

SUA at Land's End Airport

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Introduction & Scope

1 Introduction

- 1.1 This guide has been put together to provide guidance to those wishing to operate Small Unmanned Aircraft (SUA) near Land's End Airport.
- 1.2 The latest generation of commercially available SUA have very advanced capabilities in relation to their size and cost; this has led to a surge in their popularity along with utilisation for a wide range of photographic and survey tasks. Operations in urban areas require an additional understanding of the complexities of the environment and of the safety and operational limitations that are appropriate for more congested areas such as towns and villages. Similarly, operational restrictions apply in the vicinity of Land's End Airport and the surrounding airspace for the protection of all air traffic movements into and out of the Airport.
- 1.3 In addition to the general guidance regarding the operation of SUA near Land's End Airport this document details specific guidance for those wishing to operate within the Land's End Flight Restriction Zone (FRZ) and Air Traffic Zone (ATZ).
- 1.4 The operation of all Small Unmanned Aircraft is covered by specific requirements detailed in the ANO and summarised in CAP722.
- 1.5 The latest copy of CAP722 can be found on the CAA website under the publications section.
- 1.6 All reference to SUA in this guide should be interpreted to apply to other 'model aircraft' of the same category but which may be known by alternative names such as Drone, Unmanned Aerial Vehicle (UAV), Unmanned Aircraft System (UAS) etc.

2 Scope

- 2.1 The content of this document is primarily intended for non-recreational SUA operators, but there is a great deal of overlap with recreational use and as a result, much of this guidance is also relevant to recreational uses. Furthermore, the document highlights some of the safety requirements that have to be met, in terms of airworthiness and/or operational standards, before a SUA should be allowed to operate within the Land's End Airport FRZ regardless of the type of SUA use.

Abbreviations

A

AMSL	Above mean sea level
ANO	Air Navigation Order
ANSP	Air Navigation Service Provider
ATC	Air Traffic Control
ATCU	Air Traffic Control Unit
ATM	Air Traffic Management
ATS	Air Traffic Service
ATSU	Air Traffic Service Unit
ATZ	Aerodrome Traffic Zone
ANO	Air Navigation Order

C

CAA	Civil Aviation Authority
CAT	Commercial Air Transport
CAP	Civil Aviation Publication

F

FRZ	Flight Restriction Zone
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I

ID	Identification
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L

LED	Light Emitting Diode
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M

MOD	Ministry of Defence
MOR	Mandatory Occurrence Reporting
MTOM	Maximum Take-off Mass

N

NOTAM	Notice to Airmen
NM	Nautical Mile

R

RPZ	Runway Protection Zone
RTF	Radiotelephony

S

SARG	Safety and Airspace Regulation Group
SMS	Safety Management System
SUA	Small Unmanned Aircraft
SUSA	Small Unmanned Surveillance Aircraft

U

UA	Unmanned Aircraft
UAS	Unmanned Aircraft System(s)

V

VFR	Visual Flight Rules
VLOS	Visual Line of Sight

Glossary & Definitions

1.1 Model Aircraft means:

'any small unmanned aircraft which is being used for sport or recreational purposes only'

1.1.1 Most, off the shelf, shop bought SUA will fall into this category.

1.2 A **small unmanned aircraft (SUA)** is defined as:

'any unmanned aircraft, other than a balloon or a kite, having a mass of not more than 20 kg without its fuel but including any articles or equipment installed in or attached to the aircraft at the commencement of its flight'

1.2.1 Many such SUA are of the electrically powered 'multi rotor' type. However, the term SUA refers to all unmanned model aircraft including other electric types, internal combustion, turbine powered aircraft and gliders

1.2.2 For electrically propelled aircraft, the battery itself is considered to be a part of the aircraft - it is the battery's charge that is the fuel. Accordingly the aircraft weight for the purposes of local rules should be determined including its flight batteries.

1.3 An **SUA operator** is defined as:

'in relation to a small unmanned aircraft, is the person who has the management of the small unmanned aircraft'

1.3.1 This means the person who is responsible for the SUA. This may also be a company and not an individual.

1.3.2 An **SUA flyer** is the person who is actually flying the SUA/DRONE/MODEL AIRCRAFT and may or may not be the SUA Operator as well.

1.4 **Small Unmanned Surveillance Aircraft (SUSA)** means:

'any SUA, which is equipped to undertake any form of surveillance or data acquisition'

1.4.1 If you attach any form of camera to any small unmanned aircraft it becomes a SUSA regardless of whether or not data is being streamed back to the operator

1.4.2 The operator of the SUSA should consider, before the flight of the SUSA, how these images are to be used as the flight may fall into the category of 'Commercial Operation'.

1.5 A **commercial operation** is defined as:

'flight by a small unmanned aircraft except a flight for public transport, or any operation of any other aircraft except an operation for public transport;

- which is available to the public;

or

- which, when not made available to the public,

(1) in the case of a flight by a small unmanned aircraft, is performed under a contract between the SUA operator and a customer, where the latter has no control over the remote pilot

or

(2) in any other case, is performed under a contract between an operator and a customer, where the latter has no control over the operator,

in return for remuneration or other valuable consideration.'

1.5.1 The term '*available to the public*' should be interpreted as being a service or commodity that any member of the public can make use of, or actively choose to use, (e.g. because it has been advertised or offered to someone)

1.5.2 The key elements in understanding this term are

'...any flight by a small unmanned aircraft...in return for remuneration or other valuable consideration'.

1.5.3 If the operator of the SUSA obtains photos/video from the flight and then gives the pictures/footage to anyone else who then may profit through selling them, the SUSA flight would fall into the category of 'Commercial Operation'. A flight for 'Commercial Operation' needs permission from the CAA beforehand.

1.6 **Congested Area** means,

'in relation to a city, town, or settlement, any area which is substantially used for residential, commercial, industrial, or recreational purposes'

1.6.1 This would include local villages, busy beaches and parks.

1.7 **Flight Restriction Zone (FRZ)** means,

A zone around a protected aerodrome which prohibits the flight of SUA unless permission from the relevant ATS unit is obtained.

1.7.1 There are a number of runways at Land's End Airport so the FRZ can be extensive and is shown in greater detail later in this document.

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Section 1

1. Introduction & General Practice

Flying a small unmanned aircraft close to an aerodrome carries with it a number of additional risks to manned aircraft departing from and landing at the aerodrome.

Unless the operator is actively conducting aerial work related to the aerodrome itself, in which case they will have already been liaising with the aerodrome operators, there should be little real need to fly a small unmanned aircraft this close to an aerodrome.

The requirements to be satisfied that the flight can be conducted safely and to maintain visual contact with your aircraft for the purpose of avoiding collisions still apply. Additionally, of course, the requirements not to endanger persons or property always apply too.

Flight Restriction Zones (FRZ) are implemented at the majority of UK aerodromes. Their purpose is to enhance safety for other airspace users within the vicinity of an aerodrome.

FRZs are always active.

In order to operate within an FRZ, permission must be sought from the appropriate authority, either the Air Traffic Service unit (ATSU) or the Aerodrome Operator. This may be obtained through an online platform, or directly from the aerodrome. The procedure is normally outlined on the aerodrome website, otherwise the ATSU may be contacted directly, contact details can be found within the AIP. An approval in principle may be issued in advance, which must normally be followed by an 'on the day' approval from the appropriate air traffic service unit, or aerodrome operator.

FRZs are defined in article 94A of the ANO and comprise three sections:

- A cylinder, with the same dimensions as the Aerodrome Traffic Zone (ATZ);
- Runway Protection Zones (RPZs);
- Additional Boundary Zones.

The ATZ is an existing airspace structure, which applies to manned aircraft, and is a 2.0 or 2.5 NM radius cylinder which extends to 2000 ft above aerodrome level, centred around the centre point of the longest runway.

The RPZs are rectangular blocks, starting at the runway threshold and extending out 5 km along the extended runway centreline, which are 1 km wide and extend to 2000 ft above aerodrome level.

The Additional boundary zones exist where a line drawn that is 1km beyond the airfield boundary, extends outside of the ATZ. This additional volume is called the 'additional boundary zone'. This also extends to 2000 ft above aerodrome level.

Visual Line of Sight (VLOS) operations are limited to a maximum height restriction of 400 feet above the surface, however there is scope for the CAA to authorise flight at greater heights, via either a permission or exemption, if the CAA is satisfied that this can be achieved safely. Operations above 400 feet cannot be approved by the Aerodrome Air Traffic Control service, this needs to come directly from the CAA.

This height limitation is intended to contribute to the safety of manned aircraft from the risk of collision with a small unmanned aircraft. With the obvious exception of take-off and landing, the majority of manned aircraft fly at heights greater than 500 ft from the surface. While there are some other exceptions where manned aircraft fly at 'low level' (such as Police, Air Ambulance and Search and Rescue helicopters, as well as military aircraft), flying a small unmanned aircraft below 400 ft significantly reduces the likelihood of an encounter with a manned aircraft.

Due to their small size and ability to operate out of small sites, most SUA are particularly difficult to see against the land backdrop versus the relatively much larger size of a manned aircraft. The majority of SUA do not have an anti-collision beacon (although they may have other lights of lesser illumination - typically LEDs) and they are not currently required to be fitted with a transponder.

The small size and the open-framework, symmetrical structure of a multi-rotor SUA mean that it may not be clearly visible until at a much closer distance than would be the case between two manned aircraft, particularly when the SUA is hovering or moving slowly. Sighting of a SUA from another aircraft is likely to be a 'late sighting' with reduced time to alter course.

Therefore, in addition to maintaining direct, Visual Line of Sight (VLOS) and keeping to a height of no more than 400 feet above the surface, **SUA pilots shall avoid and give way to manned aircraft at all times.**

The safe operation of SUA is as important as that of manned aircraft, and third-party injury and damage to property can be just as severe when caused by either type of aircraft. Our objective is not to stop SUA users having fun; it's to help ensure that SUA users have the information that will help ensure that whilst they're having fun, they're not posing a risk to any other aircraft or people.

1.1 The Land's End FRZ

The Land's End FRZ is comprised of a 2NM Air Traffic Zone (ATZ) and 8 Runway Protection Zones (RPZ). There are 8 RPZ's because, although not all runways at Land's End have been asphalted, every runway, even the grass ones, need to be protected.



Diag 1 The Land's End Airport FRZ

A more detailed and interactive map may be found at dronesafe.uk under the Airfield Restrictions section.

If your proposed area of operation is outside of the FRZ but still in close proximity, in order to ensure the continued safe operation of all air traffic movements, we would ask that you still follow the application process so that ATC might have as much information as possible to pass on to other airspace users. The cliffs around the Cornish coast are regularly used for military and Search & Rescue training aircraft that will need to know if you are there.

It is also important to note that the area around Sennen Cove is regularly used as a launch site for Para Gliders and if this activity is in progress this will have a significant impact on the safe operation of SUA.

1.2 Flying Within the Land's End FRZ

Any operator wishing to fly an SUA within the FRZ must obtain permission from either the ATCU or the Airport Authority before doing so. Even if the airport is notified as closed, permission still needs to be obtained before the commencement of SUA operation as FRZs are always active.

If you wish to fly within the FRZ then you will be asked to provide detailed information regarding both the operator and the area and times of operation. In order for your application to be processed correctly and, if approved, the necessary information disseminated to all relevant parties, you should allow sufficient time for this process to be completed before your proposed flight takes place.

Even if you are flying your SUA just for fun you will still need to obtain permission to do so inside the FRZ. ATC still need to gather some information from you in order to ensure the safe flying operation for all airspace users. You will be informed immediately if your intended operation is approved or otherwise.

Section 2

1. Contact Information

1.1 Land's End Airport

You can contact ATC at Land's End by the following means. Telephone contact is the preferred method.

Tel 01736 788944
01736 785224

Email atc@islesofscilly-travel.co.uk

Post Air Traffic Control
Land's End Airport Ltd
Kelynack
St Just
Penzance
Cornwall
TR19 7RL

1.2 SUA/Drone Information from the CAA

If you would like more detailed information regarding the safe operation of SUA in any location the following websites are a good source.

[https://publicapps.caa.co.uk/docs/33/CAP722%20Edition8\(p\).pdf](https://publicapps.caa.co.uk/docs/33/CAP722%20Edition8(p).pdf)

<https://dronesafe.uk/>

1.3 What to do if you are concerned about SUA use

Anyone using a SUA has to follow the 'drone code' to ensure that members of the public are protected.

If you have any concerns about SUA being used in your area, either from a safety or privacy perspective, contact your local police on 101.

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