



## **DRONE OPERATIONS** **(formerly Use of Small Unmanned Aircraft (SUA))**

<b>Date</b>	<b>Purpose of Issue / Description of Change</b>	<b>Equality Impact Assessment Completed</b>
2016	Formerly Use of Unmanned Aerial Vehicles Policy	
30 <sup>th</sup> January 2019	Review (renamed Use of Small Unmanned Aircraft (SUAs))	
April 2021	Review	
16 <sup>th</sup> December 2021	Reviewed and approved by the Health, Safety and Emergency Management Task Group	3 <sup>rd</sup> January 2019

<b>Policy Officer</b>	<b>Senior Responsible Officer</b>	<b>Approved By</b>	<b>Date</b>
Head of Health & Safety	University Secretary	Health & Safety Committee	30 <sup>th</sup> January 2019

This Policy will be reviewed in 2023

## 1. INTRODUCTION

A drone is a small, unmanned aircraft (SUA) normally controlled either autonomously, by on-board computers, or by the remote control of a pilot. Drones typically consist of two parts, the drone itself and the control system.

Due to their size and use of high-speed rotors / blades to propel them, drones can be exceptionally dangerous if not handled correctly. Accidents and incidents associated with their use are rising.

Until the 31<sup>st</sup> December 2020, the required level of pilot competency and certification was based on any commercial gain from flying a drone. From 1<sup>st</sup> January 2021 this requirement no longer applies. Instead, the focus is to align pilot competency with the level of risk that each flight presents. Considerations include the Class of the aircraft being flown (including any accessories) how close the drone will fly to people not directly involved with the flight (uninvolved people) and how close the drone will fly from built-up areas (congested areas). The greater the risk, the more rigorous training and Civil Aviation Authority involvement is required.

This Policy details the key elements to ensure compliance with relevant statutory conditions.

## 2. POLICY STATEMENT AND SCOPE

It is the policy of Bangor University, so far as is reasonably practicable, but in accordance with the relevant statutory requirements and good practice, to ensure the health and safety of staff, students, and visitors to the University.

This Policy states the requirements placed on the University and any College or Professional Service operating and commissioning drones to ensure, as far as is reasonably practicable, that the drone used for University activities and /or those authorised to be flown over University property and land, are operated safely and in accordance with legislative requirements and associated good practice

The Policy also states the duties and responsibilities placed on staff, students and others operating and commissioning drones on University related business.

### **The Policy applies to:**

- Any drone operated by the University with a maximum take-off mass of less than 25kg.
- The University and all its Colleges and Services, including the Students' Union wishing to commission a third party to undertake a drone activity.
- All staff, students, and others operating drones on University related business.

### **The Policy does not apply to the following:**

- The use of drones by University staff and students 25 kg and above, which is prohibited.
- Students' Union activities (excluding 3<sup>rd</sup> Party commissions).

## 3. RELATED POLICIES AND LEGISLATION

In addition to those general duties in law, the University and its constituent Colleges and Services, have a specific obligation when operating drones to comply with the requirements of the Air Navigation (Amendment) Order 2020 (also known as CAP2038A00) which contains the Orders and Regulations for UK aviation. It covers ALL aircraft.

- CAP2038A00 is prepared by the UK Civil Aviation Authority (CAA); a public corporation which provides air traffic services and acts as an independent specialist aviation regulator.
- CAA powers include overseeing the use of drones, and can, if required prosecute.

#### 4. DEFINITIONS / TERMINOLOGY

For the purposes of this Policy the following definitions apply:

- Drone: Small unmanned aircraft (multi-rotor / fixed wing weighing less than 25kg). This description includes Unmanned Aerial Vehicles (UAVs).
- MTOM: Maximum Take-off Mass.
- ANO: CAP2038A00: Air Navigation Order 2016: The Order and Regulations.
- CAA: Civil Aviation Authority.
- DMARES: Drone & Model Aircraft Registration Scheme. DMARES is an on-line training and registration scheme required by the CAA before any person operates any camera-equipped drone, even sub 250g.
- A2 'CoC': Certificate of Competency that enables operation of drones weighing between 250g and 2kg in built up areas.
- GVC<sup>1</sup>: General Visual Line of Sight Certificate (GVC) qualification required to operate drones weighing between 2kg and 25kg in built-up areas. Includes a theory test and practical flight assessment.
- Flyer ID: Unique Pilot ID issued on completion of DMARES.
- Operator ID: Required by any person (may be an organization) operating any drone 250g and over and any drone with a camera (excludes drones classed as a toy).
- Risk Categories:
  - **Open Category:** Low risk operations (incls. 3 sub-categories A1, A2, A3) that if set parameters are followed can be safely conducted and require no specific CAA authorisation.
  - **Specific Category:** Medium risk operations that cannot be conducted within the parameters of the Open Category. Requires greater, proven pilot competency and clearly defined operated procedures authorised by the CAA.
- Operational Authorisation: CAA authorisation required before any drone operation within the 'Specific' Category takes place.
- Drone Class: The Open Category has five drone classes: C0 (<250g) to C4 (<25Kg no automation). The primary factor in determining Class is the weight.
- Remote Pilot (RP): Competent individual who operates drone flight controls or if flying automatically monitors its course and can control its course by operating flight controls.
- Health and Safety (H&S): As part of Campus Services.

#### 5. DUTIES OF THE UNIVERSITY

Through this Policy, the University establishes management arrangements to ensure drones are used safely and correctly in accordance with relevant legislation. The University will:

- a. Appoint a University Drone Officer with the skills and experience to advise Colleges / Services and who is the only member of University staff and / or student permitted to perform drone operations in the Specific Category.

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<sup>1</sup> Formerly PFCO qualification. GVC qualification must be held by 31<sup>st</sup> December 2023

- b. Obtain and maintain CAA Operational Authorisation to enable the Drone Officer to perform drone operations in the Specific Category.
- c. As part of b. above, maintain the Operations Manual and submit each year to the CAA for examination and approval.
- d. Obtain and maintain the University's Operator ID to display on University owned drones.
- e. Consider College / Service procedures and arrangements for the operation of drones and confirm compliance with this Policy and the Operations Manual, as applicable.
- f. Consider and approve arrangements for staff and students wishing to fly drones.
- g. Consider and approve commissioned 3rd Parties and requests from 3rd Parties who wish to 'overfly' the University estate.
- h. Delegate responsibility for the implementation of this Policy to Deans of Colleges and Directors of Professional Services (as applicable).

## **6. COLLEGE AND PROFESSIONAL SERVICE RESPONSIBILITIES**

Where a College or Service wishes to use a drone the Dean/Director must ensure activities are undertaken safely and in accordance with the requirements of this Policy<sup>2</sup>. This includes establishing arrangements to ensure:

- a. University authorisation (S.7 & S.10) is obtained before any drone operation takes place.
- b. Staff and students understand:
  - i. The procedures associated with the use of drones, including competency and authorisation requirements (S.10).
  - ii. Their personal responsibilities if operating their own drone on University business.
- c. College / Service 'owned' drones are operated correctly and safely (S.7).
- d. Relevant records e.g. training, maintenance are kept.
- e. Drone use is monitored, with concerns or proposed changes in drone activity notified to Health and Safety immediately.

## **7. THE DRONE<sup>3</sup>**

Colleges / Services must seek the advice of the University Drone Officer or Health and Safety before purchasing any College / Service 'owned' drone to ensure the drone Class is suitable for the task to be undertaken (e.g. flown near people). Health and Safety must be informed of all purchases.

The following arrangements must then be established for all 'owned' drones:

- a. Implement a maintenance / inspection regime, in accordance with the manufacturer's guidance for the drone and any peripherals e.g. batteries.
- b. Maintain records as required e.g. maintenance, inspections, Battery Log.
- c. Ensure the University's Operator ID is displayed on all University owned drones.
- d. Restrict access to drones to authorised persons only with drones secured when not in use.

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<sup>2</sup> The principles of this Policy should also be applied for all University drone activities undertaken overseas

<sup>3</sup> All drones must be Registered in accordance with any legal requirement

In addition, Colleges / Services must ensure that any member of staff or student wishing to fly their own personal drone on University related business:

- e. Holds suitable personal Liability Insurance if not covered by University insurance.
- f. Registers their drone with the CAA with an Operator ID obtained and displayed on the drone as required. NOTE: Evidence of this is required as part of Pilot Authorisation (S.10).
- g. Understand their personal responsibilities i.e. inspections, maintenance.

## 8. OPEN CATEGORY DRONE OPERATIONS

To operate drones in the Open Category the following minimum criteria must be met:

1. The drone flight takes place at a safe distance from persons and not above crowds.
2. The drone must be operated within visual line of sight (VLOS).
3. The drone must not be flown more than 120m (400ft) from the closest point of the earth.

The Open Category then has 3 Sub-categories which contain operational limitations (i.e. equipment used / separation distances). The aircraft Class determines which Sub-category a drone operation falls under, the basic principles of each Sub-category are:

**A1** – Close to people and potential overflight (C0 and C1 drones only)

**A2** – Close to people, no overflight (C0, C1 and C2 drones only)

**A3** – Far from people, no overflight (C0, C1, C2, C3 and C4 drones only)

It is envisaged most drone operations by staff and student will involve Class C0 drones operating in the A3 Sub-category, i.e. operating a drone weighing <250g (e.g. DJI Mini) with a fitted camera, flying far from people, away from any built-up area and with no overflight of people.

Staff or students considering using a drone will be encouraged to work within these criteria. Details of the drone to be used and the drone operation will be required as part of the Remote Pilot Authorisation process (S.10)

## 9. SPECIFIC CATEGORY DRONE OPERATIONS

Drone operations (up to 25kg) that **cannot meet all 3 criteria** of the Open Category (S.8) fall under the remit of the Specific Category. In accordance with the University's CAA Operational Authorisation, the University Drone Officer is the only member of University staff or student permitted to carry out flights on University business in the Specific Category<sup>4</sup>.

## 10. REMOTE PILOT COMPETENCY & APPROVAL – OPEN CATEGORY <sup>5</sup>

Staff and students wishing to operate a drone on University business in the 'Open Category' must seek prior approval, submitting the *Drones – Remote Pilot Authorisation Form* to Health & Safety at least 3 weeks before the flight with approval given before any drone operation is undertaken.

As part of this process all staff and students must, as a minimum:

<sup>4</sup> The Pilot must hold DMARES and the General Visual Line of Sight Certificate (GVC) qualification. CAA Operational Authorisation, which requires the University to submit an Operations Manual is also required

<sup>5</sup> All Remote Pilots must be Registered in accordance with any legal requirement i.e. DMARES, Flyer ID

- a. Undertake the on-line CAA foundation course - DMARES.
- b. Obtain a Flyer ID on completion of the DMARES course.
- c. Comply with the requirements of 'The Drone' (S.7).
- d. Comply with Remote Pilot responsibilities (S.13) and any specific requirements identified during the Pilot Authorisation process.

**NOTE:** Additional competencies may be required dependent on the drone Class and how close the drone will fly to uninvolved persons and built-up areas. In some instances, a practical flight assessment by the University Drone Officer may be necessary.

## **11. COMMISSIONING OF OTHERS (3<sup>RD</sup> PARTIES) TO UNDERTAKE DRONE WORK**

Any College / Service commissioning a 3<sup>rd</sup> Party to undertake a drone activity, must, before the 3<sup>rd</sup> Party performs the drone activity:

- a. Confirm the 3<sup>rd</sup> Party holds an appropriate CAA Operational Authorisation (see (b) below), have trained and registered Pilots, Insurances, Data Permissions (e.g. Filming Agreement) etc. and are experienced in the planned work.
- b. Where the 3<sup>rd</sup> Party has no CAA Operational Authorisation, confirm, as part of the approval process:
  - i. The Drone Class and the Subcategory of the flight.
  - ii. That the flight will be far from people with no overflight of uninvolved persons.
  - iii. There will be no flying over a congested area.
  - iv. Appropriate insurance is in place.
  - v. Pilot competence; including their experience in the planned work.
  - vi. Operator ID information.
  - vii. Data and image capture permissions and arrangements.
- c. Send a completed *3<sup>rd</sup> Party-Led Drone Operation Form*, to Health & Safety with approval received before work takes place.
- d. Where aerial work is around or above University buildings or property, inform relevant Schools / Services of the drone work and controls that are in place and where appropriate, agree the time of overflying to minimise disruption.
- e. If filming above areas 'not owned' by the University, seek written permission of the person responsible for that area before submitting the *3<sup>rd</sup> Party-Led Drone Operation Form*.

## **12. UNIVERSITY DRONE OFFICER(S) RESPONSIBILITIES**

The Drone Officer is appointed on behalf of the University to perform in-house flight assessments and supervision of staff and students. The Drone Officer is the Remote Pilot named in the University's Operations Manual required as part of the CAA Operational Authorisation process and which enables the University to undertake drone operations in the Specific Category.

## **13. REMOTE PILOT (RP) RESPONSIBILITIES**

No member of staff or student can operate a drone until formally appointed in writing by Health and Safety (S.10). Only the University Drone Officer may operate drones in the Specific Category.

Once appointed each RP has a duty and responsibility to ensure drone activities under their control are carried out safely and in accordance with the *Remote Pilot Authorisation Form*, this Policy, and all relevant CAA guidance.

Following authorisation to act as a Remote Pilot, RPs must then, for each drone activity:

- a. Ensure the drone activity meets the criteria of their *Remote Pilot Authorisation*.
- b. Pre-flight submit the following to Health & Safety for review and approval:
  - i. When in Charge of a Drone Activity: Submit the College / Service led *Drone Mission Plan and Risk Assessment Form* and Liability Insurance (if needed).
  - ii. When appointing a 3<sup>rd</sup> Party: Ensure the 3<sup>rd</sup> Party completes and forwards the *3<sup>rd</sup> Party-Led Drone Operation Form* and associated documentation.
- c. Confirm any other person supporting the activity is briefed in the action to take in the event of a foreseeable emergency and has suitable instruction, supervision, and experience for the role to be undertaken, e.g. Observer.
- d. Cooperate with University Health Assessment Procedures, as required.
- e. Inform all relevant persons if 'over flying' the University estate, including Security.
- f. If filming etc consider all relevant Privacy and Data Protection matters.
- g. Report accidents, incidents, and other concerns, including health conditions, which could affect their fitness to participate in drone activities to Health and Safety.

#### **14. DUTIES OF STAFF AND STUDENTS**

Staff and students must never operate a drone (personal or College / Service owned) or allow a 3<sup>rd</sup> Party to operate a drone on University business until authorised by Health & Safety.

Once authorisation is given the member of staff or student must ensure compliance with the requirements of this Policy and specific details included as part of relevant approval processes.

#### **15. DATA PROTECTION AND IMAGE CAPTURE**

Images and data captured by drones for the University is by default the University's property, unless otherwise agreed. No film, photographs, data, sound recordings or other material captured by or gathered for the University may be used without the University's consent, in accordance with the University's Data Protection Policy. Further information is available on the Governance Website.

- i. **Data Capture**  
Where a drone is used to gather data by a 3<sup>rd</sup> Party; or by the University for others, the initial commissioning documents should set out clearly which party owns and / or may use the data, and for what purpose. The University's Research Ethics Policy and Ethical Approval process may also apply.
- ii. **Image Capture**  
Images captures by a drone mounted camera, where they capture identifiable individuals will come under the requirements of the Data Protection Act / General Data Protection Regulation (GDPR) and therefore where an individual is clearly identifiable written consent will be required in most cases.

Incidental image capture can happen when filming buildings and land. Before use it is recommended that facial images are distorted unless written consent is given. Use of drones to capture human behaviour, or which intentionally captures facial images for research or other projects will normally require Ethical Approval through one of the University's Academic Research Ethics Committees.

Image capture by a 3<sup>rd</sup> Party will normally be subject to and follow a written Agreement.

**16. EQUALITY IMPACT ASSESSMENT**

Every effort must be made to support individuals so they are treated equally. However, in some very rare instances, there may be a requirement to treat '*persons with a protected characteristic*' differently to ensure drones are operated safely and to safeguard the health, safety and well-being of others who could be affected. In such circumstances, a second pilot control and direct-supervision should be considered before restricting activities.

**17. FURTHER INFORMATION AND PRACTICAL GUIDANCE**

Further information is available on the Health and Safety Website.

**18. REVIEW AND AUDIT PROCEDURES**

Health and Safety, Campus Services may undertake periodic audits or reviews to assess the effectiveness of and compliance with, this Policy.

Colleges / Professional Services must periodically review their own procedures to ensure the requirements of this Policy are implemented, suitable and effective.

The Health, Safety and Emergency Management Task Group will review this Policy in accordance with the agreed Review Schedule, with any significant changes considered by the University Health and Safety Committee.