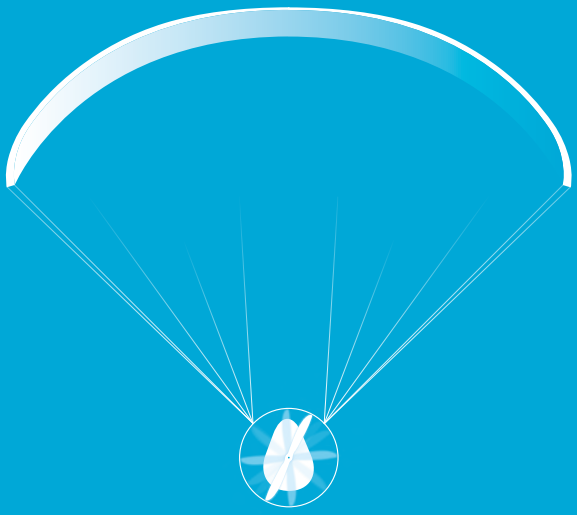
SEPT 24

UK Civil Aviation Authority



THE PARAMOTOR CODE

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SEPT 2024

Introduction

The Paramotor Code is intended for paramotor pilots as a guide to safe practice and aviation regulations.

Paramotor flying in the UK does not require a formal licence, however a paramotor is legally considered an aircraft and therefore subject to certain aviation regulations. This guide highlights the key points to be aware of and details how to find out more information.

Before attempting to fly a paramotor, it is strongly recommended to undertake formal training from a suitable instructor.

Pre-flight checklist

Flying site

☐ Have you obtained landowner permission and assessed the safety of the site?

Weather conditions

☐ Check the weather forecast. Will conditions be suitable for your level of skill and recent experience?

Airspace restrictions

☐ Review your aviation chart. Check NOTAMs for temporary airspace restrictions.

Equipment

☐ Is your paramotor airworthy? It is recommended to carry an altimeter and moving map device.

Fit to fly

☐ Do you feel fit to fly? Review the **I AM SAFE** checklist (see the Skyway Code).

Protection of people and property

You must comply with the rules that protect the public from aircraft operations

Endangering

You must not recklessly or negligently allow an aircraft to endanger persons or property[1].

Endangering could include:

- Operating near members of the public, for example taking off and landing close to people, buildings, or livestock; or
- Low flying that creates danger to persons or property.

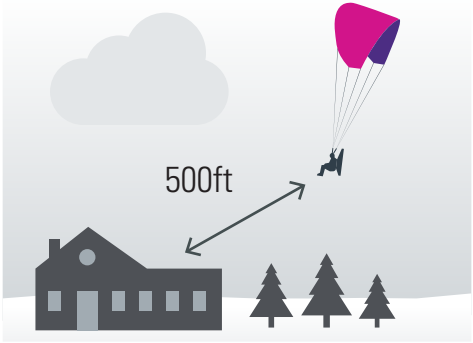
Operating from any area accessible to the public brings the risk of endangering. Public beaches, parks or similar locations where people may be present are therefore not considered suitable locations for paramotoring.

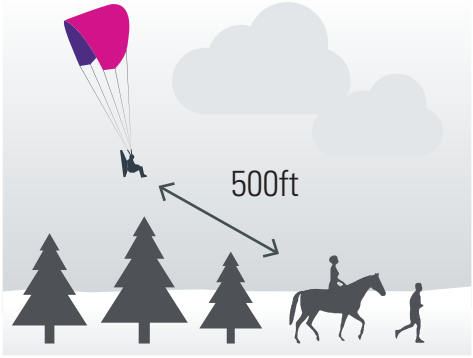
Endangering carries up to a two-year prison sentence or a substantial fine.

500 ft rule

Except when necessary for take-off or landing, you must not to fly closer than 500 ft from any person, vessel, vehicle or structure[2].

- 'Necessary' would be defined by normal aviation practice, for example an unusually low approach to land over people or buildings would still be considered a breach of low flying rules.
- The 'endangering' rule always applies – even if taking off or landing, you may still be in breach of the endangering rule if you are too close to people or property.





[1]Air Navigation Order 2016, Article 241
[2]UK Standardised Rules of the Air, SERA.5005(f)

Protection of people and property

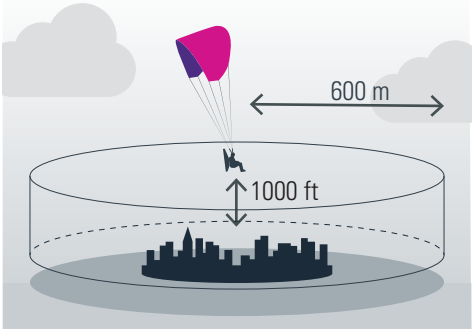
Congested areas

Except when necessary for take-off or landing, you must not fly over the congested areas of cities, towns or settlements or over an open-air assembly of persons, unless at such a height as will permit, in the event of an emergency arising, a landing to be made without undue hazard to persons or property[3].

> You must avoid flying a manner that would cause danger should you have a technical problem with your aircraft – for example you should always be able to glide clear of any towns, settlements or groups of people in the event of experiencing an engine failure.

Unless necessary for take-off and landing, you must not overfly congested areas less than 1,000 ft above the highest obstacle within a 600-metre radius of the aircraft[4].

Unless at an aerodrome or with the permission of the CAA, you must not take-off or land within a congested area or within 1000 metres of an open-air assembly of more than 1,000 people[5].



> Take-off and landing within towns or other built-up areas is not permitted, this would include adjacent public spaces, such as parks or beaches.

> What is a congested area?

The law states that a 'congested area' in relation to a city, town or settlement, means any area which is substantially used for residential, industrial, commercial or recreational purposes.

[3]UK Standardised Rules of the Air, SERA.3105
[4]UK Standardised Rules of the Air, SERA.5005(f)
[5]The Rules of the Air Regulations 2015, Rule 5

Flying Sites

Your take-off and landing site must be safe and legal

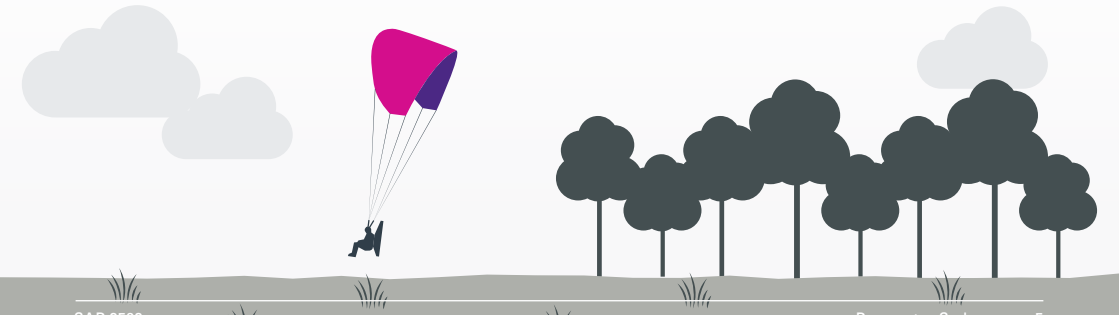
- Suitable locations include private farmland or dedicated sites that allow paramotoring. When using farmland, check for any rights of way that may allow members of the public into the area.
- Some aerodromes permit use by paramotors, but always check first. When operating in proximity to other types of aircraft, you must understand how to interact in accordance with the Rules of the Air - for more guidance see the Skyway Code.

Stay Legal

- You must have the landowner's permission to operate from private land. Always comply with the Rules of the Air and do not endanger the public or property.
- If it is necessary for safety reasons to make an unscheduled landing away from the operating site, avoid people or property as much as possible. Make reasonable attempts to identify and inform the landowner of your arrival.
- Note that sites without planning permission for use by aircraft may only be used for up to 28 days in a 12-month period. If you exceed 28 days use, the landowner may be served an enforcement notice by the local authority.
- Check that there are not any designations such as conservation areas, byelaws or other local restrictions that may affect paramotoring or the number of times you may operate from a certain area.

Be considerate

- Be considerate of your surroundings. Avoid locations in proximity to habitation or livestock. Be particularly aware of horse riders – do not overfly at low level since this may spook the horses.
- Paramotors can cause a significant noise nuisance. If conditions allow, vary your approach paths and when flying do not linger in a single place for long periods of time.
- Be aware of other airspace users and consider any local conflicts that might need to be managed. Operations close to airfields or other aerial activity such as gliding may not be advisable due to the risk of airborne conflict.



Airspace

You must understand the airspace environment you are flying in

Controlled Airspace

- Airspace is defined either as uncontrolled airspace or controlled airspace.
- Controlled airspace is located around airports but also at higher levels. Terminal airspace and enroute airways are found throughout the UK at various altitudes.

For operations inside controlled airspace, even at low altitude, you must have the permission of the relevant air traffic control unit.

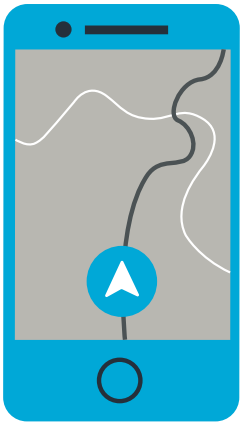
Unauthorised entry into controlled airspace causes a significant risk – paramotors may not be visible to air traffic control on radar and you may collide with other aircraft.

Full details of airspace classifications may be found in the Skyway Code.

Navigation

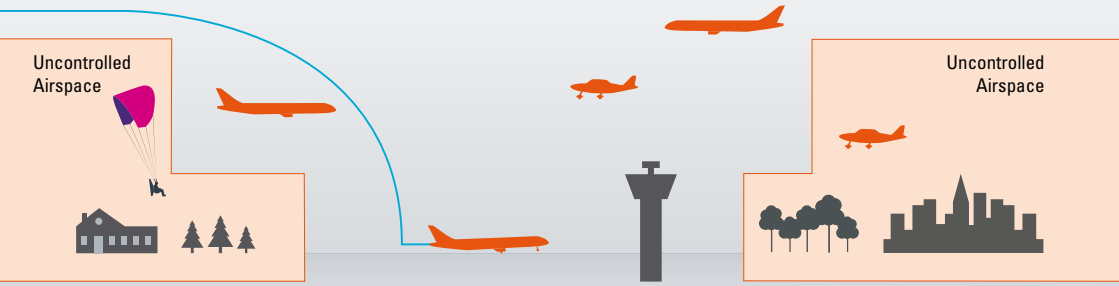
Before venturing away from the launch site, you must carry an appropriate aviation chart and know how to navigate, otherwise you may become lost and infringe controlled airspace or other restrictions.

Using a 'moving map' GNSS device with aeronautical charting will enhance your situational awareness.



Be aware of your altitude - do not climb into controlled airspace

Controlled Airspace



AIRSPACE

Airspace hazards

Understand key airspace hazards and restrictions. For more information read the Skyway Code.

> **Prohibited, Restricted and Danger areas**

> **Glider and parachute sites**

> **Aerodromes**

> **Instrument Approaches**

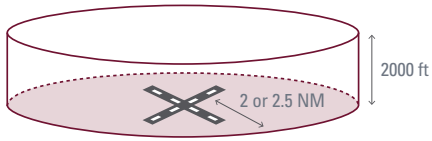
Temporary warnings or restrictions

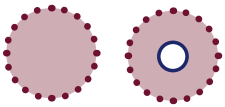
Temporary warnings or restrictions are published via the NOTAM system. You must check NOTAMs before flying.

Under the Restriction of Flying Regulations, the Secretary of State for Transport may introduce temporary restrictions and it is illegal to enter these without permission or complying with specified conditions. These are known as Restricted Areas (Temporary). These areas may be to protect airshows or other major public events.

RA(T) are listed in NOTAMs and will also have an associated 'Aeronautical Information Circular' (AIC) containing further information, available from the NATS AIS website. Having an aeronautical app on your smartphone or tablet that displays NOTAMs will assist in identifying areas subject to temporary restrictions. RA(T) details are also available by **phoning 08085 354802** ☎

Air Traffic Zones





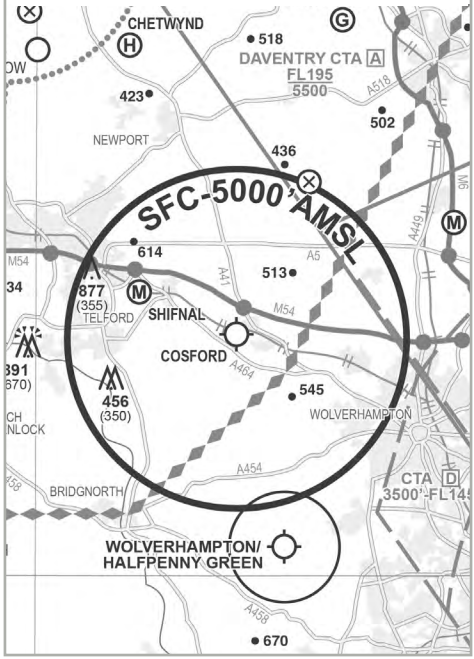
2 NM ATZ shown with aerodrome symbol

Many aerodromes are surrounded by an Air Traffic Zone (ATZ):
Make contact with the airfield over the radio and obtain either information (uncontrolled airfields) or permission (controlled airfields); or

> If the aerodrome permits non-radio traffic, obtain permission in advance of the flight.

> For further details, consult the Airspace section of the Skyway Code.

Example Restricted Area (Temporary)



AIRSPACE

Altimetry

Aviation altimetry is based on barometric altitude, measured in hectopascals (hPa). It is recommended to use an altimeter, rather than a GNSS derived altitude, which may differ significantly from the barometric figure.

The vertical dimensions of controlled airspace (CAS) and most other airspace restrictions are based on **altitude above mean sea level (AMSL).**

Some regulated airspace, such as air traffic zones (ATZ) are based on **height above aerodrome level (AAL).**

The CAA recommends pilots of all aircraft leave a margin of 2 nautical miles laterally or 200 ft vertically from the boundaries of controlled airspace.

It is recommended to use an altimeter that allows the adjustment of the reference barometric pressure, such that you may enter the figure as published in aviation weather reports (METARs).

The Skyway Code contains more information on obtaining aviation weather information.

There are three main types of altimeter setting:

QNH – for displaying AMSL. Major aerodromes publish a QNH figure. **Surrounding controlled airspace is referenced on QNH.**

QFE – for displaying height above the aerodrome or operating site.

Standard pressure – refers to the aircraft's altitude with a pressure setting of 1013 hPa. Standard pressure is sometimes referred to as QNE, but this is not an official UK term. When flying with reference to standard pressure, an aircraft's altitude is referred to as 'Flight Level' (FL).

CAS above 5000 ft or 6000 ft is normally defined by FL. The vertical dimensions of the airspace will therefore vary with the actual barometric pressure. When the QNH is less than 1013 hPa, there is a risk of vertical infringement.

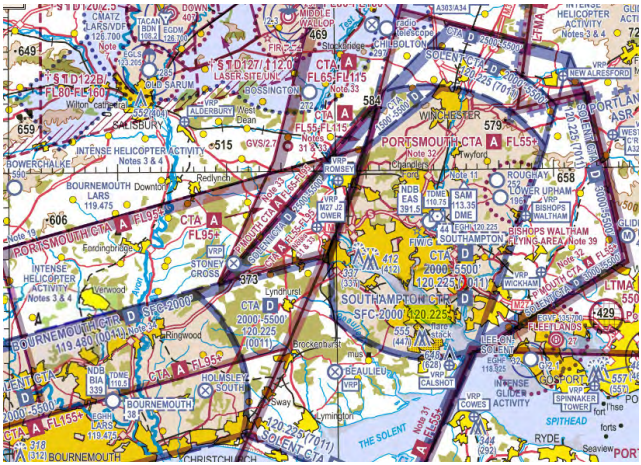
CAS defined by AMSL (QNH):

CAS defined by standard pressure (1013 hPa):

Aviation charts

You should purchase a Visual Flight Rules (VFR) aviation chart. These are available in 1:500,000 or 1:250,000 scale. Electronic aviation charts with 'moving map' functionality are also available for smartphones or tablet devices.

The 1:250,000 scale VFR chart may be more useful for paramotor flying, however it does not display controlled airspace or other restrictions above 5,000 ft. If you intend to fly above 5,000 ft, you must use a chart covering the relevant altitude.



AIRSPACE

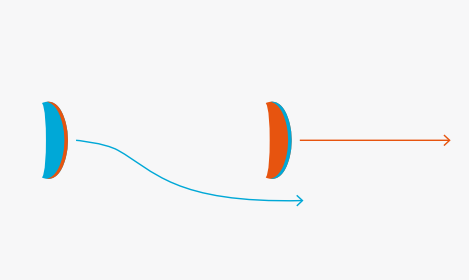
Prevention of collisions

The following rules are intended to prevent collisions between aircraft.

Proximity of aircraft

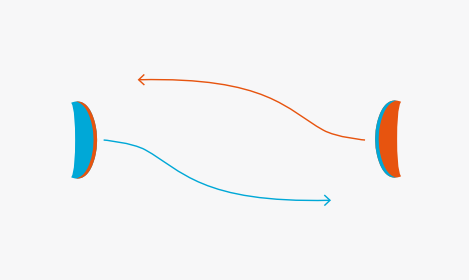
- Do not intentionally fly close to other aircraft so as to cause a collision hazard.
- This does not prohibit formation flying agreed between the pilot of each aircraft prior to flight.

  Overtaking aircraft shall pass to the right.
- The aircraft being overtaken has right of way.



Rights of way in the air

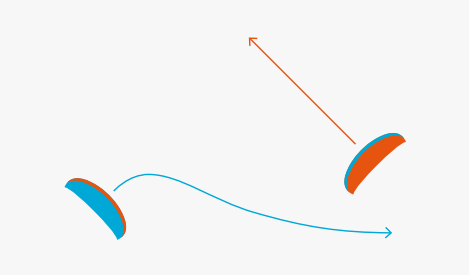
- If approaching another aircraft head on, such that there is a risk of collision, both aircraft shall turn right to avoid each other.



Head-on: Alter course to right

- If converging with another aircraft, the aircraft that has the other on its right must give way.

  If imagining the situation viewed from above, this could be thought of as “on the right, in the right”.

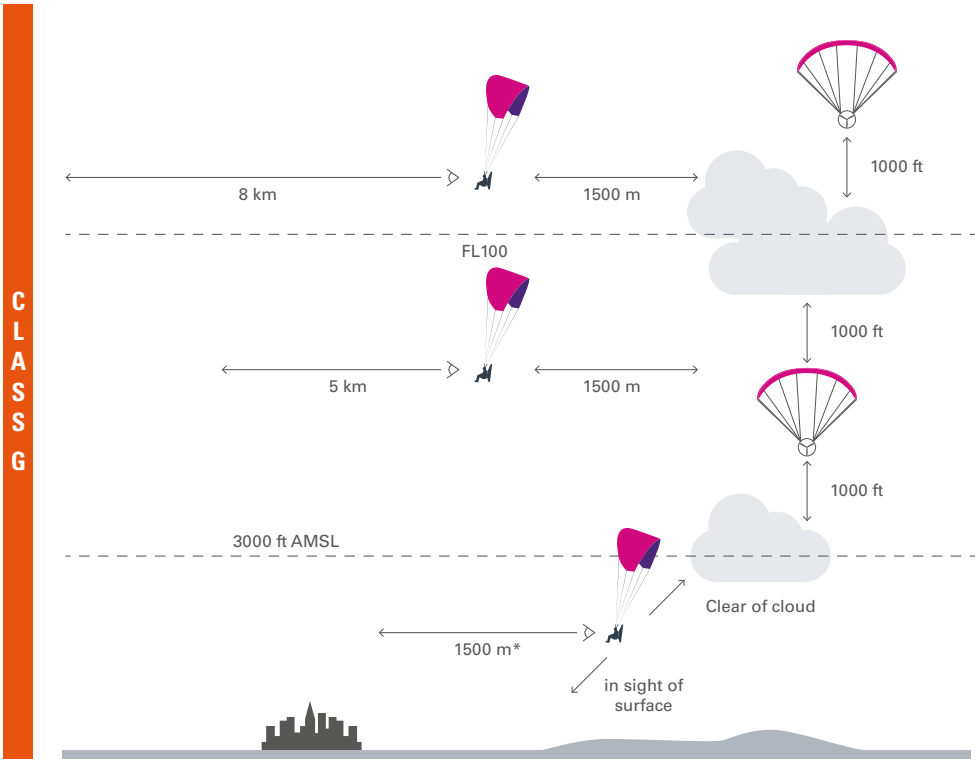


Converging: On the right, in the right

AIRSPACE

Visual Flight Rules

Paramotoring under Visual Flight Rules (VFR) must comply with the UK 'Visual Meteorological Conditions' (VMC) minima. The table below refers to uncontrolled (class G) airspace, for information on minima in controlled airspace, see the Skyway Code.



Altitude	Required flight visibility	Required cloud separation
At or above FL100	8 km	1500 m horizontally, 1000 ft vertically
Below FL100 and above 3,000ft AMSL	5 km	1500 m horizontally, 1000 ft vertically
At or below 3,000 ft AMSL	1500 m*	Clear of cloud and in sight of the surface

*For aircraft flying by day, in sight of the surface and at 140 kts or less, otherwise 5 km is required.

Airworthiness

You have a responsibility to maintain your paramotor in a safe and airworthy condition. Follow the maintenance schedules provided by the manufacturer and inspect your aircraft before the start of each flying day.

Allow adequate time and conduct your checks in a suitable location. If you are unsure about how to perform the set up and checks correctly, consult an appropriately qualified instructor.

A suggested daily inspection checklist for a simple foot-launched 2 stroke paramotor is outlined below – adapt as required for your machine and any guidance from the manufacturer:

ENSURE THE MASTER SWITCH IS OFF

Engine and fuel system

- Fuel tank and cap securely fastened
- Fuel mixture: age, condition and quantity
- Throttle cable free movement, routing and lock disengaged
- Carb and airbox, condition and mounting
- Cylinder head and casing, condition
- No leaks from tank, lines or seals

Gearbox or reduction system

- No leaks
- No abnormal noises or play in the propeller shaft
- Tension, condition and true running of belt drive (if fitted)

Propeller*

- Condition of propeller blades
- Mounting: correct torque and orientation
- Clearance and symmetry to the frame (tracking)

Exhaust system

- Condition and security
- Mountings, bolts, springs and other safety locks present and fastened
- Free movement of joints

Electrical system

- Wiring and operation of switches, 'kill' switch
- HT lead and coil, condition and security

Frame

- Straight and geometry correct
- Integrity of welded joints
- Netting tension and security
- Hang points and attachments

Harness

- Condition of webbing, stitching and buckles
- Maillons (quick links) correctly fastened
- Operation of carabiners
- Emergency parachute system and accelerator system correctly installed
- Ancillary items securely attached

Wing

- Condition and set up of canopy, suspension, risers, control lines and handles

Other items

- Condition and function of helmet and ancillary equipment

A complete visual inspection (full walk around) is essential and will help identify any potential issues. However, understanding the correct function and setup of the various parts, and how to identity potential problems is essential for safe paramotoring.

* Do not attempt your own repairs to the propeller. Minor damage should be addressed by a reputable manufacturer or dealer. Significant damage cannot be safely repaired – the propeller should always be replaced.

Further Information

Skyway Code

For further information on aviation rules and regulations, refer to the Skyway Code, available at www.caa.co.uk/skywaycode

Information on General Aviation Regulations may be found at www.caa.co.uk/ga

Insurance

If you launch your paramotor using wheels, you are legally required to have third party insurance. Even for foot-launching, obtaining insurance is strongly recommended – you never know when you might have an accident or be subject to a third-party claim.

Landowners or the operators of flying sites often require an indemnity that protects them in the event of a claim.

Training

- Training at a paramotor school will make the sport safer for you and those you share the air with. You will learn not only the practical skills in order to fly safely, but the legal requirements and key aspects of essential knowledge.
- Even if you already fly a paramotor, consider furthering your knowledge by attending a school with a training syllabus that covers the rules designed to safeguard other airspace users and those on the ground.

Prosecution

Breaches of aviation regulations are normally a criminal offence. More serious cases of flying that endangers people on the ground or other aircraft may attract a fine or prison sentence.

Endangering an aircraft carries a maximum sentence of five years in prison and endangering persons or property carries a maximum of two years.

Legal definition of a paramotor

A paramotor falls within the Air Navigation Order definition of a "Self-propelled hang-glider" (SPHG):

An aircraft comprising an aerofoil wing and a mechanical propulsion device which -

a) is foot launched;

b) has a stall speed or minimum steady flight speed in the landing configuration not exceeding 35 knots calibrated airspeed; and

c) has a maximum unladen weight, including full fuel, of 70 kg;

Aircraft equipped with wheels and flown by a single pilot are also considered to be SPHG, provided they comply with the following definition:

a) has a stall speed or minimum steady flight speed in the landing configuration not exceeding 20 knots calibrated airspeed; and

b) has a maximum unladen mass, including full fuel, of 70 kg, or 75 kg if the aircraft is equipped with an emergency parachute recovery system.