate that the system is installed in a manner that does not compromise the safety assurance. Also, it should document the evidence, arguments and assumptions that show that the system will meet its safety requirements Evidence typically required for the transition into service phase may include:

i) Factory and Site Acceptance Test (SAT) results;

ii) Systems integrations test results; and

iii) Operational trial results.

iv) Experience and qualifications of installation organization

3.4 Operation and Through Life Support

Part of the risk assessment of the system should look at the risks associated with operating and maintaining the system. Typically this will identify safety requirements to ensure that operators and maintainers are appropriately trained and that procedures covering operation and maintenance are produced and used. This should be planned for early in the project especially where training is required to be provided by equipment suppliers.

The safety case should record the basis for entry into service by demonstrating that:

i. Safety requirements are met and can be sustained

ii. The Infrastructure is in place for its safe operation

iii. The focus on Through Life implementation of SMS

iv. Training and competence issues are defined

v. Operational and maintenance procedures are in place

vi. Future modifications are subject to risk assessment

vii. Obsolescence is anticipated and taken into account

viii. All relevant documentation is recorded and available

ix. Where required, test equipment and an acceptable holding of spares is available

x. Where required, procedures for configuration management are in place

xi. Appropriate procedures in place to ensure the management of data capture and analysis in respect of any occurrence reports.

3.5 Safety Case Verification

Part of the safety assurance process to ensure that operators and maintainers are properly applying the procedures is by regulatory audit in order to provide evidence that safety requirements to do with their application are being met. The ANS and/or AGA Inspector should take into account any existing safety cases when preparing the Annual Audit plan.

SCAA should revisit the safety case of a system periodically as part of the SMS safety review procedure. If a system has been in service for a long period of time, any assumptions about the environment or the

conditions that the system is operated under may change e.g. the numbers of aircraft using the aerodrome may increase over time; are the safety requirements still valid and can the systems cope?

Some assumptions and requirements specified in the safety case may only be able to be fully substantiated after a period of operation of the system. The verification of these should be addressed after an appropriate period of time. In the interim period, it may be necessary to apply additional mitigations until such time as it can be shown that the requirement is satisfied.

3.6 System Changes

There can be many reasons to make changes to an existing system, for example:

i. To correct defects;
ii. To replace or update ageing equipment
iii. To increase functionality;
iv. To modify procedures e.g. where there are efficiencies to be gained;
v. Where staff changes reduce the level of experience or expertise.

A change to a system can be considered as a small project, with the lifecycle phases described above being applicable to a variable extent depending on the size of the change. The use of a change control system will ensure that changes are given due consideration and include assessing the safety impact of the change.

Depending on the extent and impact of the change, it is possible that the safety case will require updating with a subsequent approval from SRD.

3.7 Example of a Safety Case Contents

Part or Section	Description
Title Page	Include: the name of the organisation to which the Safety Case is relevant; the system being covered; stage in the project; issue status; date of issue; author(s). An 'Authorised By' sign-off table may be included where this is a Quality Management requirement for the organisation
Configuration Control Page	A table showing the version history of the document including a brief description of what changed between versions
Acronyms and Abbreviations	Include a list explaining any acronyms or abbreviations used in the safety case.
Contents Page	Include chapters or sections, tables, diagrams, figures, appendices and page numbering for these.
Part 1: Scope and Requirements	Include: The overall role of the system, why it is needed, where it fits in with other systems and the limits to what this Safety Case covers.

Functional Description	Include a description of the functions of the system; include the operational requirements; use diagrams and figures; show where this system fits in with others including any interfaces to other systems
System Description	Describe the components of the system, interfaces between them; use diagrams and figures; describe the different allowable configurations of the system. Record here the version number, build state or procedure issue for which this Safety Case is applicable.
Assumptions	Include any assumptions about interfaces or other systems with which this system interacts and any other assumptions; include justification for the assumptions where possible. Note: These assumptions are likely to have been made during the hazard identification and risk assessment processes.
Hazard identification and Risk Assessment	Preliminary risk assessment process to establish safety objectives to make the system tolerably safe and derived safety requirements from the mitigations to reduce the risk from the hazard consequences in order to meet the safety objective.
Safety Objectives	Where Safety Objectives have been set for individual hazards, then these should be stated. Where the tolerable probability for a set of hazards sharing the same consequence severity has been used (as in the case of using a risk matrix to set Safety Objectives) then the tolerable probability for each severity level should be stated, along with a list of hazards associated with each severity level.
Derived Safety Requirements	State how the Safety Requirements came about, referencing out to related documentation e.g. reports from brainstorming, HAZOPs or FMECA State the derived Safety Requirements for the system i.e. the safety requirements derived by this procedure.
Statutory Safety Objectives and Requirements	Reference out to regulatory material containing Safety Objectives and Requirements applicable to this system e.g. ICAO Annexes or national legislation
Part 2: System Design	Describe how the system was designed; who designed it; any design standards used. Note: This section can be expanded to act as supporting (backing) evidence where Safety Requirements call for evidence of good design practice.
System Operation	Describe how the system will, or does operate; include the concept of operation; describe the flow of information or data; inputs and outputs (e.g. human machine interface [HMI] aspects); what processes are carried out or what decisions are being made.
Design Dependencies	Include any systems or inputs that this system depends upon for safe operation. Be brief where these have already been described in the previous sections of the document.
System Assurance	Address each Safety Objective and Safety Requirement; include the claim(s), associated argument(s) and reference the evidence that supports each

	argument; reference to diagrammatic representations of arguments if used. Identify the status of the Requirement i.e. is it met, not yet met or only partially proven? State whether any further work to prove that the Requirement is met is planned e.g. at later stages of the project
Limitations and Shortcomings	Identify any deficiencies found with the system. Identify any Safety Objectives or Requirements that have only partially been proven, have failed to be proven or have insufficient evidence to provide the required level of confidence (except those Requirements where further validation work is already planned). Identify any counter evidence for the system i.e. any evidence that demonstrates that a Requirement is not met. Reiterate any assumptions for the system for which there is no, or insufficient validation or rationale.
Part 3: Transition to Operation	Identify any Safety Objectives or Requirements that require ongoing monitoring in order to accrue evidence that the Requirement continues to be met.
Record evidence of suitability	Such evidence would include SAT results, operational trial results, suitability and competence of manufacturer, designer and/or installer.
Part 4: Operation and Through Life Support	Identify risks associated with the operation and life cycle of the system Assure that safety requirements can be sustained Infrastructure in place for safe operation Relevant documentation in place and available
References	Where applicable, include the following references: Standards; Supporting hazard identification and risk assessment documentation; Sources of evidence.
Appendices	Appendices should be used to store text, diagrams, tables etc. that if contained in the main body of the Safety Case, may distract from the main flow of the document. Typically, appendices should contain: Extracts from MATS Pt 2/Aerodrome Manual e.g. where they form part of the system description; Compact items of evidence (reference should be made to larger documents r rather than reproducing them); Standards Compliance matrices; Verification Cross Reference Indices (VCRI).

Appendix 4 - Occurrence Reporting Mandatory

Occurrence Reporting

1 General Exemption GEN-2013/03/02 issued on 19 March 2013 by the SCAA Safety Regulation Division requires that all occurrence reporting shall be in accordance with the European Union Directive 2003/42/EC. This appendix provides guidance for mandatory reporting within SCAA.

An occurrence is defined as *"an operational interruption, defect, fault other irregular circumstance that has or may have influenced flight safety and that has not resulted in an accident or serious incident, hereinafter referred to as 'accident or serious incident', as defined in Article 3(a) and (k) of Directive 94/56/EC."*

The Directive mandates the following personnel are to report such occurrences as listed in the paragraph 4:

- Air Traffic Controllers;
- Airport managers and supervisors;
- CNS engineers connected with the installation, modification, maintenance, repair, overhaul, flight checking or inspection of air navigation facilities;
- Staff connected with the ground-handling of aircraft, including fueling, servicing, load sheet preparation, loading, de-icing and towing

SCAA best practice encourages staff not listed above but who work either airside or within close proximity to make voluntary reports if they observe or involved occurrences as detailed in paragraph 4. (See section dealing with Voluntary Reporting)

Although this list contains the majority of reportable occurrences, it cannot be completely comprehensive. Any other occurrences, which are judged by those involved to meet the criteria, should also be reported. This list does not include accidents.

Occurrences to be reported are those where the safety of operation was or could have been endangered or which could have led to an unsafe condition. If in the view of the reporter an occurrence did not endanger the safety of the operation but if repeated in different but likely circumstances would create a hazard, then a report should be made. What is judged to be reportable on one class of product, part or appliance may not be so on another and the absence or presence of a single factor, human or technical, can transform an occurrence into an accident or serious incident.

2 AIR OPERATIONS

2.1 Flight preparation

(1) Use of incorrect data or erroneous entries into equipment used for navigation or performance calculations which has or could have endangered the aircraft, its occupants or any other person.

(2) Carriage or attempted carriage of dangerous goods in contravention of applicable legislations including incorrect labelling, packaging and handling of dangerous goods.

2.2 Aircraft preparation

(1) Incorrect fuel type or contaminated fuel.

2.3 Take-off and landing

(1) Taxiway or runway excursion.

(2) Actual or potential taxiway or runway incursion.

(3) Final Approach and Take-off Area (FATO) incursion.

(4) Any rejected take-off.

(5) Inability to achieve required or expected performance during take-off, go-around or landing.

(6) Actual or attempted take-off, approach or landing with incorrect configuration setting

(7) Tail, blade/wingtip or nacelle strike during take-off or landing.

(8) Approach continued against air operator stabilized approach criteria.

(9) Continuation of an instrument approach below published minimums with inadequate visual references

(10) Precautionary or forced landing.

(11) Short and long landing.

(12) Hard landing.

2.4 Any phase of flight

(1) Loss of control.

(2)) Aircraft upset, exceeding normal pitch attitude, bank angle or airspeed inappropriate for the conditions

(3) Level bust.

(4) Activation of any flight envelope protection, including stall warning, stick shaker, stick pusher and automatic protections.

(5) Unintentional deviation from intended or assigned track of the lowest of twice the required navigation performance or 10 nautical miles.

(6) Exceedance of aircraft flight manual limitation. 30.6.2015 EN Official Journal of the European Union L 163/3

(7) Operation with incorrect altimeter setting.

(8) Jet blast or rotor and prop wash occurrences which have or could have endangered the aircraft, its occupants or any other person.

(9) Misinterpretation of automation mode or of any flight deck information provided to the flight crew which has or could have endangered the aircraft, its occupants or any other person.

2.5 Other types of occurrences

(1) Unintentional release of cargo or other externally carried equipment.

(2) Loss of situational awareness (including environmental, mode and system awareness, spatial disorientation, and time horizon).

(3) Any occurrence where the human performance has directly contributed to or could have contributed to an accident or a serious incident.

3 TECHNICAL OCCURRENCES

3.1 Structure and systems

(1) Loss of any part of the aircraft structure in flight.

(2) Loss of a system.

(3) Loss of redundancy of a system

(4) Leakage of any fluid which resulted in a fire hazard or possible hazardous contamination of aircraft structure, systems or equipment, or which has or could have endangered the aircraft, its occupants or any other person.

(5) Fuel system malfunctions or defects, which had an effect on fuel supply and/or distribution.

(6) Malfunction or defect of any indication system when this results in misleading indications to the crew.

(7) Abnormal functioning of flight controls such as asymmetric or stuck/jammed flight controls (for example: lift (flaps/slats), drag (spoilers), attitude control (ailerons, elevators, and rudder) devices).

3.2 Propulsion (including engines, propellers and rotor systems) and auxiliary power units (APUs)

(1) Failure or significant malfunction of any part or controlling of a propeller, rotor or power plant.

(2) Damage to or failure of main/tail rotor or transmission and/or equivalent systems.

(3) Flameout, in-flight shutdown of any engine or APU when required (for example: ETOPS (Extended range Twin engine aircraft Operations), MEL (Minimum Equipment List)).

(4) Engine operating limitation exceedance, including over speed or inability to control the speed of any high speed rotating component (for example: APU, air starter, air cycle machine, air turbine motor, propeller or rotor).

(5) Failure or malfunction of any part of an engine, power plant, APU or transmission resulting in any one or more of the following:

(a) thrust-reversing system failing to operate as commanded;

(b) Inability to control power, thrust or rpm (revolutions per minute);

(c) Non-containment of components/debris.

4 INTERACTION WITH AIR NAVIGATION SERVICES (ANS) AND AIR TRAFFIC MANAGEMENT (ANS)

(1) Unsafe ATC (Air Traffic Control) clearance.

(2) Prolonged loss of communication with ATS (Air Traffic Service) or ANS Unit.

(3) Conflicting instructions from different ATS Units potentially leading to a loss of separation.

(4) Misinterpretation of radio-communication which has or could have endangered the aircraft, its occupants or any other person.

(5) Intentional deviation from ATC instruction which has or could have endangered the aircraft, its occupants or any other person.

5 EMERGENCIES AND OTHER CRITICAL SITUATIONS

(1) Any event leading to the declaration of an emergency (‘Mayday’ or ‘PAN call’).

(2) Any burning, melting, smoke, fumes, arcing, overheating, fire or explosion.

(3) Contaminated air in the cockpit or in the passenger compartment which has or could have endangered the aircraft, its occupants or any other person.

(4) Failure to apply the correct non-normal or emergency procedure by the flight or cabin crew to deal with an emergency.

(5) Use of any emergency equipment or non-normal procedure affecting in-flight or landing performance.

(6) Failure of any emergency or rescue system or equipment which has or could have endangered the aircraft, its occupants or any other person.

(7) Uncontrollable cabin pressure.

(8) Critically low fuel quantity or fuel quantity at destination below required final reserve fuel.

(9) Any use of crew oxygen system by the crew.

(10) Incapacitation of any member of the flight or cabin crew that results in the reduction below the minimum certified crew complement.

(11) Crew fatigue impacting or potentially impacting their ability to perform safely their flight duties.

6 EXTERNAL ENVIRONMENT AND METEOROLOGY

(1) A collision or a near collision on the ground or in the air, with another aircraft, terrain or obstacle

(2) ACAS RA (Airborne Collision Avoidance System, Resolution Advisory).

(3) Activation of genuine ground collision system such as GPWS (Ground Proximity Warning System)/TAWS (Terrain Awareness and Warning System) 'Warning'

(4) Wildlife strike including bird strike.

(5) Foreign object damage/debris (FOD).

(6) Unexpected encounter of poor runway surface conditions.

(7) Wake-turbulence encounters.

(8) Interference with the aircraft by firearms, fireworks, flying kites, laser illumination, high powered lights, lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.

(9) A lightning strike which resulted in damage to the aircraft or loss or malfunction of any aircraft system.

(10) A hail encounter which resulted in damage to the aircraft or loss or malfunction of any aircraft system.

(11) Severe turbulence encounter or any encounter resulting in injury to occupants or deemed to require a 'turbulence check' of the aircraft.

(12) A significant wind shear or thunderstorm encounter which has or could have endangered the aircraft, its occupants or any other person. 30.6.2015 EN Official Journal of the European Union L 163/5(1) Obstacle includes vehicle.

(13) Icing encounter resulting in handling difficulties, damage to the aircraft or loss or malfunction of any aircraft system.

(14) Volcanic ash encounter.

7 SECURITY

(1) Bomb threat or hijack.

(2) Difficulty in controlling intoxicated, violent or unruly passengers.

(3) Discovery of a stowaway.

When an occurrence is to be reported, the reporter shall use the following forms which shall be in held in their respective departments or if not available, can be obtained from the Safety Regulation Division:

SR SMDA 1601 - Aerodrome occurrences

SR SMDA 1602 - Air Traffic Services occurrences

SR SMDA 1603 - CNS Engineering occurrences

Voluntary Occurrence Reporting

The key objective of the voluntary and confidential reporting system is to enhance the safety of SCAA's aviation activities through the collection of reports on actual or potential safety deficiencies that would otherwise not be reported through other channels. Such reports may involve occurrences, hazards or threats relevant to the safety of our aviation activities.

Although this reporting system is in the early stages of development, the main principle is that it will be a voluntary confidential occurrence and hazard reporting system administered by the SCAA Safety Manager. It provides a channel for the voluntary reporting of aviation occurrences or hazards relevant to our organisation's aviation activities, while protecting the reporter's identity. It is important to emphasise that the voluntary reporting system relies on the establishment of a positive Just Culture within SCAA where a clear line is drawn between acceptable and unacceptable practices.

SCAA encourages voluntary reporting across the whole spectrum of civil aviation operations. A voluntary report can be made by any person working for SCAA either as permanent staff or those staff working on contract to the SCAA.

Individuals may submit an occurrence report directly to the relevant SCAA Inspector should they so wish, but in the interest of flight safety and to the benefit of the SCAA ISMS, it is strongly recommended that they use the notification procedure to be established by the Aviation Safety Manager.

APPENDIX 5 - Safety Event Grading System (SEGS)

2. When an Occurrence report is submitted and is considered to have significant safety implications then it should be investigated as soon as possible and that any necessary corrective action is taken. Part of the investigation is to make recommendations and propose corrective actions to reduce the probability of the event repeating itself.
3. However, it has to be recognised that any corrective action is most probably going to impact on the limited resources available. Therefore it is in the interests of safety and the need to target the high priority risks that each occurrence investigation finding shall be subjected to a severity grading. The factors that need to be considered are:
    - severity of the occurrence outcome
    - repeatability (the chances of it reoccurring based on historical information)
    - reliability of the data
4. The grading system of SCAA SMS is integrated in SMS reporting system (Centrik). The decision to conduct an investigation is highly reliant on the grading system. This is particularly relevant to the repeatability element which is based on historical data (limited or non- existent at present) therefore assessors will need to make expert judgements (where possible, using information from other sources such as ICAO and regional systems) to establish the risk.
5. The main consideration is contributions of the hazard to an aircraft incident, serious incident or an accident.

    The risk categories that are considered include

    - Aircraft Accident
    - Serious Incident/incident
    - ATC issues
    - Vehicle Incident
    - Equipment failure
    - Infrastructure failure
    - Financial Loss (only)
    - Security Breach
    - Wildlife

6. The Severity Table is detailed below.

SEVERITY	SEVERE A	A1	A2	A3
	HIGH B	B1	B2	B3
	MEDIUM C	C1	C2	C3
	LOW D	D1	D2	D3
		HIGH 1	MEDIUM 2	LOW 3
		PROBABILITY		

SEVERITY	DEFINITION OR FAILURE CONDITION	GRADING CRITERIA
A - SEVERE	Catastrophic event	Airprox - CLASS G, very close to each other, no opportunity to avoid, one unsighted
	Potentially catastrophic	Airborne or ground (ATC control) – very close, pilots/controller unaware of proximity or unable to do anything
	Multiple fatalities/serious injuries	
	Substantial damage to property or equipment	Collision with obstacle or ground equipment
B - HIGH	Serious increase in flight crew workload	Serious Airprox Large reduction in safety margins
	Serious degradation of aircraft performance/handling	Serious ATC system failure Major airport equipment failure such as lighting in poor weather conditions
	Serious incident	An event where an accident nearly occurs. No safety barriers remaining. The outcome is not under control and could very likely lead to an accident. Damage to major aerodrome facilities. Serious injury to staff/members of public at the aerodrome.

	Small number of fatalities (refers to large aircraft only) or serious injuries	Serious loss of separation - not reported as AirProx
C - MEDIUM	Significant increase in Flight Crew workload	All other significant AirProx
	Significant degradation of aircraft performance/handling	Loss of separation (other than technical
	Major incident (1)	Safety of aircraft may have been compromised, having led to a near collision between aircraft, with ground or obstacles.
	Major incident (2)	A large reduction in safety margins. The outcome is controllable by use of existing emergency or non- normal procedures and/or emergency equipment. The safety barriers are very few approaching none. Minor injury to occupants of the aircraft or staff/members of public at the aerodrome. Minor damage to aircraft or major aerodrome facilities may occur.
D - LOW	Slight increase in Flight Crew workload	Technical loss of separation
	Results in an effect which can be readily counteracted and for which adequate procedures are already in place	All other (reportable) ATC incidents - failures which do not significantly affect safety
	Significant incident	A significant reduction in safety margins but several safety barriers remain to prevent an accident. Reduced ability of the flight crew or air traffic control to cope with the increase in workload as a result of the conditions impairing their efficiency. Only on rare occasions can the occurrence develop into an accident. Nuisance to occupants of the aircraft or staff/members of public at the aerodrome.

PROBABILITY	
HIGH	A significant number of similar incidents already on record. Has occurred several times to aircraft of the type or a significant number of times at the same location or involving the particular ground based system.
MEDIUM	Several similar incidents on record, has occurred more than once to aircraft of the type or similar, or more than once at the same location, or more than once to similar ground based systems.
LOW	Only very few similar incidents on record when considering a large fleet, or no records on a small fleet. No similar incidents on record when considering a particular location or ground based system.

APPENDIX 6 - Technical Hazard Identification Taxonomy

The following tables provide guidance for identifying hazards for aerodrome and ANS risk assessments. It should be noted that these are basic examples which are designed to help service providers who are in the early stages of safety management implementation.

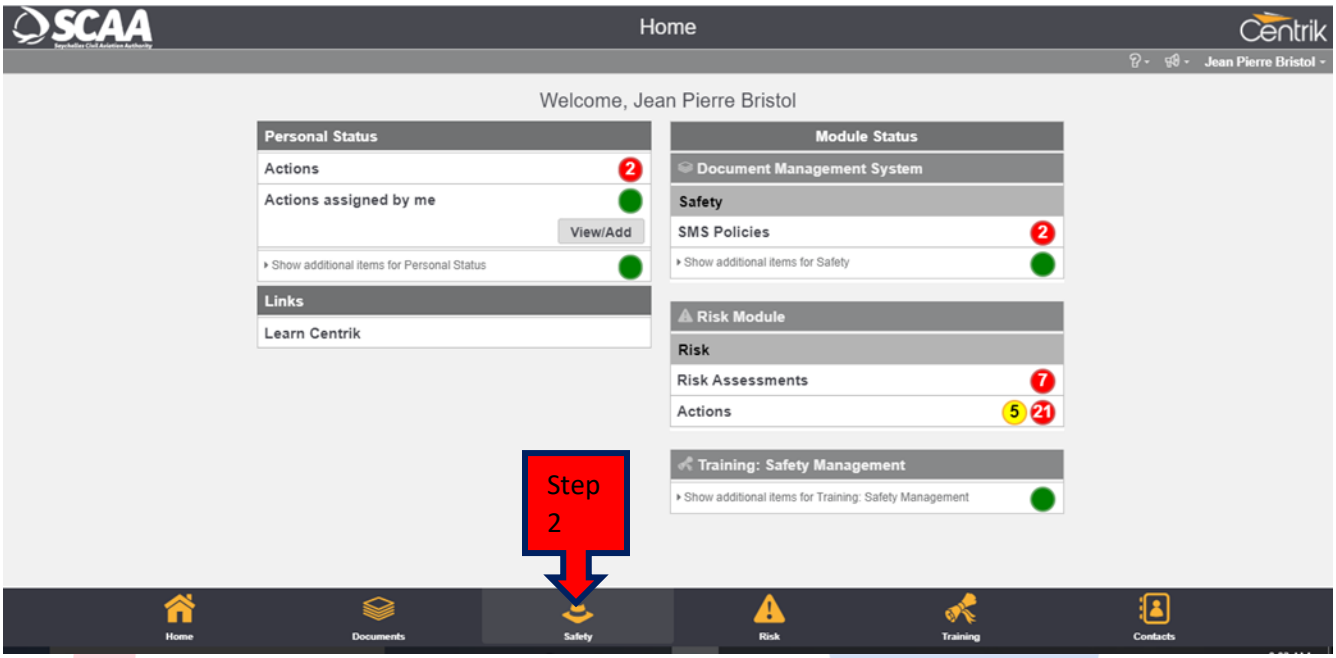
Type of Operation	Type of activity/ infrastructure/ system	Examples of Hazards
Aerodrome	Runway operations	Construction, vehicles and people on movement area
		Poor aerodrome design (Intersecting runways; Obstacle clearance; Taxiway crossing runways)
		Distracting lights
		Lack of coordination with Air Traffic Control (ATC)
		Improper, inadequate, or lack of Notices to Airmen (NOTAMs) issuance
		Laser beams
	Runway condition	Poor condition or improper runway surface
		Inadequate runway length
		Lack of, or inadequate runway protected areas
	Airfield /Apron Operation	Jet Blast
		Lack of, limited or incorrect type of aircraft parking
		Improper Marshalling
		Lack of, or insufficient protective pylons around aircraft
		Lack of, or inadequate chalks when aircraft parks
		Lack of, or improper foreign object debris (FOD) control
		Lack of, or improper ramp control tie down procedures
		Improper fuel or hazardous material spill containment and clean-up
		Poor refueling procedures
	Airside Vehicle	Vehicle failure during aerodrome services
		Poor mechanical condition
		Poor radio or communication equipment condition
		Oil spills on apron and/or in passenger areas
		Lack of vehicle maintenance
		Poor Emergency Reponses Planning

	Operations	Erratic driving or not complying with flight line driving regulations
		Driving too fast
		Improper parking
		Failure to chalk vehicles
		Leaving engine running while vehicle is unattended
		Lack of coordination between vehicles during aircraft servicing
	Action of Individuals	Pedestrians on apron areas
		Ignoring aircraft hazard beacons
		Improper checking around aircraft during departure marshalling
		Misinterpreting apron markings
		Smoking on the apron
		Passenger failure to follow guidance
		Use of cell phone within 15 meters of a refueling operation
		Littering on ramp
		Running on apron
	Facilities	Faulty electrical power supply systems on airport or navigational aids (radars, satellites, very high frequency (VHF) Omni-directional radio range (VOR), Automatic Dependent Surveillance - Broadcast (ADS-B), etc.)
		Faulty, incorrect or incomplete airfield markings (especially in movement areas)
		Faulty, incorrect, or incomplete airfield lighting (especially in movement areas)
		Faulty, incorrect, or incomplete approach lighting
		Poor condition or inappropriate runway surface
		Poor condition or inappropriate apron surface
		Taxiway and runway system complexity
		Inadequate airfield or terrain drainage
		Insufficient equipment, radios, infrastructure, or personnel
		Issues that attract wildlife (high grass, proximity of landfills, nearby water bodies)
		Inadequate or inappropriate firefighting equipment
		Lack of or limited parking areas
		Lack of safety protective equipment

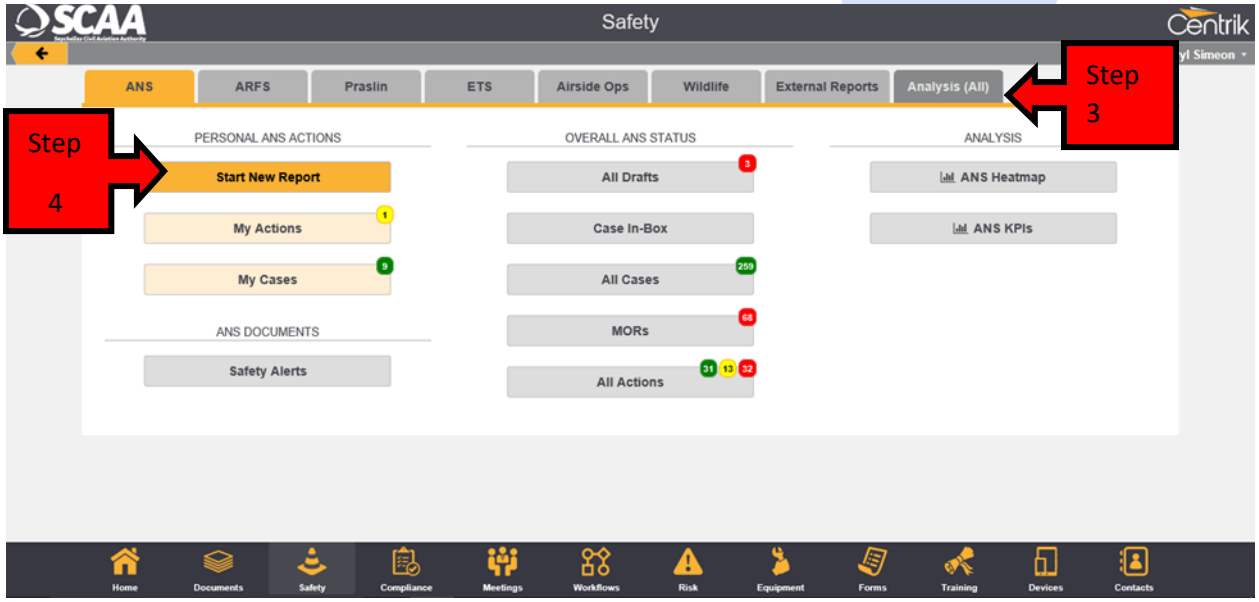
Annex: Centrik user guide

The following pictures explains the process.

Step 1: login to Centrik; www.scaa-sp.centrik.net



Step 2: Select and click on the Safety icon at the bottom of the homepage screen.



Step 3: Select your department from which you are filling the report.

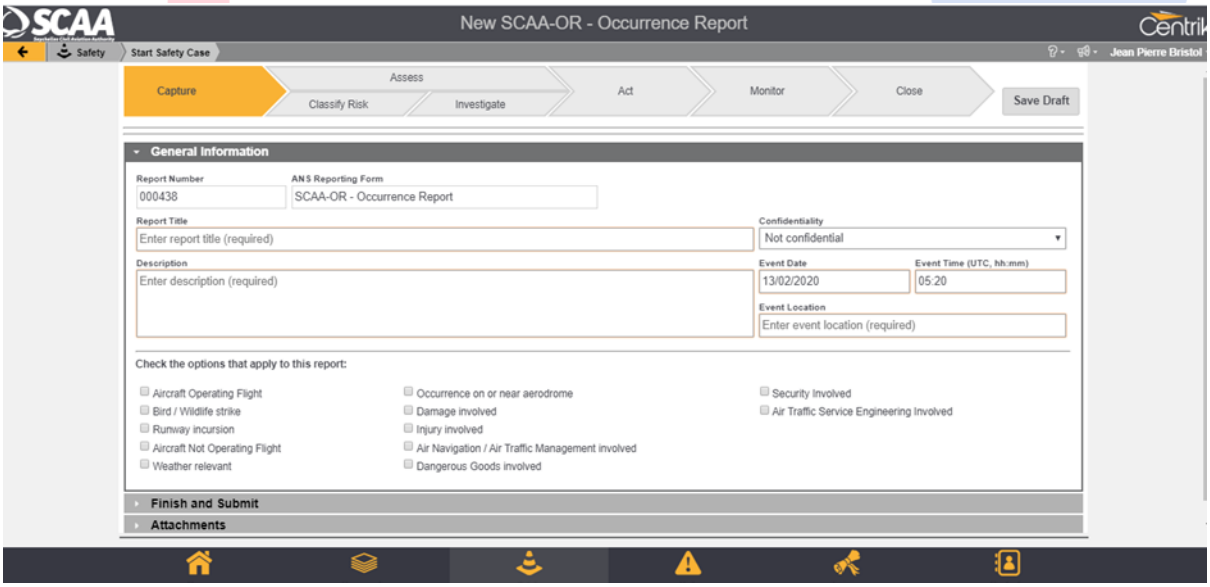
Step 4: Select and click "Start new report"

Step 5: Select and click the type of report to be sent.

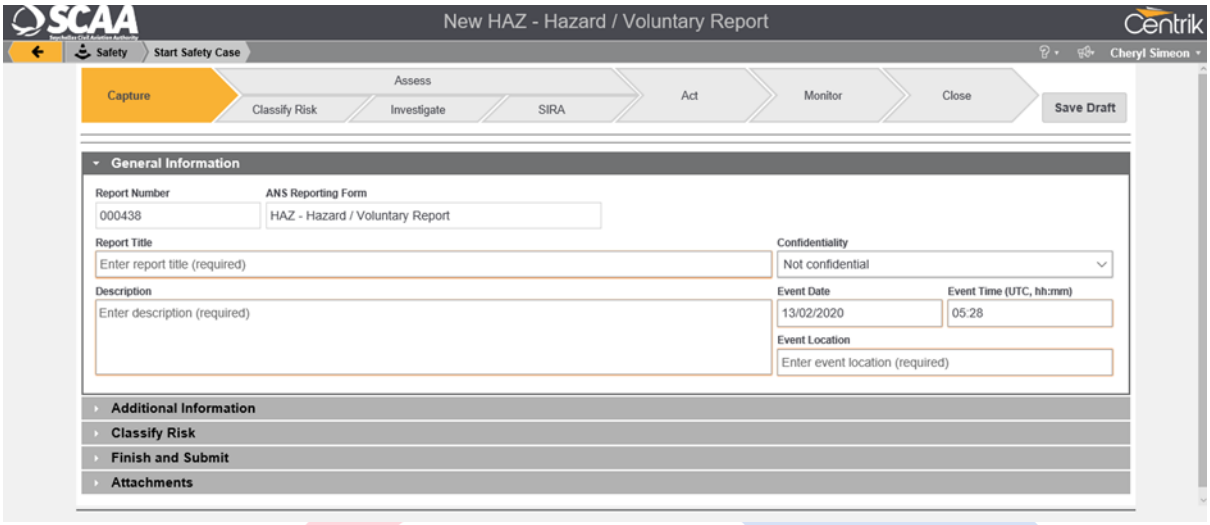
Step 6: Fill in all the mandatory fields. These are outlined in red.

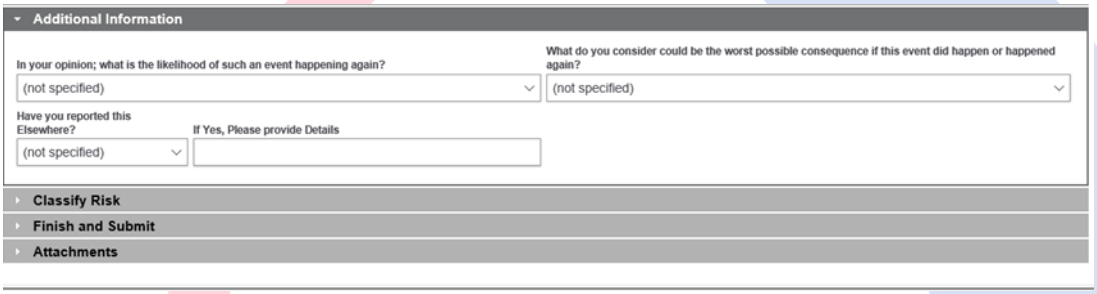
The different reports are:

- Occurrence report

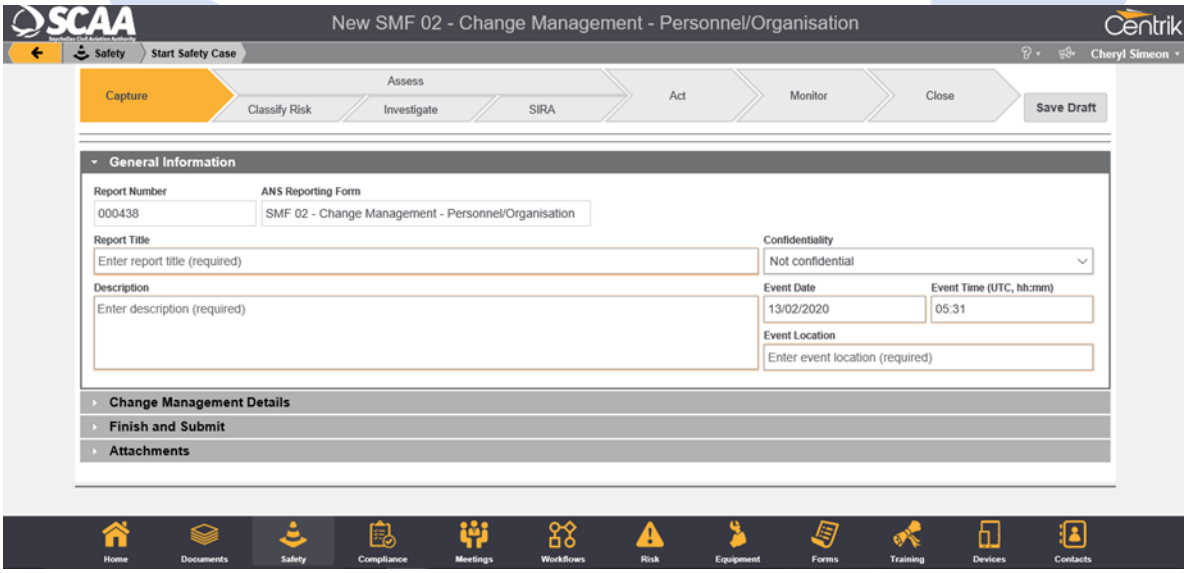


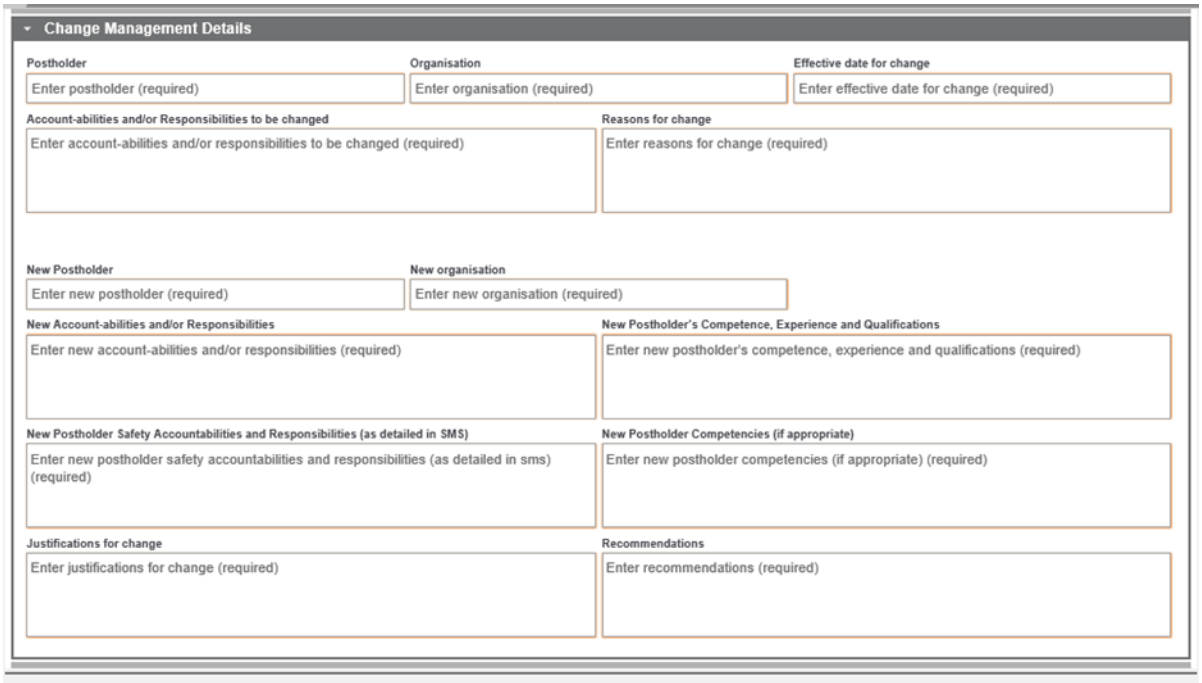
- Hazard/ voluntary report



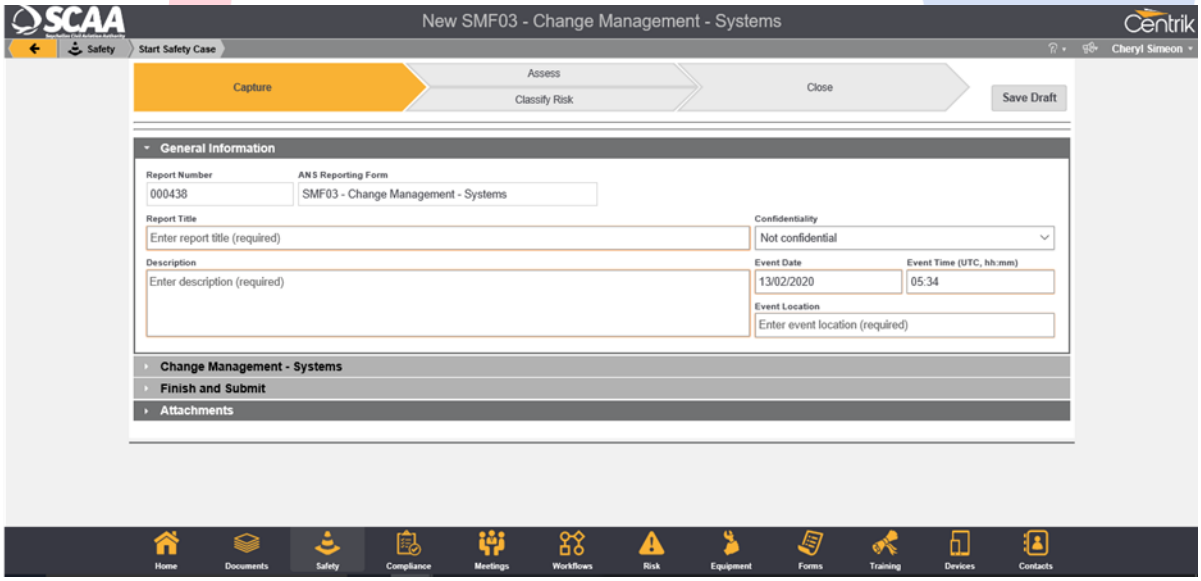


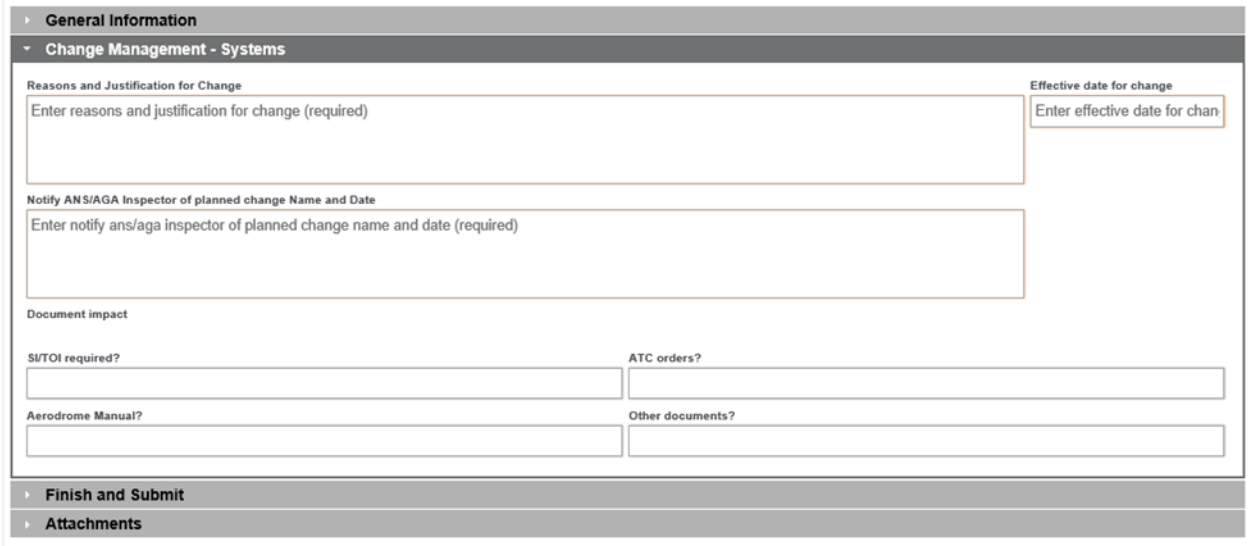
- Change management; personnel/management



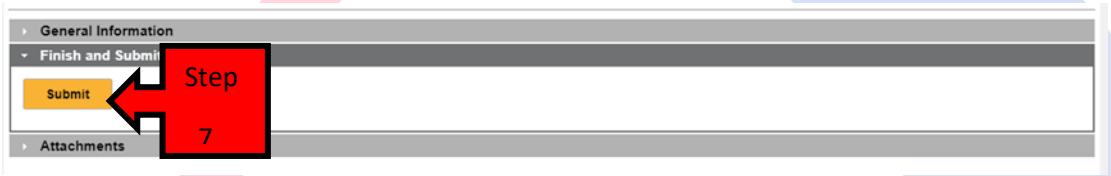


- Change management; system





Step 7: Select and click "Submit" which is found in the Finish and submit field.

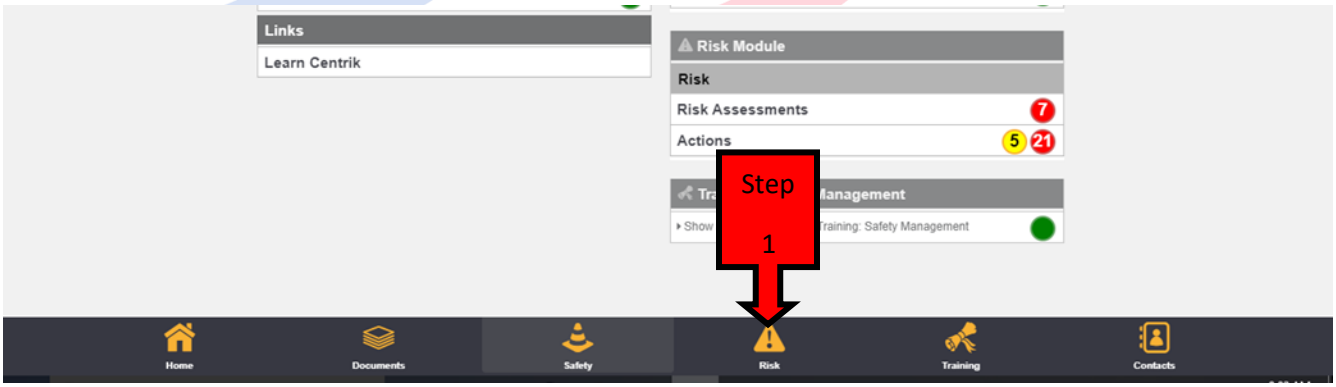


Optional: For any attachment, this is uploaded in the Attachments field, e.g. pictures, videos.

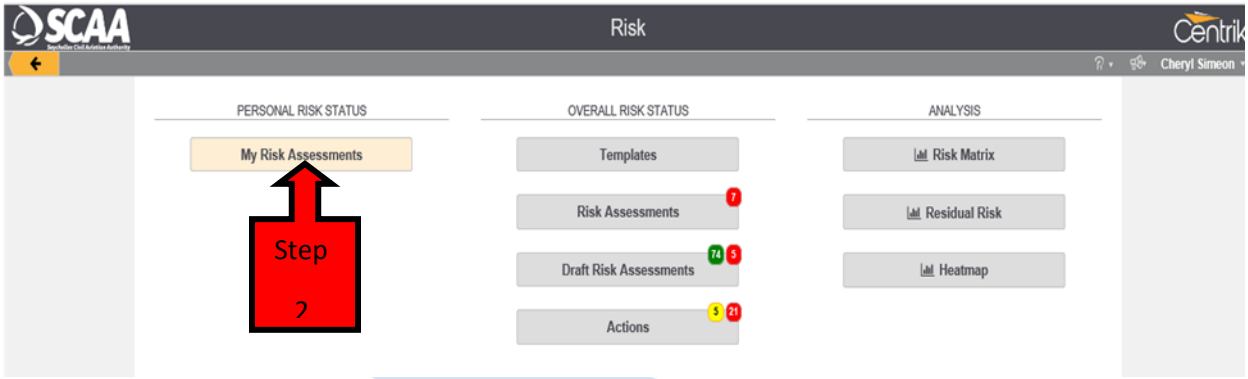
SP Centrik Set-Up page in Risk Module

Creating a risk assessment:

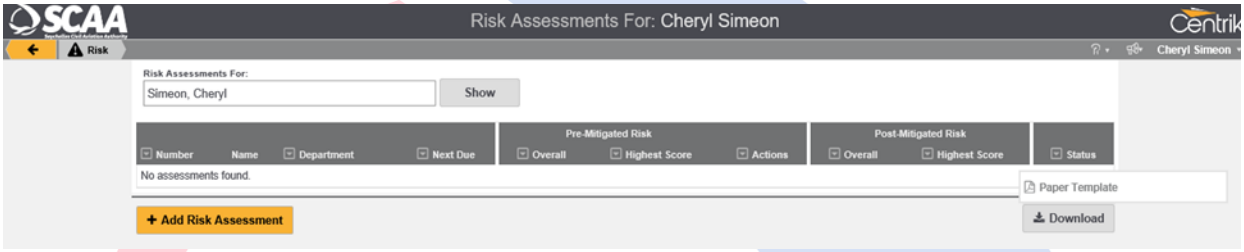
The following pictures explains the process.



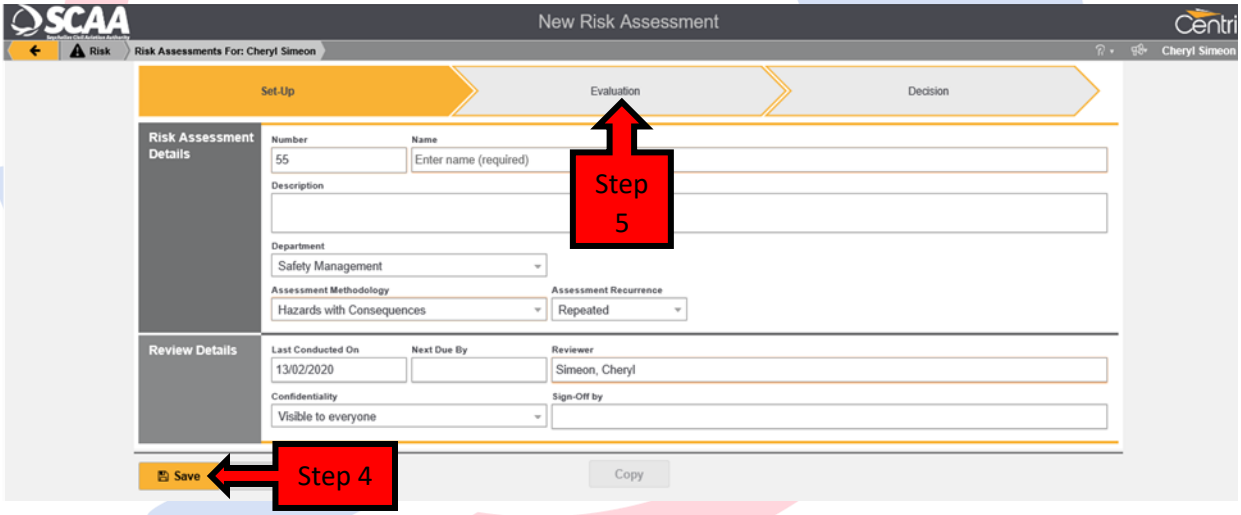
Step 1: Select and Click on the Risk icon at the bottom of the homepage screen.



Step 2: Select and click; 'My risk assessment'



Step 3: Select and click "Add risk assessment"

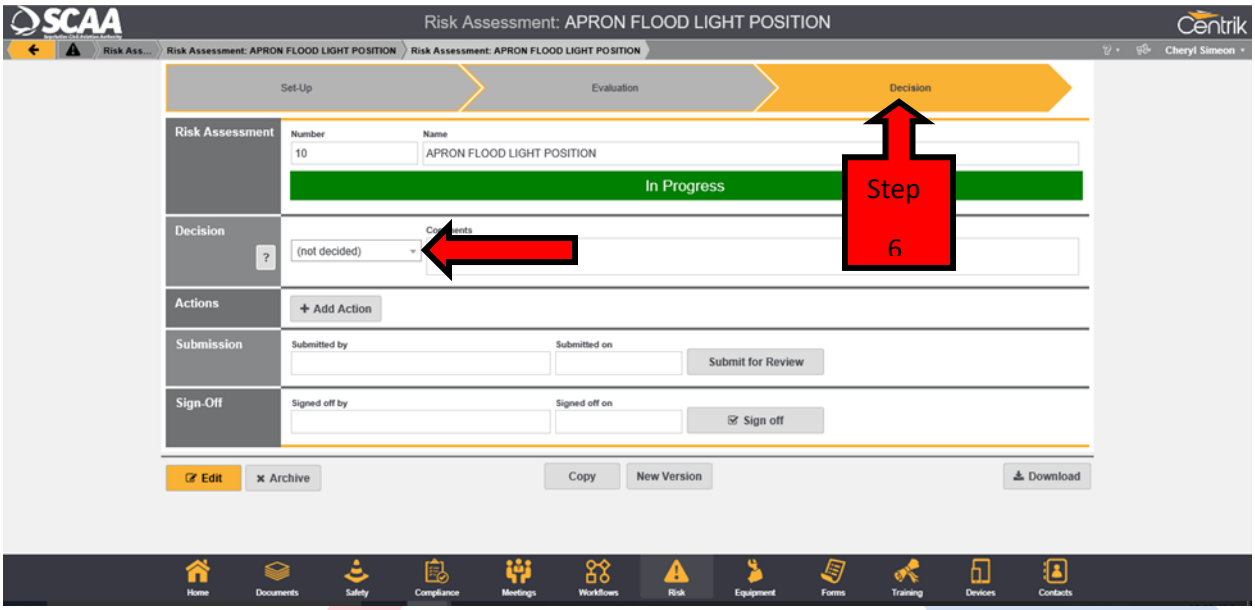


Fill in all the mandatory fills, these are outlined in red

Step 4: Click save before leaving page.

Step 5: Evaluation. Input all hazards, associated consequences and severity as per tables.

Step 6: Select and click “decision” to enter the final decision



Step 7 - Documentation of the safety assessment

The complete process of hazard identification and risk management shall be documented and recorded to ensure that the analysis of each hazard and management is available for future reference.

Annex 2: Scanned copies of signed Safety accountabilities and responsibilities

Safety Accountabilities and Responsibilities General Manager Air Navigation Services

The GM ANS is accountable to the Accountable Executive for the safety performance of the ANS Division in that it meets, or improves on, the acceptable level of safety as determined by the SCAA Safety Review Board (SRB) through the establishment of agreed Safety Performance Targets (SPT) and Safety Performance Indicators (SPIs).

The GM ANS is responsible to:

- Ensure that safety is given the highest priority in the ANS Division and that risk to aircraft and associated operations is reduced to an acceptable level through the application of the SCAA Policy and Procedures;
- Define clearly for all ANS Divisional managers and staff their safety accountabilities and responsibilities for the conduct and delivery of safe practices and procedures;
- Ensure that sufficient skilled, trained, and competent (licensed where applicable) staff are available to undertake Departmental operations and tasks in a safe and efficient manner **(SMP09)**
- Provide Departmental staff, in conjunction with the SCAA Safety Manager, adequate and appropriate Safety management training and safety information to enable them to carry out safety activities in accordance with the SCAA SMS **(SMP11);**
- Ensure that all changes to ANS Divisional equipment, procedures and organisation are subject to formal safety assessment and risk reduction measures and, where applicable, regulatory approval obtained before being put into operation **(SMP 02/03);**
- Establish a culture which enables positive reporting through a transparent application of a Just Culture in which reporters can expect a high level of trust without fear of punishment subject only to the clearly defined line between acceptable and unacceptable behavior(SMS App 4);
- Ensure that all safety related incidents are investigated and any findings and recommendations are made widely available to foster a learning culture for benefit of safe practice within and external to the ANS Division using facilities available through the SCAA Safety Manager **(SMP05);**
- Ensure that whenever contractors and non-SCAA entities are employed for Departmental tasks and assistance that they are clear about their safety responsibilities and the requirement to comply with the SCAA SMS policy and procedures **(SMP10);** and
- Provide adequate support and resources to the ANS Division Safety Co-coordinators to enable them to fulfil their safety tasks on behalf of the ANS Division.

Esmee Samson
General Manager
ANS Department
15.04.2021

T: +248 438 4000 | F: +248 438 4009 | www.scaa.sc
Seychelles Civil Aviation Authority (SCAA), P.O. Box 181,
Seychelles International Airport, Pointe Larue, Mahé, Seychelles

Safety Accountabilities and Responsibilities (GM ETS)

The GM Engineering &Technical Services is accountable to the Accountable Executive for the safety performance of the ETS Department in that it meets, or improves on, the acceptable level of safety as determined by the SCAA Safety Review Board (SRB) through the establishment of agreed Safety Performance Targets (SPT) and Safety Performance Indicators (SPI).

The GM ETS is responsible to:

- Ensure that safety is given the highest priority in the ETS Department and that risk to aircraft and associated operations is reduced to an acceptable level through the application of the SCAA Policy and Procedures;
- Define clearly for all ETS Departmental managers and staff their safety accountabilities and responsibilities for the conduct and delivery of safe practices and procedures;
- Ensure that sufficient skilled, trained, and competent (licensed where applicable) staff are available to undertake Departmental operations and tasks in a safe and efficient manner **(SMP09)**;
- Provide Departmental staff, in conjunction with the SCAA Safety Manager, adequate and appropriate training and safety information to enable them to carry out safety activities in accordance with the SCAA SMS **(SMP11);**
- Ensure that all changes to ETS Departmental equipment, procedures and organisation are subject to formal safety assessment and risk reduction measures and, where applicable, regulatory approval obtained before being put into operation **(SMP 02/03);**
- Establish a culture which enables positive reporting through a transparent application of a Just Culture in which reporters can expect a high level of trust without fear of punishment subject only to the clearly defined line between acceptable and unacceptable behavior(SMS App 4);
- Ensure that all safety related incidents are investigated and any findings and recommendations are made widely available to foster a learning culture for benefit of safe practice within and external to the ETS Department using facilities available through the SCAA Safety Manager **(SMP05)**;
- Ensure that whenever contractors and none SCAA entities are employed for Departmental tasks and assistance that they are clear about their safety responsibilities and the requirement to comply with the SCAA SMS policy and procedures **(SMP10);** and
- Provide adequate support and resources to the ETS Department Safety Co-coordinator to enable him/her to fulfil his/her safety tasks on behalf of the ETS Department.

Darel Boniface
General Manager

ETS Department

Safety Accountabilities and Responsibilities (General Manager Human Resources/Administration)

GMHRA is accountable to the Accountable Executive for allocation of Human resources for SCAA Operations and Safety Management programmes to ensure that operational safety risks are kept at the acceptable level of safety as determined by the SCAA Safety Review Board (SRB) through the establishment of agreed Safety Performance Targets (SPT) and Safety Performance Indicators (SPI).

The GM HR/A is responsible to:

- Ensure that safety is given the highest priority in the organisation and adequate human resources are available and for provision of Air Navigation Services and Aerodrome Operations.
- Provide adequate support and resources to the implementation of SCAA Safety Management system
- Ensure that sufficient skilled, trained, and competent (licensed where applicable) staff are available to undertake operational tasks in a safe and efficient manner **(SMP09);**
- Provide Departmental staff, in conjunction with the SCAA Safety Manager, adequate and appropriate training and safety information to enable them to carry out safety activities in accordance with the SCAA SMS **(SMP11**);
- Support the establishment of a culture which enables positive reporting through a transparent application of a Just Culture in which reporters can expect a high level of trust without fear of punishment subject only to the clearly defined line between acceptable and unacceptable behavior **(SMS App 4**);
- Ensure that whenever contractors and non-SCAA entities are employed for Departmental tasks and assistance or delivering a service on the airport related to aircraft operations, that they are clear about their safety responsibilities and the requirement to comply with the SCAA SMS policy and relevant procedures **(SMP10);**

Lorella Uranie

General Manager

Human Resources/ Administration