

Health and Safety Department

Small Unmanned Aircraft (SUA)(Drone) Policy

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Contents

- 1. Introduction**
 - 2. Policy statement**
 - 3. Objective**
 - 4. Responsibilities**
 - 4.1 Deans and Heads of Professional Services
 - 4.2 University Health & Safety Service
 - 4.3 SUA/Drone Operations Coordinator
 - 4.4 SUA/Drone pilots
 - 5. Definitions**
 - 6. Background**
 - 6.1 Regulation of aviation in the UK
 - 6.2 Commercial aviation
 - 6.3 SUA/Drone operations around airfields
 - 7. Generic health and safety considerations**
 - 7.1 Minimum University safety requirements
 - 8. LSU Drone Society use of SUA's/Drones**
 - 9. Use of SUA's/Drones for Commercial Operations and the University Operations Manual**
 - 9.1 Permission for Commercial Operations
 - 9.2 The University's Operations Manual
 - 10. Use of SUA's/Drones for teaching activities**
 - 11. Use of SUA's/Drones for events**
 - 12. Recreational and all other SUA/Drones activities**
 - 13. Insurance**
 - 14. References and document management table**
- Appendix 1; Aerodrome Traffic Zones (ATZ) and Flight Restriction Zones (FRZ)**
Figure 1: East Midlands Airport ATZ & FRZ
Figure 2: Heathrow Airport ATZ & FRZ

1. Introduction

Small Unmanned Aircraft (SUA) / Drone use is growing at a rapid rate in the UK and our skies are some of the busiest anywhere in the world. **Dronesafe.uk** (1) is designed to

help ensure that SUA / Drone users in the UK can easily access the information they need about how to fly their drones safely and legally, without endangering others.

The objective of this policy is to help ensure that SUA / Drone users wishing to operate at Loughborough University campuses have the information that will help ensure that whilst they are operating their devices, they are not posing a risk to any other aircraft or people and that they are complying with the relevant legislation.

2. Policy statement

It is the policy of Loughborough University, so far as is reasonably practicable, to ensure the health and safety of staff, students and visitors to the University with respect to the use of SUA/Drones on both Loughborough and London campuses.

3. Objective

The objective of this policy is to set out minimum standards for ensuring the safety of persons using and those affected by SUA/Drone activity on the University Campuses. Activities include SUA/Drone use for Teaching, Research, Commercial and personal or recreational use.

4. Responsibilities

4.1 Deans & Heads of Professional Services

Ensure all SUA use in respect of research and commercial activities is undertaken;

- in compliance with this policy, Civil Aviation Authority (CAA) legislation and guidance and LU Operations Manual,
- on completion of suitable and sufficient risk assessments,
- by suitably competent persons and,
- with the necessary public liability insurance cover.

4.2 University Health & Safety Service

- Ensure the SUA/Drone policy is reviewed and updated regularly. Including whenever legislation changes and no longer than every 2 years.
- Provide advice and guidance to SUA/Drone operators and approve, where appropriate, SUA use subject to satisfactory compliance with this policy, CAA regulations and guidance, on completion of suitable and sufficient risk assessments and having obtained suitable Public Liability insurance, (£5m minimum cover).

4.3 SUA/Drone Operations Coordinator

- Apply for, and upon issue by the CAA, hold and maintain the Permission for Commercial Operations (PfCO) and regularly review and maintain the associated University SUA Operations Manual.
- Advise on the appropriate procedures for complying with the relevant legislation and guidance on safe management of SUA.
- Advise SUA Operators as necessary regarding training, flight planning, risk assessment etc.
- Operate SUA in compliance with this policy, CAA legislation and guidance, on completion of suitable and sufficient risk assessments and having obtained suitable Public Liability insurance.

4.4 SUA/Drone Operators

- All SUA / Drone Operators will be responsible for ensuring that their flights are carried out safely and that all risks are controlled to an acceptable level.

- On 1 October 2019 a new SUA / Drone registration scheme will open. By 30 November 2019 all SUA / Drone Operators will be required to have registered their devices (if over 250g) with the CAA and to have taken an online training course and test. This will be an annual registration and a charge will be levied by the CAA. (*Fees to be set and published by 16 September 2019*).

5. Definitions

- Small Unmanned Aircraft (SUA) system; Defined as remotely operated aircraft and all of the control, launch and landing systems required for their operation. Sometimes referred to as ‘Drones’, Unmanned Aerial Vehicles (UAV), and “Remotely Piloted Aircraft Systems” (RPAS). All are covered by the scope of this policy.
- Operator (or pilot) – the person operating the SUA / Drone.

6. Background

6.1 Regulation of aviation in the UK

The primary legislation is the Air Navigation Order (ANO) 2016 (as amended). ANO is enforced by the CAA which has enforcement powers.

The ANO does not distinguish between different types of aircraft. It covers ALL aircraft, of all sizes. The CAA grants “exemptions” from certain provisions of the ANO. If there is no explicit exemption, then the provisions of the ANO apply.

The ANO does not regulate the use of SUA’s / Drones indoors. Workplace health and safety legislation applies to indoor use.

6.2 Commercial aviation

ANO defines a ‘commercial operation’ as:

“...any operation of an aircraft other than for public transport—

(a) which is available to the public; or

(b) which, when not made available to the public, is performed under a contract between an operator and a customer, where the latter has no control over the operator, in return for re-numeration or other valuable consideration.”

Any commercial operation requires the operator to meet all of the legal requirements of a commercial operator that apply to their type of aircraft.

Any SUA use must be risk assessed. This will include the risk to persons who might be affected by malfunction, as well as operators, where there may be manual handling and hazardous substance hazards, for example.

6.3 SUA / Drone operations around airfields

In March 2019 the Flight Restriction Zone (FRZ) around airports and airfields changed. Boundaries of FRZ around airports are now set at a minimum distance of **5km**. Air Traffic Control (ATC) approval is required for any SUA / Drone flight within the FRZ.

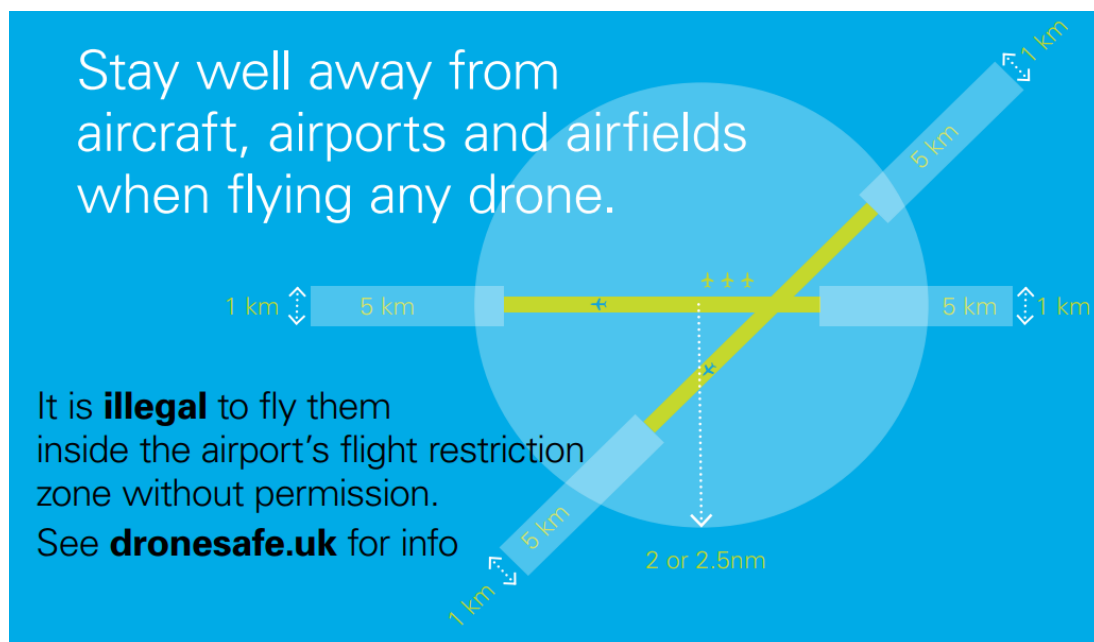
SUA / Drone Operators are required to ask permission from the local airport’s Air Traffic Control (ATC) to fly within the Aerodrome Traffic Zone (ATZ). The ATZ is a 4.6km radius circle centred at an Aerodrome Reference Point (ARP). The ARP is the geographical location of the aerodrome and the centre of its traffic zone where an ATZ is established.

In addition, a zone has been introduced, 5km by 1km starting from the point known as the 'threshold', at the end of each of the airfield's runways. Both zones (FRZ and ATZ), extend upwards to a height of 2,000 feet above the airfield.

A map depicting the restricted areas at east Midlands Airport and Heathrow Airport are at Appendix 1 (below) and available at <https://dronesafe.uk/restrictions/>.

Where appropriate, Operators must provide written evidence of their permission to operate inside the FRZ / ATZ to the University Health & Safety Service upon request and in any case, to the local Air Traffic Control prior to any flying in the FRZ / ATZ.

The FRZs in proximity to the University campuses are depicted in; Appendix 1; Aerodrome Traffic Zones (ATZ) and Flight Restriction Zones (FRZ) (below).



7. Generic health and safety considerations

SUA/Drones are considered to be work equipment, as defined by the Provision and Use of Work Equipment Regulations 1998. They must therefore be;

- suitable for the intended use.
- safe for use, maintained in a safe condition and inspected to ensure it is correctly constructed and does not subsequently deteriorate.
- used only by people who have received adequate information, instruction and training.
- accompanied by suitable health and safety measures, such as protective devices and controls. These will normally include emergency devices, adequate means of isolation from sources of energy, clearly visible markings and warning devices

7.1 Minimum University safety requirements

- The University SUA/Drone Code of Practice requires that all SUA/Drone operators must provide, before flying on campus, a current registration certificate for the devices they

intend to use and their Operators training certificate. (Please refer to the following website for details: [CAA website](#) including exemptions).

- The person responsible for the flight must maintain direct, unaided visual contact.
- Flights above 400ft (c.120m) are prohibited (unless prior CAA approval is obtained).
- Operators must not fly within 50m (150ft) of a person, vehicle, building (unless the building is under their control), or structure.
- Operators must not fly within 150m (500ft) of crowds and built up areas. The 400 feet maximum height applies in all cases.
- During landing / take off then SUA / Drone must not fly within 30m (100ft) of any person, except those who are in charge of the aircraft.
- Always comply with the manufacturer's instructions for your SUA / Drone.
- No one may operate an SUA / Drone with more than 9 micrograms of alcohol in 100 ml of breath. Although it is acknowledged that this is difficult to determine in practice it must be noted that this is a quarter of the current English drink drive limit. For light alcohol consumption, 8 hours 'bottle to throttle' is a useful term to keep in mind. If any doubt exists as to the level of intoxication of the Operator then the Operator must not fly the device.
The University does not tolerate the use of illegal substances and SUA/Drones must never be operated whilst under the influence.
- From 30 November 2019 SUA/Drone Operators must register their devices with, and undertake an online training course provided by, the CAA. The Police have new powers from the same date to deal with offenders. These include new powers to enter and search premises under a warrant where there's a reasonable suspicion that there is a SUA / Drone which the Police reasonably believe to have been used in the commission of an offence. Police will be able to issue fixed penalties of up to £100 for minor SUA / Drone related offences. Such as failing to produce registration documents and / or proof of registration for SUA / Drones between 250g and up to and including 20kg in mass, failure to produce evidence of any other relevant permissions required by legislation (e.g. proof of Operators Permission for Commercial Operations (PfCO) or exemption issued by the CAA from the ANO, and failing to comply with a Police officer's instruction to land a SUA/Drone, and flying a SUA / Drone without a valid acknowledgement of competency or evidence of meeting that competency when requested.

*(*Please see references below for links to "Dronesafe" (1) safety guidance linking to other resources including the "Drone Assist" App, the "Dronecode (2)" and "Drone Aware" safety video.)*

8. LSU Drone Society use of SUA's/Drones

Student societies, including LSU Drone Society, should seek permission from the UH&SS Approval for flights will be subject to;

- compliance with the Dronecode(2),
- observance and compliance with Loughborough Students Union Drone Society Operations Manual and operating procedures,
- completion of appropriate risk assessments,
- obtaining the necessary public liability insurance provision.

9. Use of SUA's/Drones for Commercial Operations and the University Operations Manual

The University requires that all SUA use for teaching, research or consultancy purposes must be undertaken in accordance with the procedures in the Operations Manual and conditions in any applicable PfCO. Any School or Department which wishes to undertake teaching, research or consultancy using an SUA should seek guidance from the SUA Operations Coordinator.

(For enquiries regarding these activities, contact the University Operations Coordinator at: uasoperations@lboro.ac.uk).

9.1 Permission for Commercial Operations

A CAA issued PfCO is required for all commercial SUA activities and for activities outside of the operating limits set out in the Air Navigation Order. Such permission is granted by submitting to the CAA, for their examination and approval, an Operations Manual. The University is seeking to obtain a PfCO covering multi-rotor and fixed wing remotely piloted aircraft systems with a maximum take-off mass of less than 20 kg. Any permission will be issued to the University, not to any individual or group of individuals, and will be held by the SUA Operations Coordinator.

9.2 The University's Operations Manual

The Operations Manual covers ALL outdoor research / commercial SUA / Drone operations for the entire institution. As the University is a large, complex organisation that wishes to undertake many different types of "mission" it has to spell out its procedures in detail to reassure the CAA about the University's ability to design "open ended" missions safely.

This Operations Manual describes the organisation, aircraft systems, personnel, flight operations and procedures by which the University carries out SUA operations.

The Operations Manual describes, comprehensively, how SUA will be operated. It covers, (but not exclusively):

- Pilot qualification requirements
- Operational management
- Operational procedures
- Maintenance procedures
- Emergency procedures

The Operations Manual is held by the SUA Operations Coordinator. For any enquiries regarding the Operations Manual, write an email to; uasoperations@lboro.ac.uk.

10. Use of SUA's/Drones for teaching activities

Flying of SUA on campus for teaching purposes is permitted provided that:

- CAA regulations and rules are complied with fully.
- The flight is undertaken by an appropriately qualified/experienced person, or under their direct supervision.
- A risk assessment is undertaken and provided to the University Health and Safety Service a minimum of 1 week in advance for their comment.

All minimum safety requirements in section 7 above must be complied with.

11. Use of SUA's/Drones for events

It may sometimes be desirable to use SUA / Drones for events held on University land (e.g. for demonstration purposes or to obtain aerial imagery). Their use in such circumstances can present additional health and safety considerations owing to the larger number of people who may be impacted.

A formal request for permission must be made through the University Events Team or the UH&SS and an Outdoor Event approval form completed. Approval will be subject to compliance with the CAA guidance on SUA / Drone safety, observance of agreed operating procedures, completion of appropriate risk assessments, and satisfactory insurance provision. There is no guarantee that permission will be granted.

If 'valuable consideration' is granted in association with the operation of the UAS, the operator must have a valid PfCO.

In any event, all minimum safety requirements in section 7 above must be complied with.

12. Recreational and all other SUA/Drone activities

The recreational use of SUA/Drones on University land is prohibited unless the pilot has obtained the necessary permission from the UH&SS. There is a presumption against recreational use of SUA by individuals on University land. Exceptions may be made however, and permission given subject to;

- The SUA/Drone operator demonstrating full compliance with generic health and safety considerations (See Section 7 above).
- The SUA/Drone operator demonstrating compliance with CAA legislation.
- The SUA/Drone operator providing proof (where appropriate) that their SUA/Drone is registered with the CAA
- The SUA/Drone operator demonstrates competence by providing evidence of suitable qualifications and training and experience or is operating under the direct supervision of a competent person.
- A risk assessment has been undertaken, provided to the University Health and Safety Service a minimum of 1 week in advance for their approval.

All minimum safety requirements in section 7 above must be complied with.

13. Insurance

Public and Products Liability is extended to include liability arising out of or from the ownership possession or use by or on behalf of the Member of any SUA provided that:

- a. the Member (and any person acting on the Member's behalf) complies with the operating and licensing provisions of the CAA in respect of the use of the SUA in the United Kingdom and,
- b. the SUA/Drone is restricted to 120m / 400ft in altitude measured from ground level, and,
- c. the maximum range of the SUA / Drone is not greater than 1km from the operator, and,
- d. where the SUA/Drone weighs more than 250g and less than 2kg the operator has obtained mandatory registration with the CAA and can demonstrate operator competency having undertaken the CAAs online training course and,
- e. the SUA/Drone will not be operated within 5km of an airport or licenced aerodrome boundary, and,
- f. the SUA/Drone is within the airspace of the United Kingdom, and,
- g. the SUA/Drone is not a military vehicle, does not carry weapons of any kind and is not being used for military purposes or in any way involving military purposes.

(Please contact Insurance Support at; Insurance.Support@lboro.ac.uk for insurance enquiries including information on countries outside the UK).

NOTE 1: "Small Unmanned Aircraft" includes systems (or any part thereof) and radio controlled helicopters (model aircraft).

NOTE 2: The provision of insurance cover does not remove the obligation to adhere to CAA legislation.

Where a personally owned SUA/Drone is to be deployed on University business, the University would need to agree with the owner in advance that it was taking responsibility for the drone for the duration of its use for the University. This could include property damage cover for the drone too, but please note there is no accidental damage cover for drones whilst being flown.

The University Insurance office and University Health and Safety Service must be informed of, and consulted on, any other types of SUA/Drone operations on campus. Information required will include the activity risk assessment, details of the pilot's training and a copy of a current public liability insurance certificate. (Minimum cover of £5m required).

14. References and document management table

1. [Link to the "Drone Assist" App, "Drone Aware" video and other resources](#)

- <http://dronesafe.uk/> :
2. Dronesafe Drone Code; <https://dronesafe.uk/drone-code/>
 3. For detailed guidance on all unmanned aircraft and specifically SUA / Drone laws, go to: <https://www.caa.co.uk/Consumers/Unmanned-aircraft-and-drones/>

Document management table

Version	Owner	Author	Revised by	Summary of revision	Date of revision
v1	UH&SS	H Weaver		New policy draft. Approved by HSEC 8 February 2017	Feb 2017
v2	"	"	H Weaver	Amend CTZ section	April 2017
v3	"	"	"	To take account of changes to the ANO which came into force on 30 July 2018	2 Aug 2018
v4	"	"	H Weaver & Dr D Graham	To take account of changes to the ANO which came into force on 13 March 2019	3 April 2019
v5	"	"	H Weaver	Legal update taking into account new registration and training requirements as of November 2019	Sept 2019
v6	"	"	"	Take account of the CAAs new registration and education requirements	Nov 2019

Appendix 1; Aerodrome Traffic Zones (ATZ) and Flight Restriction Zones (FRZ)

With reference to section 6.3 above, the shaded areas in Figures 1 and 2 below are the ATZ's and FRZs in proximity of the University campuses at Loughborough and London.

Permission is required from the local ATC to fly any SUA in the shaded areas. Outside of the FRZ's SUA's must not be flown above 120 meters / 400 feet above ground level.

Figure 1 East Midlands Airport ATZ and FRZ

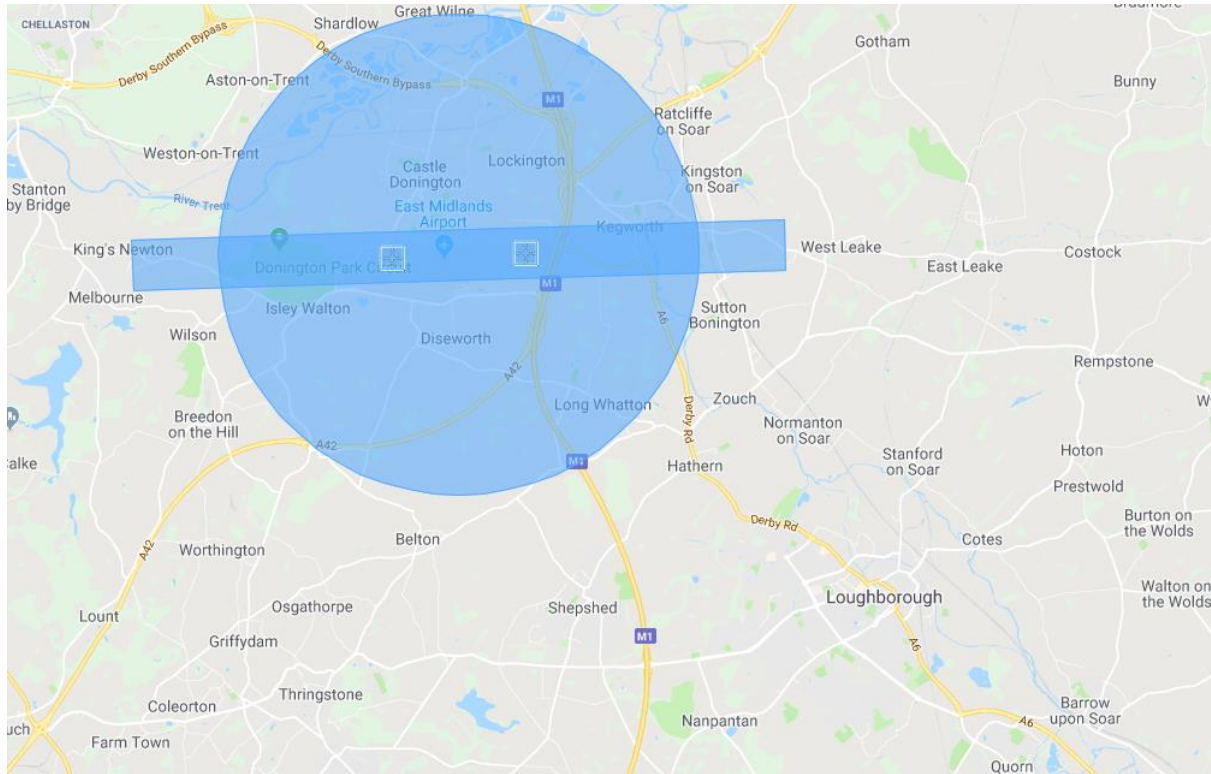


Figure 2: Heathrow Airport ATZ and FRZ

