**DRONE Mission Plan & RISK ASSESSMENT**

The Remote Pilot must send this completed Form to the Health & Safety Office (HSO) healthandsafety@bangor.ac.uk with HSO approval given before any drone operation takes place. Once approved, the RP must ensure the Form is available for the duration of the operation, with the On-site Assessment (final page) completed as required.

|  |  |  |
| --- | --- | --- |
| Mission Proposer: | Name: | Contact: |
| College / Service: | Details: |

|  |  |  |
| --- | --- | --- |
| Remote Pilot (RP): | Name: | Contact: |
| Remote Pilot Qualifications: | Qualifications: | RP Flyer ID: |
| Observer(s): | Name: | Contact: |

|  |  |  |  |
| --- | --- | --- | --- |
| Other Emergency Contacts: | Hospital | Police | Civil Aviation Authority020 7 379 7311 |

|  |  |
| --- | --- |
| Mission Location[[1]](#footnote-1): |  |
| Dates & Time[[2]](#footnote-2): | Date From: | Date To: | Times: |
| Permission Requiredto Fly in Area[[3]](#footnote-3): | YES | NO | Summarise if YES e.g., Air Traffic, Site Owner, College |

|  |  |
| --- | --- |
| Type of Mission[[4]](#footnote-4): |  |

|  |  |  |
| --- | --- | --- |
| Flight Details: | Number & Duration: | Flight ID: |

|  |  |  |
| --- | --- | --- |
| SUA to be Used: | Model / Class: | Serial No / Operator ID: |

|  |  |
| --- | --- |
| Payload Requirements[[5]](#footnote-5): |  |
| Detailed Mission description: |
| Attach a map or zoomed in Google Earth image of the intended fly zone, detailing intended fly zone boundaries, entry / exit points, location of primary take-off / landing / alternate landing zone. **In addition,** indicate hazards in or close to the fly zone e.g., trees, pylons, buildings, or areas of the University estate which may be ‘over flown’  |

|  |
| --- |
| **Site / DRONE OPERATION RISK Assessment – state ‘YES’ to confirm addressed or state N/A** |
| The RP should also refer to the ***Use of Drones Generic Risk Assessment***. In addition, the following Risk Assessment must be completed for all Missions with details given of specific, Mission related significant hazards and the controls needed to manage these. *The text at the base is an example only*. A final On-Site Assessment *(see final page)* is also then required to capture any changes once on site. |
| **Public Access:** *Risk of uninvolved persons? Can public easily access site / flight area*  |  | **Livestock:** *Are animals in the flight area that could be distressed by the SUA* |  | **Terrain:** *E.g. hills blocking VLOS, gradients affecting SUA GPS signal*  |  |
| **Hazards:** *E.g. industrial sites, gas venting, signals affecting SUA controls* |  | **Congested Area:** *Is area substantially used for residential, industrial, commercial, or recreational purposes* |  | **Landowner Permission(s):** *Is authorisation needed to use the site* |  |
| **Airspace Type:** *E.g. Controlled / Protected / Air Traffic Zone (ATZ)* |  | **Other Aircrafts:** *E.g. other SUAs, model aircrafts operating in the flight area* |  | **Cordon Needed:** *Is a cordon needed to physically prevent access to the flight area* |  |
| **Extraordinary Restrictions:** *E.g. airspace at prisons or nuclear sites* |  | **Obstructions:** *E.g. pylons, trees, masts, buildings, chimneys, bridges* |  | **Proximity Limits:** *Is a specific exclusion area for non-flight personnel needed* |  |
| **Weather:** *Are specific conditions required e.g. dry, no frost, no rain* |  | **Wind Speed:** *Is there a maximum speed that must not be exceeded* |  | **Tide Times / Daylight Hours:** *Are specific times essential to the mission*  |  |
| **Take Off Site:** *Has it been identified* |  | **Landing Site:** *Has it been identified and assessed* |  | **Alternate Site:** *Has it been identified and assessed* |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Significant hazards** | **Who / what may be harmed** | **What are you already doing to prevent harm** | **Further actions / considerations** | **Action by** |
| Working Dock Nearby - electronics on vessels could cause radio interference leading to loss of control of SUA | Pilot, Observers, other persons, and assets (e.g. boats) in the fly zone  | * Dock Yard owner permission given and who has agreed to inform vessel owners of flight
* SUA will travel along shoreline and dock perimeter
* 50m overhead clearance with vessel masts always
 | * Confirm arrival on site with Dock Yard owner and check no new vessels docked which could cause signal interference
 | RP |
| Wind Speed – winds more than 15mph may affect SUA stability  | SUA, all persons in fly zone  | * Weather conditions checked for flight period, (including after in case of overrun) and currently suitable
 | * Take anemometer to measure wind speed
* Abort flight if wind speed exceeds 15mph
 | RP |
| Public beach – others may enter the shore area in the flight zone, working adjacent to tidal water | Non flight personnel  | * Flight mid-week when shore should be quieter
* RP will always keep SUA in VLOS
* Two Observers will be on site to warn others
 | * RP and Observers to wear Hi-vis
* Confirm tide times and undertake SUA operation at low tide
 | RP |

|  |  |  |
| --- | --- | --- |
| External Sites to be ‘over flown’: | External Site: | Contact details of Person / Organisation to be Informed: |
| Permission Given: | YES | NO |

|  |  |  |
| --- | --- | --- |
| Areas of University Estate to be ‘over flown’: | University Sites: | Contact details of Person to be Informed: |
| Permission Given: | YES | NO |

|  |  |  |
| --- | --- | --- |
| Air Traffic Zones to be ‘over flown’: | ATZs: | Contact details of ATZs to be Informed: |
| Permission Required: | YES | NO |

|  |  |
| --- | --- |
| Remote Pilot Declaration: | *I confirm I will ensure:** *The flight is undertaken in accordance with the Drone Mission Plan & Risk Assessment.*
* *All drone operations are carried out in accordance with relevant University’s Policies and Procedures.*
* *Pre-flight, the On-Site Assessment will be completed which includes:*
* *A further dynamic Risk Assessment of the site.*
* *The provision of a suitable Briefing (including emergency procedures) to all persons involved with the drone operation.*
* *Checks of the drone to ensure in correct working order.*
 |
| Signed: | Date: |

|  |  |  |
| --- | --- | --- |
| Approved by theHealth & Safety Office: | Name: | Date: |
| Comments / Caveats: |  |

**ON-SITE RISK ASSESSMENT**

**PRE-FLIGHT**The RP must undertake an On-site Assessment to ensure the details in the Mission Plan & Risk Assessment remain current. The RP must brief all relevant persons in this document and any adjustments due to changes in on-site conditions. The Briefing must also include key personnel, key contacts, and emergency procedures.

|  |
| --- |
| RP Observations / Additional Actions from On-Site Assessment (detail): |

|  |  |  |  |
| --- | --- | --- | --- |
| SUA Pre-flight Checks by: |  | Date & Time: |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Permissions Given (e.g., ATZ): | YES | NO | N/A | Date & Time: |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Pre-flight Briefing by: |  | Date & Time: |  |

**POST FLIGHT**

Post-flight, the Remote Pilot must record basic flight details and any issues which require further action.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No of Flights: |  | Flight Durations: |  |  | Any Incidents[[6]](#footnote-6): | YES | NO |

|  |
| --- |
| Any Issues or Alerts on SUA, Batteries, Payload or Systems: |

|  |
| --- |
| Further Action Required: |

1. Sufficient information to locate the Mission; area, postcode, **specific** **parts of the University estate to be ‘over flown’**  [↑](#footnote-ref-1)
2. Approximate range of dates if exact date not known. Times may be critical e.g., daylight hours, tide times [↑](#footnote-ref-2)
3. See Sign Off Sheet where further information is required [↑](#footnote-ref-3)
4. For example, Video Survey, 3D Data Capture Test Flight, Gas Detection, what data will be captured, what will be tested etc [↑](#footnote-ref-4)
5. If required, describe the payload and any mounting / gimbal requirements. Also identify external power requirements the payload may have and the estimated combined take off mass of the SUA and payload [↑](#footnote-ref-5)
6. All incidents no matter how minor must be reported as per University Accident and Incident Report procedures [↑](#footnote-ref-6)