

Hong Kong Paragliding Association

香港滑翔傘協會

Safety Management System Manual

www.HKPA.net



HKPA Safety Management System Manual

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Revisions

Note: This manual was initially published as Section 4 (Safety) of the HKPA Operations Manual originally issued September 1st, 1994. On August 9th, 2018 Section 4 (Safety) of the HKPA Operations Manual was transferred to create this manual.

List of Revisions

1. 9 Aug 2018 Original
2. 1 Dec 2019 Definitions Updated
3. 1 Dec 2019 Section 1,2,3,4,7 Updated
4. 10 Apr 2020 Definitions Updated
5. 10 Apr 2020 Section 3,4,5,6 Updated
6. 4 Jul 2020 Definitions Updated
7. 4 Jul 2020 Section 2,4,5,6,7 Updated
8. 2 Aug 2020 Definitions Updated
9. 1 Jan 2022 Definitions, Section 6 Updated

Revisions highlight (1 Jan 2022)

Definitions "Serious incident" added
Section 6 6.2.1 Safety Risk Severity Table updated



Definitions

In this manual, unless the context otherwise requires-

“Accident” in relation to a paraglider means: an occurrence associated with the operation of an aircraft that takes place after the time any person boards the aircraft with the intention of flight and no later than the time all persons who boarded with that intention have disembarked, if applicable, in which:

- a person is fatally or seriously injured; or
- the aircraft sustains structural failure or damage; or
- the aircraft is missing or is completely inaccessible.

(HONG KONG CIVIL AVIATION (INVESTIGATION OF ACCIDENTS) REGULATIONS (CAP. 448B OF THE LAWS OF HONG KONG))

“Aeroplane” means: a power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight; (L.N. 77 of 2008)
(AIR NAVIGATION (HONG KONG) ORDER 1995 (CAP. 448C OF THE LAWS OF HONG KONG))

“Aircraft” means: a machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface; (L.N. 77 of 2008). The use of this term in this manual is to be read to include paragliders.

(AIR NAVIGATION (HONG KONG) ORDER 1995 (CAP. 448C OF THE LAWS OF HONG KONG))

“Air Service” means: any service performed by any aircraft for hire or reward: Provided that a member of a club carried in an aircraft belonging to the club for the purposes of instruction shall not, if the instructor is also a member of the club, be deemed to be carried for hire or reward, notwithstanding that payment is made for such instruction or carriage;

(AIR TRANSPORT (LICENSING OF AIR SERVICES) REGULATIONS (CAP. 448A OF THE LAWS OF HONG KONG))

“Altimeter Setting” For details, please refer to ICAO Document 8168 or ENR 1.7 of HKAIP

“APPI” means: Association of Paragliding Pilots and Instructors

“ATIS” means: Aerodrome Terminal Information Service.

“BOI” means: Board of Inquiry formed to investigate an incident or accident.

“CAD” means: The Hong Kong Civil Aviation Department.

“Commercial” means: Any service or operation for the carriage of passengers or goods by air for hire or reward.

“Controlled Airspace (CTA)” means: a control area or control zone which has been notified by CAD as Class A, Class B, Class C, Class D or Class E airspace, please refer to HKAIP for details



“*Congested area*” in relation to a city, town, or settlement, means any area which is substantially used for residential, industrial, commercial or recreational purposes.

“*Daily Maintenance*” means: the replacement of component parts which require only assembly and no sewing other than hand tacking.

“*DGCA*” means: the person for the time being lawfully discharging in Hong Kong the functions of the office of Director-General of Civil Aviation
(AIR TRANSPORT (LICENSING OF AIR SERVICES) REGULATIONS (CAP. 448A OF THE LAWS OF HONG KONG))

“*Direct Supervision*” means: the detailed-on site personal supervision and direction of pilot training operations.

“*EC*” means: Executive Committee of the HKPA

“*FAI*” means: Federation Aeronautique Internationale (French) The international body that administers sport aviation throughout the world.

“*Flight Time*” means: the total time from the moment at which an aircraft first commences movement for the purpose of takeoff until the moment at which it comes to rest at the end of a flight.

“*Foreign Instructor License*” means: A valid instructor license, certificate or rating issued by a FAI Certified Country Authority.

“*Foreign License*” means: A valid pilots license, certificate or rating issued by a FAI Certified Country Authority.

“*GFS*” means: Government Flying Service. Search and rescue services are typically provided by a GFS helicopter in Hong Kong.

“*Hard Landing*” means: a landing made while the aircraft is experiencing an excessive rate of descent or excessive ground speed.

“*HKAC*” means: The Hong Kong Aviation Club

“*HKCAD*” means: The Hong Kong Civil Aviation Department

“*HKPA*” means: The Hong Kong Paragliding Association

“*HKPA Website*” means: <http://www.hkpa.net>

“*ICAO*” means: International Civil Aviation Organization.

“*Incident*” in relation to a paraglider, means: an occurrence, other than an accident, associated with the operation of the aircraft that affects or could affect the safety of the operation of the aircraft.

“*Injury*” means: Any injury including fatal or serious injuries.



“*Instructor*” means: a person who holds an HKPA recognized Instructor rating.

“*Integral Part*” means: any part which would affect the safe operation of the aircraft.

“*IPPI*” means: International Pilot Proficiency Identification license

“*LCSD*” means: Leisure and Cultural Services Department.

“*Maintenance*” means: the restoration of any part of a paraglider assembly to its original specifications and/or condition. It does not include alteration of existing components or construction of alternative sections for the aircraft assembly.

“*Major Modification*” means: any modification to a structural component or an integral part of an aircraft.

“*Major Repair*” means: any repair to a structural component or an integral part of an aircraft.

“*NAC*” means: National Aerosport Control Organization. Each FAI member country has only one NAC assigned by the FAI.

“*Night*” means: The time between half an hour after sunset and half an hour before sunrise, sunset and sunrise being determined at surface level.

(AIR NAVIGATION (HONG KONG) ORDER 1995 (CAP. 448C OF THE LAWS OF HONG KONG))

“*Normal Flight*” means: flights in accordance with the OM in the designated flying areas.

“*NSA*” means: National Sports Association as designated by the SF&OC.

“*OM*” means: Operations Manual of the HKPA.

“*OFCA*” means: The Office of the Communications Authority.

“*Paraglider*” is a heavier than air aircraft. An aerodyne, or parachute, or parascending parachute, in which the shape of the fabric / film aerofoil is primarily maintained by inflation by dynamic pressure due to air speed thus forming a tensioned membrane structure. It has no primary rigid structural parts although secondary semi rigid parts such as battens or sealed inflated fabric bodies are not excluded. Its function is gliding and soaring free flight and it may be launched after its inflation by any glider launching method or by foot. It must be portable by one person.

“*Pilot certificate*” means: any pilot or instructor certificate or rating, and any endorsement issued by the HKPA or issued by a licensing authority recognized by the HKPA.

“*Pilot in Command (PIC)*”, in relation to an aircraft, means the pilot designated by the operator or the owner, as appropriate, as being in charge of the aircraft without being under the direction of any other pilot in the aircraft and charged with the safe conduct of a flight; (L.N. 77 of 2008)

(AIR NAVIGATION (HONG KONG) ORDER 1995 (CAP. 448C OF THE LAWS OF HONG KONG))



“SIV” means: Simulation d'Incidents en Vol (French) a structured format course for learning how to prevent and deal with unexpected situations in normal flight.

“STSC” means: Safety and Training Sub-Committee.

“Student Pilot in Command under Direct Supervision” means: as a student in actual control of the aircraft, under the direct supervision of an instructor either in the aircraft or observing from the ground.

“QNH Altimeter Setting” means: that pressure setting which, when placed on the pressure setting subscale of a sensitive altimeter located at a reference point, will cause the altimeter to indicate the vertical displacement of the reference point above mean sea level.

“Radio” means: a transceiver capable of operating on the frequency 145.9875Mhz.

“Serious incident” means: An incident that—

(a) is associated with the operation of an aircraft involving circumstances indicating that there was a high probability of an accident; and

(b) takes place after the time any person boards the aircraft with the intention of flight and no later than the time all persons who boarded with that intention have disembarked; (L.N. 115 of 2017)

“Serious injury” means: An injury which is sustained by person in an accident and which— (L.N. 115 of 2017)

(a) requires hospitalization for more than 48 hours commencing within 7 days from the date on which the injury was received; or (L.N. 115 of 2017)

(b) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); or

(c) involves lacerations which cause nerve, muscle or tendon damage or severe haemorrhage; or

(d) involves injury to any internal organ; or

(e) involves second or third degree burns or any burns affecting more than 5 per cent of the body surface; or (L.N. 115 of 2017)

(f) involves verified exposure to infectious substances or injurious radiation, (L.N. 115 of 2017)

and seriously injured shall be construed accordingly. (L.N. 115 of 2017)

(HONG KONG CIVIL AVIATION (INVESTIGATION OF ACCIDENTS) REGULATIONS (CAP. 448B OF THE LAWS OF HONG KONG))

“SF&OC” means: Sports Federation & Olympic Committee of Hong Kong, China.

“SMS” means: Safety Management System.

“SOP” means: Standard Operating Procedure.

“Supervision” means: the periodic surveillance, assessment, and correction of pilot training operations and of persons engaged in those operations.

“Tandem Flight” means: any flight or intended flight in which a passenger in addition to the pilot in command is carried (or intended to be carried) in an aircraft.

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"VFR" means: visual flight rules.

"XC" means: Cross Country flight typically transitioning between areas of thermal lift used to remain airborne and travel in a specific direction.



1. General

1.1. Introduction

Paragliding, like all sports, has associated risks. The purpose of this manual is to keep the risks within acceptable limits. It describes the structure, methods and measures that should be used by paraglider pilots to keep their sport as safe as possible. The objective of this manual is to foster a safety culture, where safety events are actively and systematically analysed, and measures are taken to reduce the risk of recurrence.

For the effective function of these structures, methods, and measures, it is important that everyone involved in paragliding including the HKPA committee members, schools, clubs, instructors and pilots, promote flight safety. Everyone must face the hazards and consequent risks and be prepared to take appropriate measures to remove or at least reduce these hazards and risks.

Events, incidents, and accidents can never be eliminated completely, not even with a SMS Manual. But it is possible to learn from events to avoid recurrence. This requires openness of those directly involved and understanding of the others. It is not about finding someone guilty or blaming those involved, but about finding, together, the reasons and then the solutions to reduce the chance of recurrence. This manual provides guidance for this purpose.

1.2. Format of the SMS Manual

This manual should be read with the other manuals published by the HKPA and in conjunction with the regulations published by the HKCAD and ICAO and with reference to the HKPA website.

www.HKPA.net

The HKPA welcomes all pilots to join our association. In all HKPA publications “he” and “his” have been used for simplicity but must be read to include “he and she”, and “his and hers”.

Chinese and English are used in HKPA publications where practical. HKPA do not translate any of manuals issued by other party to avoid any possibility of ambiguity or contradiction. This manual has been translated for ease of use but in the case of any ambiguity or contradiction the English version shall prevail.



2. HKPA Safety Policy

2.1. Just Culture

The HKPA promotes and requires a just culture. A just culture is one in which front line operators or others are not punished for actions, omissions or decisions taken by them that are commensurate with their experience and training, but where reckless behavior, willful violations and destructive acts are not tolerated.

2.2. De-identified Safety Reports

Only the HKPA Safety Officer has access to the reports submitted through the HKPA Safety Reporting system. The Safety Officer de-identifies the reports before disclosing any information to any other Committee Member or publishing the information on the HKPA Web Site. The HKPA will not voluntarily divulge information secured in the safety program to any outside agency which would permit identification of any individual involved. This is a basic tenet of the HKPA SMS.

If preferred any pilot can make a report anonymously by simply not entering their name or contact details on the website form.

2.3. Protection from Violation

HKPA Safety Reports will not be used for disciplinary action by the HKPA.

The HKPA will protect the information submitted in a Safety Report to the greatest extent allowable by law. The HKPA has never been asked by any agency to release any information from a Safety Report without the express permission of the pilot involved. The submission of a safety report has prevented many paraglider pilots from being subject to civil penalty action.

For further information see the ICAO Safety Management Manual Appendix 5 to Chapter 4 SAFETY INFORMATION PROTECTION.

2.4. In-Flight Emergency

In an in-flight emergency requiring immediate action, the pilot in command may deviate from any rule to the extent required to meet that emergency. Should a pilot ever exercise this privilege a Safety Report must be filed. This can establish that an emergency was declared and protect the pilot from civil prosecution.

For example: Due to fouled lines on take-off the pilot-in-command elects to make a landing on the main bathing beach at Shek O as there is significantly larger clear area available and there is concern for that the stall characteristics of the glider are compromised. This is in direct contradiction with LCSD and HKCAD regulations but in the pilot's estimation was the safest course of action in this emergency situation. File a Safety Report and the HKPA will be able to defend your actions.

2.5. History of SMS in the HKPA

The HKPA SMS was introduced in 2009. Guidance for the SMS was initially included in the HKPA Operations Manual Section 4 Safety. In 2018 Section 4 of the Operations Manual was transferred to this manual. The HKPA was one of the first paragliding associations worldwide to adopt the SMS concept and safety reporting.



2.6. Historical Records of Accidents and Incidents

The accident statistics for paragliding in Hong Kong are available for review and analysis on the HKPA website. Examples are shown in the Appendices Section of this manual.



3. Scope of the SMS

3.1. Objectives

The purpose of the SMS is to:

10. Reduce the risk of accidents.
11. Increase knowledge of safe operation for schools their students, clubs and their members and the entire paragliding community in Hong Kong.
12. Promote an environment where safety is paramount and second nature.

The aim is to create a culture not just of reporting and analysis of events, but also where pilots can talk to each other about their behaviour regarding flight safety.

3.2. Proactive and Reactive Safety Systems

The proactive safety system sets out to identify problems before they occur, whereas the reactive system deals with events after they occur. Unfortunately, it is impossible to remove all risk associated with aviation, however the proactive and reactive systems complement each other and reduce risk to an acceptable level.

Proactive

An important principle of an SMS is to pay attention to small or apparently less significant events and to report and discuss them openly. By doing so, risks can be better identified, and serious accidents can be avoided. This is the proactive or predictive approach to safety. Not only accidents or incidents must be reported, but also Hazards that could lead to a dangerous situation. In addition, the analysis and discussion of all events is necessary at all levels. What does this mean? Report Hazards and talk openly to your fellow pilots if you see something potentially unsafe.

Reactive

The reactive elements utilise de-identified Accident and Incident reports to produce statistics that can be analysed to prevent reoccurrence of similar events. Although by definition this system deals with actual events and failures of systems, it complements the proactive element, ensuring that hazards missed by the proactive system are address and the objective of reducing risk to acceptable levels is achieved.

What does this mean? Report Accidents and Incidents to prevent others making the same mistake.

Predictive

This methodology involves data gathering in order to identify possible negative future outcomes or events, analysing system processes and the environment to identify potential future hazards and initiating mitigating actions.

3.3. Closed Loop System

Both the proactive and reactive systems share similar components:

1. Event Reporting
2. Hazard Identification
3. Establish Improvement Measures
4. Safety Promotion and Training
5. Assessment of Improvement Measures





An “Event Report” is analysed, and a “Hazard Identification” is made in order to “Establish Improvement measures” which are disseminated through “Safety Promotion and Training”.

The loop is closed when an “Assessment of Improvement Measures” is made. If the assessment is not favourable new “Improvement Measures” should be established and disseminated through further “Safety Promotion and Training” until a favourable assessment is achieved. This closed loop system captures any undesirable outcomes from the application of the SMS components.



4. Roles and Responsibilities

The paragliding safety structure in Hong Kong includes all parties and entities that are involved in the sport. However, the Hong Kong Civil Aviation Department (HKCAD), the Federation Aeronautique Internationale (FAI), the Hong Kong Paragliding Association (HKPA), the Safety and Training Sub-Committee (STSC), schools and clubs, pilots and students all have specific tasks:

Level	Role Summary	Responsible Party
HKCAD	Review and provide advice on the safety policy and manuals of the HKPA	HKCAD Officer
FAI	Review and provide advice on the safety policy and manuals of the HKPA	FAI Vice-President
HKPA	Design, implement and monitor the SMS for schools, clubs and individual students and pilots	Safety Officer
STSC	Analyse safety statistics and de-identified reports for Hazard Identification and to establish Improvement Measures	Sub-Committee Chairman
Schools and clubs	Ensure compliance with HKPA Operations Manual, establish a just culture of safety reporting within the school or club and make safety reports	Instructor
Pilots and Students	Comply with the HKPA Operations Manual, discuss safety openly and make safety reports	Individual Member

4.1. Safety Officer Role

- Establish a safety culture where event reporting is normal, and pilots can talk to each other
- Inform instructors, students, and pilots about flight safety Improvement Measures
- Ensure compliance of Improvement Measures and assess them
- Monitor and adjust safety related policies and rules where necessary
- Report de-identified events to the Executive Committee, STSC and HKCAD.
- Coordinate research on serious events

4.2. STSC Chairman Role

- Establish a safety culture where event reporting is normal, and pilots can talk to each other
- Analyse events
- Hazard identification
- Establish Improvement Measures

4.3. Instructor Role

- Respect laws and regulations
- Keep their knowledge up-to-date on CAD aviation regulations, HKPA rules, meteorology, aerodynamics, navigation, technique, and other information affecting flight safety
- Establish a safety culture where event reporting is normal, and pilots can talk to each other
- Establish and distribute educational material for instructors, students, and pilots
- Support and coordinate SMS of schools and clubs
- Supervise implementation of SMS
- Submit safety reports



4.4. Tandem pilot/Advance Tandem Pilot Role

- Respect laws and regulations
- Keep their knowledge up-to-date on CAD aviation regulations, HKPA rules, meteorology, aerodynamics, navigation, technique, and other information affecting flight safety
- Apply that knowledge
- Support and coordinate SMS
- Take note of the safety notices, Improvement Measures, and procedures
- Submit safety reports

4.5. Individual Member Role

- Members are expected to respect laws and regulations
- Keep their knowledge up-to-date on CAD aviation regulations, HKPA rules, meteorology, aerodynamics, navigation, technique, and other information affecting flight safety
- Apply that knowledge
- Take note of the safety notices, Improvement Measures, and procedures
- Submit safety reports



5. SMS in Practice

The SMS is composed of the following components:

1. Event Reporting
2. Hazard Identification
3. Establish Improvement Measures
4. Safety Promotion and Training
5. Assessment of Improvement Measures

5.1. Event Reporting

The HKPA Safety Report form is available on the HKPA website in the safety section. The form can be used to report accidents, incidents, or hazards. Safety Reports are not intended to apportion blame or liability but intended solely to promote accident prevention by analysis of accident, incident, and hazard data. See the Appendices of this manual for an example of this form.

5.1.1 Compulsory Reports

All pilots are required to report ACCIDENTS and INCIDENTS within 72 HOURS of the event. This is true even if you are not involved but simply witness an accident or incident. (You are not required to disclose the pilot's name or your name). Compulsory report triggers include but are not limited to:

13. Collision or near collision with another aircraft
14. Hitting an obstacle on landing approach
15. Rescue/reserve parachute deployment
16. Faintness of pilot during flight
17. Damage to property
18. Injuries to oneself and or others
19. Bystanders tangled with glider at launch
20. Dangerous launch, landing and flying technique

5.1.2 Voluntary Reports

All pilots are requested to report HAZARDS. A hazard has the protentional to cause an accident or incident. This report can be used for any situation that the reporter feels is, or maybe in the future, unsafe.

5.2. Hazard Identification

With reference to Hazard Reports, Incident Reports and Accident Reports, hazards are identified by the Safety Officer and STSC using the techniques described in the Risk Categorisation section of this manual.

5.3. Establish Improvement Measures

The Safety Officer and STSC will use Hazard Reports, Incident Reports and Accident Reports, and, the HKPA website safety statistics, and include open discussion with instructors and pilots to establish appropriate Improvement Measures to address the Identified Hazards.



5.4. Safety Promotion and Training

Safety promotion and training is required to disseminate Improvement Measures established by the Safety Officer and STSC. The aim is knowledge transfer regarding flight safety, both on a technical level and to create a safety culture. On a technical level, pilots should be aware of laws and regulations, technique, procedures, and other technical matters associated with flight. Talking to each other about behaviour and readiness to report are key elements in developing the safety culture in Hong Kong.

It is important that not only improvement measures are applied, but also an explanation is given why and how these measures will improve flight safety. When pilots know the reason for a new safety procedure, they will be more inclined to adhere to it. Additionally, when pilots know that reports result in improvement measures, this inspires further reporting. Safety promotion and training's goal is that everybody (members, students, instructors, and others) has the most current knowledge of flying technique, meteorology, aviation regulations, aerodynamics, rules, navigation, and all other information affecting flight safety.

5.4.1 Implementation of Improvement Measures

Working together with the club or school, the safety officer communicates improvement measures and ensures that they are further communicated to the members, students, and instructors.

5.4.2 Communication Tools

A distinction can be made between two types of information, and the mode of communication depends on their type:

- Time Critical Information that must be known before the next flight or as soon as possible
- General Information where the time factor is less critical

Communication occurs by means of instructor briefings on the flying day, consultation with senior and experienced pilots at the flying site, via weather reporting sites like the HKO, via radio transceiver messages from pilots on the HKPA emergency frequency, via instant message groups, via email, via the HKPA website, via the HKPA OM and other means. Everyone has the responsibility for receiving and passing on safety information. Please choose the appropriate method.

5.5. Assessment of Improvement Measures

Shortly after Improvement Measures have been implemented, it is necessary to check whether they have lowered the risk level through assessment.

Additionally, and at least once a year safety events and the Improvement Measures taken will be discussed. This discussion occurs at the HKPA annual general meeting of each year. The central questions in the review of improvement measures are the following:

- Are the improvement measures working as they are supposed to?
- Have the improvement measures had desired effect on risk?
- Have the improvement measures introduced new hazards?

If improvement measure is found ineffective or counterproductive it is the responsibility of all to consider and offer alternative solutions.

5.6. Reporting to HKCAD

The Safety Officer should provide regular reports to CAD on the safety statistics, the associated analyses, improvement measures established, and assessment of the improvement measures.



6. Risk Categorization

The Safety Officer and Safety and Training Sub-Committee (STSC) will use the following procedure for Hazard Identification and to best decide on how to appropriately Establish Improvement Measures.

Should a Board Of Inquiry (BOI) be formed to investigate an Accident or Incident the Board may choose to follow the principals below in their investigation. The board, however, is free to find fault and offer improvements with the SMS or any other system or procedure.

6.1. Safety Risk Probability

The process starts by assessing the probability that the consequences of hazards will materialize. 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:

21. Is there a history of occurrences similar to the one under consideration, or is this an isolated occurrence?
22. What other equipment or components of the same type might have similar defects?
23. How many pilots are following, or are subject to, the procedures in question?
24. What percentage of the time is the suspect equipment or the questionable procedure in use?
25. To what extent are there organizational or regulatory implications that might reflect larger threats to public safety?

6.1.1 Safety Risk Probability Table

Risk Probability	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, 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

6.2. Safety Risk Severity

Once the probability assessment has been completed, the next step is to assess the safety risk severity, considering the potential consequences related to the hazard. Safety risk severity is defined as the extent of harm that might reasonably occur consequentially or outcome of the identified hazard. The severity assessment can be based upon:

26. Fatalities/injury. How many lives may be lost (pilots, students, bystanders, and the general public)?
27. Damage. What is the likely extent of aircraft or property damage?

The severity assessment should consider all possible consequences related to an unsafe condition or object, considering the worst foreseeable situation.



6.2.1 Safety Risk Severity Table

Risk Severity	Meaning	Value
Catastrophic	Equipment destroyed Death	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 an increase in workload or as a result of conditions impairing their efficiency Serious incident Injuries other than serious injury (e.g., abrasions, sprains, strains, etc.)	C
Minor	Nuisance Operating limitations Use of emergency procedures Minor incident	D
Negligible	Few consequences	E

6.3. Safety Risk Assessment

The safety risk probability and severity assessment process can be used to derive a safety risk index. The index created through the methodology described above consists of an alphanumeric designator, indicating the combined results of the probability and severity assessments. The respective severity/probability combinations are presented in the safety risk assessment matrix

6.3.1 Safety Risk Index Matrix

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



6.4. Safety Risk Tolerability

The next step in the process is to determine safety risk tolerability. For example, consider a situation where a safety risk probability has been assessed as occasional (4), and safety risk severity has been assessed as hazardous (B). The composite of probability and severity (4B) is the safety risk index of the consequence. This is a RED Safety Risk Index and falls in the “unacceptable under the existing circumstances” category. In this case, the safety risk index of the consequence is unacceptable.


6.4.1 Safety Risk Tolerability Matrix

Assessed Risk Index	Suggested Criteria
RED INDEX (5A-C, 4A-B and 3A)	Unacceptable under the existing circumstances
(OTHERS)	Acceptable based on risk mitigation.
GREEN INDEX (1B-E, 2D-E and 3E)	Acceptable



7. Appendices

7.1. Safety Reporting Form

 **HKPA Incident/Accident Reporting Form**
香港滑翔傘協會事故/意外報告表格

Please fill the following form as much as you can. Note all personal information will be not be disclosed during publication of the reports.
請盡可能填寫以下表格。所有個人資料不會向公眾披露。

YOUR INFORMATION

Your Full Name
你的全名 *

Your Phone Number
你的電話號碼 *

Your E-mail Address
你的電郵地址 *

INCIDENT/ACCIDENT INFORMATION

Date of Incident/Accident
事故/意外日期 *

Time of Incident/Accident
事故/意外時間 *

Morning (6am-12pm)
 Early Afternoon (12pm-2pm)
 Late Afternoon (2pm-5pm)
 Evening (5pm-7pm)
 Night (7pm-6am)

Location - Flying Site of the Incident/Accident
事故/意外地點 *

Cloudy Hill
 Lamau
 Long Kee Wan
 Ma On Shan
 Shek O
 Other

If "Other" site, please provide more information here:
請在此處提供更多有關地點的資料

Incident/Accident Description
事故/意外描述 *

Please provide a description with as much detail as you feel necessary, especially in regards to anyone being injured and any property damages. A narrative of the sequence of events will be ideal. Report facts and avoid judgemental language.
請提供詳細事故/意外描述，尤其是關於任何人受傷和財產損失的描述。對事件本來的敘述將是理想的。報告事實並避免使用判斷性語言。

Photos or Videos of the Incident / Accident
事故/意外的照片或視頻

Please note the following are optional:
請注意以下是非必須：

PILOT INFORMATION

Pilot(s) Involved
涉及的飛行員

Pilot Glider Description(s)
滑翔傘描述

Model / Color / Type
型號/顏色/類型

Pilot Phone Number(s)
飛行員的電話號碼

Pilot E-mail Address(es)
飛行員的電郵地址

Are Pilot(s) HKPA Member(s)?
飛行員是不是香港滑翔傘協會會員?

Pilot Rating(s)
飛行員等級

Novice or Beginner
 Solo Novice (HKPA 1)
 Club Pilot (HKPA 2)
 Pilot (HKPA 3)
 Intermediate Pilot (HKPA 4)
 Advanced Pilot (HKPA 5)
 Instructor
 Tandem
 Unknown

Pilot Experience(s)
飛行員經驗

0
 1
 2-3
 3-5
 5-10
 10+
 Unknown

WEATHER & ENVIRONMENT INFORMATION

Temperature (Degrees Celcius)
溫度(攝氏)

10-14
 15-19
 20-24
 25-29
 30-34

Wind Direction
風向

N
 NE
 E
 SE
 S
 SW
 W
 NW

Wind Speed (km/h)
風速(km/h)

0-10
 10-15
 16-20
 21-25
 26-30
 31-35
 36-40
 >40

Wind Conditions
風狀況

Stable
 Smooth
 Gusting
 Turbulent
 Variable
 Strong Lift
 Cloud Suck

Cloud Conditions
雲狀況

No Cloud
 A Little Cloud
 Some Cloud
 Moderate Cloud
 Overcast Cloud
 Lots of Cloud

Visibility Conditions
能見度

Unlimited
 Slight Hazy
 Hazy
 Poor
 Very Poor

Number of Pilots Flying
飛行員人數

1
 2-5
 6-10
 11-15
 16+



7.2. Safety Report Summary Example

Report #	Event Type	Event Date	Location - Site	Factors in this Incident
44	Incident	3/29/2015	Long Kee Wan	Tree Impact, Airmanship, Undershoot Landing
32	Accident	1/12/2014	Long Kee Wan	Airmanship, Undershoot Landing Zone, Water
86	Accident	3/12/2017	Long Kee Wan	Hard Landing, Airmanship, Strong Winds, GF
74	Accident	11/8/2016	Long Kee Wan	Hard Landing, Strong Winds, GFS Involvement
16	Incident	3/7/2013	Long Kee Wan	Tree Impact, Airmanship
42	Accident	2/1/2015	Long Kee Wan	Stall, Hard Landing, Injury, Tree Impact, Ai
67	Incident	7/4/2016	Lantau	
121	Accident	5/19/2018	Lantau	Injury, Impact with Obstacle, Police Involvement
22	Accident	6/1/2013	Lantau	Airmanship, Undershoot Landing Zone, Upsett
34	Incident	8/23/2014	Lantau	Airmanship, Upsetting Neighbours, HKCAD Inv
61	Accident	6/7/2015	Lantau	Stall, Hard Landing, Injury, Collapse, Tree
35	Incident	8/24/2014	Lantau	Stall, Hard Landing, Collapse, Tree Impact
137	Accident	7/22/2018	Lantau	Impact with Obstacle, HKCAD Involvement, Po

115 records Sum 8926

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7.3. Safety Report Statistics Detail Example

17	18	19
SUBMITTED DATE 3/14/2013	SUBMITTED DATE 3/14/2013	SUBMITTED DATE 3/14/2013
PILOT RATING Pilot (HKPA 3)	PILOT RATING Pilot (HKPA 3)	PILOT RATING Novice or Beginner
PILOT EXPERIENCE 10+	PILOT EXPERIENCE 1	PILOT EXPERIENCE 1
EVENT TYPE Accident	EVENT TYPE Accident	EVENT TYPE Accident
EVENT DATE 11/8/2009	EVENT DATE 1/15/2010	EVENT DATE 4/16/2011
EVENT TIME Early Afternoon (12pm-2pm)	EVENT TIME Early Afternoon (12pm-2pm)	EVENT TIME Early Afternoon (12pm-2pm)
LOCATION - SITE Shek O	LOCATION - SITE Shek O	LOCATION - SITE Lantau
LOCATION - MORE INFO	LOCATION - MORE INFO	LOCATION - MORE INFO Lantau West
WEATHER - TEMPERATURE (DEG C) 20-24	WEATHER - TEMPERATURE (DEG C) 15-19	WEATHER - TEMPERATURE (DEG C) 25-29
WEATHER - WIND DIRECTION E	WEATHER - WIND DIRECTION NE	WEATHER - WIND DIRECTION SW
WEATHER - WIND SPEED (KM/H) 10-15	WEATHER - WIND SPEED (KM/H) 26-30	WEATHER - WIND SPEED (KM/H) 26-30
WEATHER - WIND CONDITIONS Smooth	WEATHER - WIND CONDITIONS Gusting	WEATHER - WIND CONDITIONS Variable
WEATHER - CLOUD Some Cloud	WEATHER - CLOUD Moderate Cloud	WEATHER - CLOUD Some Cloud
WEATHER - VISIBILITY Slight Hazy	WEATHER - VISIBILITY Hazy	WEATHER - VISIBILITY Hazy
NUMBER OF PILOTS FLYING 2-5	NUMBER OF PILOTS FLYING 1	NUMBER OF PILOTS FLYING 2-5
EVENT DESCRIPTION On Sunday the 8th of November 2009, at approximately 1500hrs, the pilot made and approach and landing at Shek O Main Beach after soaring the ...	EVENT DESCRIPTION 1. Pilot was experienced, fairly active, with 12 previous flights at Shek-O. 2. Pilot's equipment was all in ...	EVENT DESCRIPTION Accident Description As far as the Board of Inquiry can ascertain, the following sequence of events unfolded....
WITNESS ATTACHMENTS 	WITNESS ATTACHMENTS ---	WITNESS ATTACHMENTS
WEATHER ATTACHEMENTS 	WEATHER ATTACHEMENTS ---	WEATHER ATTACHEMENTS
HKPA ATTACHEMENTS ---	HKPA ATTACHEMENTS ---	HKPA ATTACHEMENTS ---
HKPA RESPONSE The pilot was ridge soaring in light conditions south of Shek O Main Beach on Cape D'Aguliar. <p> The already light wind conditions ...	HKPA RESPONSE Contribution Factors <p> 1. Pilot was attempting to fly alone. 2. Pilot did not show good judgment ...	HKPA RESPONSE Site Report <p> The site being flown is identified by the Civil Aviation Department as a paragliding zone and designated as ...
HKPA ACTION The pilot has been advised that although flying without an official qualification is acceptable in Europe, in Hong Kong we require that pilots be ...	HKPA ACTION Accident summary <p> Pilots was alone on ridge and attempted to fly in conditions above his capabilities and had not ...	HKPA ACTION Recommendations to the HKPA Executive Committee Given the analysis of this incident the Board of Inquiry would like to make ...
FACTORS IN THIS INCIDENT Overshoot Land Zone Injury Air	FACTORS IN THIS INCIDENT Stall Hard Landing Injury Coll	FACTORS IN THIS INCIDENT Stall Hard Landing Injury Coll
INJURY LEVEL 0	INJURY LEVEL 2	INJURY LEVEL 5