

SMS 101

This is a self help guide to Safety Management in Aviation for HG/PG Instructors who are operating as [PCBU](#)'s. It is an overview of the different elements that are essential to managing safety at all stages of flight; pre season of operation, pre flight, pre launch, during flight, on landing, post flight, post season. Every business has its own flavour, hence it is up to you to structure your SMS procedures accordingly.

It is important to be familiar with and have ready access to the resources and tools available for managing safety; the [NZHGPA Operations & Procedures Manual](#) and associated documents and forms, are essential standards and requirements to operate as an Instructor in New Zealand. Authority to instruct is granted under CAA delegation to the NZHGPA under a 149 Aviation Recreational Certificate.

Useful safety management resources:

[CAA SMS Booklet 1](#); [CAA SMS Booklet 2](#); [CAA SMS Booklet 3](#); [CAA SMS Booklet 4](#);

[CAA AC00-3](#);

[CAA AC100-1](#);

[ICAO State Safety Programme](#);

Reason, James T (1997). Managing the Risks of Organisational Accidents.

Note: *The NZHGPA operates as a voluntary organisation under a QMS. The NZHGPA has no jurisdiction and is not qualified or responsible for auditing outside of the NZHGPA 149 Certification requirements prescribed in the Operations and Procedures Manual. If operating as a PCBU, then it is recommended that you find a suitably qualified professional to audit your SMS, to ensure you meet the requirements of the Health and Safety Act 2015. Be aware, as a PCBU operating a business, you will also have many other relevant legislation relating to your business such as the Privacy Act 2020, Employment Relations Act 2000, Consumers Guarantee Act 1993.*

1.0 The Basics

Let's begin with frequently used SMS-related abbreviations and terms:

ALARP	As Low As Reasonably Practicable; residual risk shall be reduced as far as reasonably practicable. <i>(Source: Wikipedia)</i>
CPA's	Corrective or Preventive Actions;
DAMP	Drug & Alcohol Management Plan.
ERP	Emergency Response Plan.
IQA	Internal Quality Assurance; Looking back at the system; reviewing and improving methods.
OPM	In this guide, refers to the NZHGPA Operations & Procedures Manual.
PCBU	Person(s) Conducting a Business or Undertaking; Third Party.
QMS	Quality Management System; QMS is an ongoing process encompassing an organisation's structure, responsibilities, processes and procedures. An effective QMS promotes and establishes a culture of continuous improvement that will enhance safety; achieved through engagement. <i>(Source: CAA AC00-3)</i>
SMS	Safety Management System; A systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures. <i>(Source: ICAO)</i>

Consequence Level	Outcome of an event. <i>(Source: CAA SMS Booklet 4)</i>
Controls	Management and operational techniques, activities, and procedures that monitor the satisfactory performance of the IQA procedures, including the organisation's operating processes and procedures. <i>(Source: CAA AC00-3)</i>
Corrective Action	Something planned in the wake of a non-conformance or finding, to prevent it happening again. In contrast to a preventive action, which aims to prevent occurrence/s, corrective action is carried out after something has been found to go wrong or have been a near-miss. <i>(Source: CAA AC00-3)</i>
Hazard	A source or a situation, with the potential for harm, in terms of human injury or ill-health, damage to property, damage to the environment, or a combination of these. <i>(NZHGPA OPM Section 1.3)</i>
Just Culture	An atmosphere of trust in which people are encouraged, and even rewarded, for providing essential safety-related information, but in which they are also clear about where the line must be drawn between acceptable and unacceptable behaviour. <i>(Source: Reason, J.(1997))</i>
Likelihood Level	Chance of something happening. <i>(Source: CAA SMS Booklet 4)</i>
Preventive Action	Something planned to prevent something going wrong before it happens. In contrast to a corrective action, which is carried out after a nonconformity or finding has occurred, preventive action is planned with the goal of preventing a nonconformity. <i>(Source: CAA AC00-3)</i>
Reasonably Practicable	Doing what is effective and possible to ensure the health and safety of workers and others. <i>(Source: HSWA 2015, Section 22)</i>

Risk	A situation involving potential exposure to danger (identified hazard) that has the chance or probability to cause harm to a person. <i>(NZHGPA OPM Section 1.3)</i>
Risk Level	Magnitude of a risk, or a combination of risks, expressed in terms of the combination of consequences and their likelihood. <i>(Source: CAA SMS Booklet 4)</i>
Risk Mitigation	A systematic reduction in the extent of exposure to a risk and/or likelihood of its occurrence. <i>(Source: ICAO)</i>
Root Cause Analysis	An assessment of an organisation’s processes, procedure/s, methodology, structure or practices, or any combination of the above, to determine the underlying organisational cause, or causes, of any finding or concern. <i>(Source: CAA AC00-3)</i>

2.0 The Sum of All Parts

How do you keep yourself, your instructors, helpers, students, volunteers, contractors and anyone else involved in your daily operation safe? Set up operational procedures that are systematic and thorough. Think of your systematic approach as your base of support; the more stable the base, the steadier the walk, the run, and the take off to fly.

SMS	<p><i>Safety Management System: A systematic approach to managing safety;</i></p> <p><i>Looking ahead:</i></p> <ul style="list-style-type: none"> ● <i>What policies and procedures are in place?</i> ● <i>What tools/resources are available?</i> ● <i>Who is accountable for implementation and performance of the SMS?</i> ● <i>How is it documented, maintained, relevant and current?</i> ● <i>How is it reviewed and improved?</i>
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The systematic approach broken down into parts:

- A. Policies, Plans, and Paperwork;**
- B. Hazard ID, Risk Management, and Communication of Safety Critical Info;**
- C. Training & Competency;**
- D. Recording, Reporting, Reviewing the System.**

A.1 Policies

What does safety mean to you? How do you plan to achieve this?

You are accountable for the safety of everyone involved in your operation; how do YOU manage drug, alcohol and careless operations? This commitment to safety should be signed and dated by the person accountable; CEO, Director, sole owner. (See OPM 2.1).

Have a look at the NZHGPA Safety Policy below, as an example:

NZHGPA Safety Policy	<i>SAFETY is the primary consideration of the NZHGPA for all flying activities in accordance with the Civil Aviation Rules and the approved NZHGPA OPM. Everyone who is an active member of the NZHGPA, is responsible for keeping themselves safe and ensuring that their behaviours or actions (including inactions) do not put the health or safety of themselves or others at risk. (NZHGPA OPM Section 2.2)</i>
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Your Policies:	
Safety Policy	What do you want to achieve? → GOAL; → Commitment to Safety - signed and dated.
Objectives	How do you want to achieve this? (i.e. effective communication) 1. 2. 3.
Targets/indicators	What are you aiming for? (i.e. regular morning meeting, end of day debrief) A. B. C.
DAMP	What is your Drug & Alcohol Management Plan? (NZHGPA OPM Section 2.4) Who does it cover? (instructors, students, helpers, drivers...)

A.2 Emergency Response Plan

Set up guidelines and operational procedures for emergency situations to minimise the risk of injury to persons or property. **Create a Plan. Test it out. Review it. Communicate it.**

Emergency Response Plan (NZHGPA Section 6.5.13)	
When to activate	Create a Flow Chart
Who to Call	Emergency - Who to Call
Step by Step Guidance	→ OPM 8.11 Accident Procedures → OPM 8.12 Incident Procedures → OPM 8.13 AIRS
Forms	→ Where are forms located? → What forms will be handy to have for quick access? ◆ ERP laminated flow chart ◆ Emergency Who To Call - Pocket Card ◆ CURRENT contacts list ● Instructors/Helpers/Drivers/Students Emergency Contacts and Next of Kin ● PCBU's ◆ Incident Report Log (see example below)

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Communication	<ul style="list-style-type: none"> → HOW is ERP communicated to others? → If the Instructor is injured: <ul style="list-style-type: none"> ◆ Who takes control of the scene? ◆ Will they know what to do? ◆ Where do they find safety equipment?
Retention of Records	<ul style="list-style-type: none"> → OPM 8.11 Accident Procedures → OPM 4.3.4 Preservation of Records
Test Run	<p>Scenario Train- what are possible events? If Solo Instructing, merge with some HG/PG friends and run through scenarios.</p>
Post Event Review	If an event/issue has occurred: Review, Improve, and Revise Procedures.

Incident Report Log Example (Store with First Aid Kit for easy access)

Flight Details			
Date		Pilot	
Time		Glider ID	
Time HG/PG departed		Environment <i>Weather/Site conditions</i>	
Time HG/PG was due back		Planned Landing Area	
Time Emergency Services Activated		Last contact	

Incident/Accident Details			
Exact location:			
Nature of injury:			
Perceived Cause of Incident			
People			
Equipment			
Environment			
Patient Details			
Patient Name		Allergies/ Meds	
DOB		Next Of Kin	
Contact No.		Email / address	

Patient Care Details

Actions Taken:

Witness Details

<i>Name</i>		<i>Contact no.</i>	
<i>Name</i>		<i>Contact no.</i>	
<i>Name</i>		<i>Contact no.</i>	

Patient Follow Up

<i>Date/Time</i>		<i>Details</i>	
<i>Date/Time</i>		<i>Details</i>	
<i>Date/Time</i>		<i>Details</i>	
<i>Date/Time</i>		<i>Details</i>	

Other Communications Details

<i>Media</i>	
<i>PCBU's</i>	
<i>Welfare & support</i>	

Reporting

<i>Log Reported by</i>		<i>Date/Time</i>	
<u>NZHGPA AIRS Report</u>		<i>Date/Time</i>	
<i>Internal Report</i>		<i>Date/Time</i>	

A.3 Control of Records

Paperwork may be the last thing you want to do at the end of your day; however this is when the events of the day are most accurate. If you have a safety event/issue, you know you have maintained records of currency of instructors and equipment, you have minutes of any issues discussed at any point, you have records of locations of signal loss. **Cover all your bases**; the self audit is a great tool (see Part D).

1. Personnel Records

- A. **Instructor Records:** memberships, seminars, currency;
- B. **Student Records:** memberships, certificates, currency, progressions;
- C. **Pilot Record Retention:** 3 years (OPM 4.3.8); track date filed to NZHGPA;
- D. **Maintenance Personnel:** currency and authorisation (OPM 8.3.3).

2. Equipment Records

- A. Equipment List (Spreadsheet of hours used, WOF Checks, date filed to NZHGPA):
 - a. training gliders;
 - b. tandem gliders;
 - c. reserves;
 - d. Harnesses;
 - e. Helmets;
 - f. other safety and flying equipment;
- B. Airworthiness standards HG/PG;
- C. Equipment Standards (OPM 8.6.1);

3. Maintenance Records:

- A. Maintained in accordance with requirements (OPM 8.9, 9.11, 9.3);
- B. Defects and Reporting (OPM 9.1.2):
 - a. **Record and identify** damage and repairs;
 - b. **Lock out procedure:** defective equipment to be identified, logged, tagged and locked out of use until either amended or destroyed; [OPMF10_Equipment Grounding Notification](#).

4. Site Authorisation Forms

- A. [OPMF41A Site Assessment Instructor/Coach](#)

5. Resource Records

- A. First aid kits (restocked and checked dates)
- B. Scales (calibration dates)
- C. Fire extinguisher (expiration dates)

6. Meeting Minutes

- A. One on one
- B. Crew
- C. Safety
- D. other

7. Audit / Self-Audit Records

- A. Actions required, responsibility, follow up, close out.

8. Safety/feedback Records (Important to track to identify trends)

- A. Close calls/near misses
- B. Post event/issue review/feedback
- C. Instructor/helper/student feedback

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Record samples (spreadsheet/table; whatever works to track):

Authorised Flying Sites (OPM Section 8.4.2)	
<i>Site Location</i>	<i>Site Rating completed (Date)</i>

Flying Equipment Records (OPM Section 6.5.6)			
<i>Glider/ harness & reserve</i>	<i>Serial Number</i>	<i>WOF date</i>	<i>Lock out</i>

Equipment & Instrument Records (OPM Section 8.6)			
<i>Radios/helmets/other</i>	<i>Serial Number</i>	<i>Due date</i>	<i>Lock out</i>

Safety Equipment Records (OPM Section 6.5.5)			
<i>Equipment</i>	<i>Details</i>	<i>Date checked</i>	<i>Notes</i>
<i>Emergency Communications</i>	<ul style="list-style-type: none"> • Device type • Range • Out of range areas (signal loss) 		
<i>First Aid Kits</i>	<ul style="list-style-type: none"> • Fully stocked- restocked after use, checked yearly • Kit locations 		
<i>Wind socks / Streamers</i>	<ul style="list-style-type: none"> • Take off sites • Landing zones 		
<i>Other</i>			

B. Hazard ID, Risk Management, Communication Of Safety Critical Info

Establish a process of risk management that identifies hazards in the workplace, evaluates possible consequences, and implements critical controls to manage associated risks to as low as reasonably practicable (ALARP) to mitigate.

What does this mean? How are hazards identified, assessed and controlled?

Use your resources:

Hazard ID & Risk Management (OPM 6.5.7, 8.4, 8.7);

Have a look at the following guide: [HazLog/RiskMan Guide](#); this is not a definitive list, just the basics to expand on in your environment.

Communication of Safety Critical Information (OPM 2.2, 6.5.10, 8.7.4).

- How is internal safety information communicated; to crew, students, contractors, PCBU's?
 - ◆ What is your *Reporting Hazard System* (crew and students)?
 - ◆ Is there a visual log at base?
 - ◆ Instructors fit for duty; how do you check this?

- Do you keep to date with external industry safety updates?

C. Training & Competency

Here is a summary of items to think about prior to commencing instructing:

Resource Materials	What resource materials are provided to students?
Code of Conduct	Get familiar with your OPM: → Country code → Instructor Code of Conduct → NZHGPA INSTRUCTOR HANDBOOK → TM10 - Instructing Guide → NZHGPA Waiver Form ; duty of care → IM SAFE
Equipment	→ Yours vs student's own; → Equipment requirements; → Records (see A.3 above).
Instructor Currency	(OPM 6.2.3, 6.2.4, 7.1.6 C, 7.2.5 B, 7.3.2 C, 7.4.2 D, 7.4.4. D, 7.5.3 C, 7.5.5 B) → NZHGPA member → Seminars → First Aid Certificate
Student Currency	→ NZHGPA member
Site Rating Forms	Have you completed yours? → OPMF41A_Site Assessment_Instructor/Coach
General Safety Briefings	How is the following communicated to your crew and students? → Hazard Logs → ERP → AIRS Reporting
Daily Briefings	→ When are crew and students briefed? ◆ start of day / start of every task / end of day; → What is communicated? (i.e. Inherent risk...); → How do you check for understanding → IM SAFE; → Students keep their own logs.
Tow Launch	Is there any tow launching involved in training students? → Is there a written procedure for towing? → Briefing on failure to release the tow system? → Briefing in the event of a lockout?
Checklists	Do you have daily checklists? There is so much to remember; make some quick lists for you, crew and students: → Start of day go no go; what to check; → Pre start briefs; → Pre launch checklists; crew / students

D. Reviewing the System,

There is always room for improvement; like a filtering system: if your system is closed, it will stagnate.

Review, improve, revise procedures:

Start off using the [149 Self Assessment for Instructors](#); this NZHGPA self audit questionnaire is a self-assessment tool for the head or sole Instructor; to help identify strengths and any weaknesses for improvement to both your legal aviation obligations and the safety of your students.

When to review internally: End of season review / Post event/Issue review / Triggered review.

When to review externally: External physical audit recommended every 3 years.



3.0 Equates to a Safe Flying Environment

The sum of all parts equates to a safe flying environment. You want to have fun doing what you love. Your member organisation has worked hard using their safety ethos; through years of experience, communication, trend analysis, and continual improvement in their safety system; the cycle never stops.

If you have done the leg work, i.e all the steps above to provide for a safe learning environment, you, as the instructor, will have a strong base of support (your procedures) to provide your students with a safe and fun learning environment.

This Field Guide (coming soon) is an amazing tool to use before setting off for your/their next adventure:

NZHGPA Field Guide to a Safe Flight
FLY LIKE A BIRD, THINK LIKE A PILOT
CHECK
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> My Environment: Everything in my surroundings, especially weather, terrain, other people; <input checked="" type="checkbox"/> My Plan: A well grounded vision for the day; <input checked="" type="checkbox"/> Myself: Everything to do with me and my equipment.