OPERATIONS MANUAL

Nova Centric LTD

Amendment Record

Version	*Amendment Date*	*Amendments Incorporated*	*Signed Off By*
0.1	06/08/2018	First draft	Joe Duckhouse
0.2	14/08/2018	*Second draft*	Joe Duckhouse
0.3	07/12/2018	3rd Draft – comply with CAP1687 13 July 18	Joe Duckhouse
0.4	02/01/2019	4th Draft – minor amendments to title / cover pages.	Joe Duckhouse
1.0	16/01/2019	First Edition	Joe Duckhouse
1.1	04/02/2019	Update to company name and insurance details.	Joe Duckhouse
1.2	13/05/2019	Inserted PfCO	Joe Duckhouse
1.3	06/06/2024	Update to reflect current CMG UAVs	Joe Duckhouse
1.4	29/11/2024	Change to accountable manager	Thomas Bee

This document is a combined Safety and Operations Manual, compliant with Volume 1 – Operations Manual as set out in Appendix B of CAP722, covering all of aspects of Nova Centric LTD utilising small drone aircraft in accordance with the requirements of the UK Civil Aviation Authority's Permission for Commercial Operations.

Document Reference: Nova Centric SUA Operations Manual

Version: 1.3 – 29 November 2024

Document Author: Tom Bee / Mike Latham

Accountable Manager: Thomas Bee

Acronyms and Abbreviations

Below is a list of abbreviations used in this Operations Manual;

Reference	Full Title
ATC	Air Traffic Controller
ATZ	Aerodrome Traffic Zone
CAA	UK Civil Aviation Authority
CTR	Controlled Traffic Zone
PfCO	Permission for Commercial Operations
SUA	Small Unmanned Aircraft
VLOS	Visual Line of Sight
FE	Further Education
HE	Higher Education

Commitment of Accountable Manager

This Operations Manual describes the organisation, aircraft systems, personnel, flight operations and procedures by which Nova Centric LTD carries out its Small Unmanned Aircraft operations.

Nova Centric LTD is committed to the safe conduct of all its Small Unmanned Aircraft operations and will ensure that the systems deployed are maintained and prepared in accordance with industry best practice, are operated in accordance with the procedures and bounds of this Operations Manual and within any limitation or condition specified in any UK Civil Aviation Authority (CAA) Permission granted for such aerial work.

It is accepted that the contents of this document do not override the necessity of reviewing and complying appropriately with any new or amended regulation published from time to time by the CAA addressed by this document.

Signed:  Date: 29 November 2024

Accountable Manager: Thomas Bee

Nova Centric LTD

For and on behalf of Nova Centric LTD, a company registered in England & Wales c/o Nottingham Trent University, 50 Shakespeare Street, Nottingham, England, NG1 4FQ Registration Number: 04820267

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Contents

1. INTRODUCTION

1.1 Purpose

The purpose of this document is to record the key data associated with the safe operation of any Small Unmanned Aircraft (SUA) with a Maximum Take-Off Mass of up to 20 kg by Nova Centric LTD personnel.

1.2 Scope

Nova Centric LTD's traditional business is further and higher education provision in the creative industries, local broadcast operations and media production and post production services for commercial and internal clients. Its customer base is anyone who needs the services listed above.

Confetti Media Group aims to capture innovative and dynamic video and photography to help enhance the appeal and production values of assets created for local television and journalism, internal marketing departments, commercial clients, and education. This will involve a range of locations and productions as per the brief of the specific client / customer, providing that all safety and best practice guidelines set out in this this document can be met.

1.3 Overarching Strategy

Nova Centric LTD is aiming to grow its student enrolment numbers at both FE and HE levels year on year by providing access to industry standard professionals and equipment within the company as means of guidance and opportunity, allowing students to shadow, learn, and gain experience working on professional production shoots.

This will be complemented by an increase in commercial revenue and local TV viewing figures due to an expanded range of innovative production techniques on offer, of which the safe and considered use of SUA's is a key part.

Safety is paramount and Nova Centric LTD has put essential safeguards in place to maintain a safe environment for all involved or connected to Nova Centric LTD SUA operations.

1.4 Document Control and Amendment Process

All amendments to this Operations Manual are to be made by Tom Bee / Mike Latham and must be recorded in the Amendment Record Page found at the front of this document. Each amendment is identified with a new Version Number, an Amendment Date, and a list of the major Amendments Incorporated. All amendments will be signed off by the Accountable Manager, Thomas Bee.

The CAA will be informed of all major updates such as new aircraft or pilots.

All Nova Centric LTD employees will be informed of any changes to this Operations Manual and they must ensure they have access to a current up-to-date version either in electronic or paper format.

1.5 Referenced Documents

Reference	Full Title	Issue Number & Date of Issue
CAP 382	Mandatory Occurrence Reporting Scheme	Tenth Edition – December 2016
CAP 393	The Air Navigation Order 2016 and Regulations	Version 5.4 – 28th September 2018
CAP 722	Unmanned Aircraft System Operations – Guidance	Sixth Edition – 24 March 2015
CAP1687	The Air Navigation (Amendment) Order 2018	13th July 2018

2. SAFETY POLICY

2.1 Policy

Safety is the first priority in all Nova Centric LTD activities. The business is committed to implementing, developing and improving strategies, management systems and processes to ensure that all its aviation-related activities uphold the highest level of safety performance and meet national and where appropriate international standards.

Nova Centric LTD's commitment is to:

a) Comply with and, wherever possible, exceed legislative and regulatory requirements and standards;
b) Develop and embed a safety culture in all aviation-related activities that recognises the importance and value of effective aviation safety management and acknowledges that safety is paramount at all times;
c) Minimize the risks associated with aircraft operations to a point that is as low as reasonably practicable and achievable;
d) Ensure that externally supplied systems and services that impact upon the safety of operations meet appropriate safety standards;
e) Ensure that sufficient skilled and trained resources are available to implement safety strategy and policy;
f) Establish and measure safety performance against realistic objectives and/or targets;
g) Continually improve its safety performance; and
h) Conduct safety and management reviews and ensure that relevant corrective action is taken.
i) Clearly define for all staff their accountabilities and responsibilities for the development and delivery of the company's aviation safety strategy and performance;
j) Achieve the highest levels of safety standards and performance in all its aviation activities;
k) Ensure that sufficient skilled and trained resources are available to implement safety strategy and policy
l) Actively develop and improve safety processes to conform to world-class standards;

2.2 Safety Management System

Nova Centric LTD has only implemented the rudiments of a full Safety Management System.

The 'internal' Safety Objectives are:

- Encouraging an environment whereby safety has top priority and is second nature, and
- Increasing the knowledge on safe operations and practices on the part of its customers.

2.3 Safety Targets

It is the goal of Nova Centric LTD to operate aircraft without harm, injury or damage to any persons or property. The Nova Centric LTD Remote Pilot will comply with all of the safety requirements and limitations of the Permission for Commercial Operations issued by the UK CAA to Nova Centric LTD.

3. ORGANISATION

3.1 Organisation

Organisation Name:	Nova Centric LTD
Trading as:	Confetti Media Group
Organisation Type:	LTD
Organisation Registration Number:	04820267
Country of Registration:	England

Nova Centric LTD flies the following SUA:

The technical specifications for these SUA are attached as Appendix B.

SUA:	DJI Mavic Pro Platinum (M1X)
SUA Type:	Multirotor
SUA MTOM:	743 g
SUA Serial No.:	08QCF1JP021KAH

SUA:	DJI Mavic Mini
SUA Type:	Multirotor
SUA MTOM:	249g
SUA Serial No.:	YCBZJJ00073503

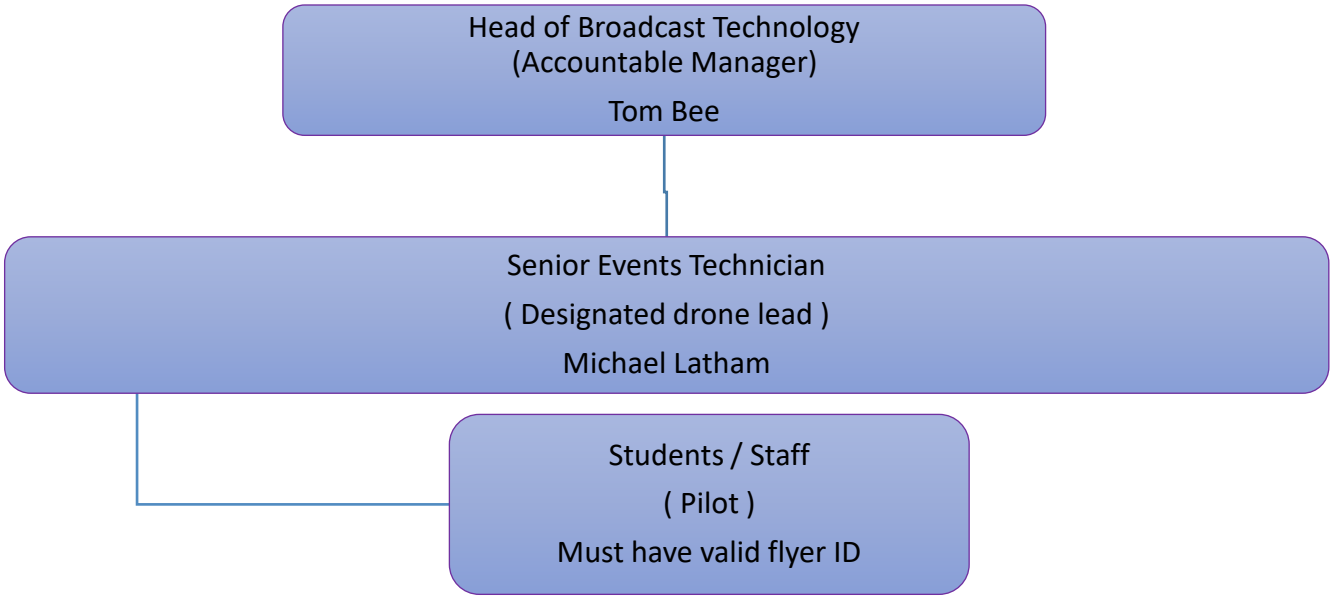
SUA:	DJI Mavic Mini 2
SUA Type:	Multirotor
SUA MTOM:	246g
SUA Serial No.:	3Q4SJ160034PCL

SUA:	DJI Avata
SUA Type:	Multirotor
SUA MTOM:	410g
SUA Serial No.:	1581F4QWD227N00355JX

SUA:	DJI NEO
SUA Type:	Multirotor
SUA MTOM:	135g
SUA Serial No.:	1581F87LB248S00204PM

3.2 Structure of Nova Centric LTD

Nova Centric LTD is owned by Nottingham Trent University.



3.3 Nominated Personnel

Remote Pilot: Michael Latham

Remote Pilot: Thomas Bee

3.4 Responsibilities

The Remote Pilot's responsibilities are:

- Supervising each operation of the SUA.
- Completing the pre-flight risk assessment and mitigating any risks where possible.
- Having confidence that the flight can be conducted safely and the competence to perform that flight.
- Checking that everything is secure on the SUA.
- Ensuring that the aircraft used is airworthy by completing the pre-flight checklist.
- Briefing all crew members prior to a flight to ensure they understand their responsibilities.
- Communicating with client as required to understand the required task.
- Planning each flight in advance and ensuring the right resources are available when required.
- Ensuring that the welfare of themselves or others is not compromised by any planned operations.
- Operating the aircraft within the stated limitations for that particular aircraft.
- Respecting the limitations stated on the Permission for Commercial Operations.
- Ensuring that he or she is of sound body and mind to operate the aircraft.

- Completing all required paperwork such as pilot & aircraft hours, battery log etc. after a flight.

If present, the Observer's responsibilities are:

- Acting as a link between the Remote Pilot and other crew members.
- Ensuring the Remote Pilot is aware of all relevant developing situations.
- Maintaining constant visual look out for ground and air incursions.
- Ensuring the position of the SUA is known at all times.
- Keeping the Remote Pilot updated with battery status.
- Being prepared to activate the 'failsafe' function on the aircraft when required.
- Briefing the pilot after a flight using Threat and Error Management techniques to help the pilot improve his or her competency.

If present, the Payload Operator's responsibilities are:

- Ensuring the camera or sensor is operational. (Fully charged, empty memory card fitted, lens clean)
- Ensuring the camera or sensor is securely mounted. (the Remote Pilot must confirm this also)
- Ensuring the camera or sensor is switched on and operating correctly before activation of the aircraft.
- Ensuring the camera or sensor is switched off and images saved after the aircraft is made safe.
- Ensuring operational safety: it is every crew member's responsibility to alert the observer to any changing situation which may cause threat to any aircraft, property or person present.
- Ensuring the camera or sensor is rotated to the stored position for take-off and landing procedures.

3.5 Areas of Operation

The areas of operation are primarily in rural and semi-rural locations outside. However, due to the nature of the business other areas may need to be considered, such as urban or indoors. The viability of all areas considered for production must always be researched and scrutinised before decisions by the accountable manager as to the suitability of that location for planning and pre-production.

3.6 Types of Operation

The anticipated types of operation are:

- Aerial Photography
- Aerial Videography

Operations that are conducted during daylight will be within standard Visual Line of Sight (VLOS) limitations of 400 ft (121.92 meters) above ground level and at a maximum distance from the Remote Pilot of 500 metres provided the Remote Pilot can see the Small Unmanned Aircraft (SUA) in good Visual Meteorological Conditions.

Prior to all night time operations (where night time is defined as the time from half an hour after sunset until half an hour before sunrise, sunset and sunrise being determined at surface level), a daylight reconnaissance and site safety assessment including aircraft flight-paths within the surrounding area, shall be undertaken to identify, address and record any hazards, restrictions and obstacles. The launch site shall be provided with adequate illumination and the aircraft shall be equipped with adequate conspicuity lighting. Flights shall only commence when the weather conditions and visibility of the SUA are suitable for continuous VLOS operations.

The minimum separation from people, vessels or vehicles not directly under the control of the Remote Pilot will be 50 metres. The same distance will be maintained from structures not under the control of the Remote Pilot

3.7 Supervision of SUA Operations

The Remote Pilot present during each operation will be responsible for the supervision and safe conduct of that operation.

The Remote Pilot will seek clearance from the Accountable Manager in advance of a flight where a risk is identified as not being in the Low or Moderate categories and cannot be easily mitigated.

An Observer, if present, will be charged with pointing out to the Remote Pilany unobserved threat or risk that manifests itself during a flight using Threat and Error Management techniques.

Any safety issue that arises will be brought to the attention of the Accountable Manager as soon as practicable after the incident has been recorded.

3.8 Accident Prevention and Flight Safety Programme

Nova Centric LTD will comply with the requirements of CAP382, Mandatory Occurrence Reporting.

Any Incidents or Occurrences will be dealt with by Nova Centric LTD as follows:

Incident Handling

In the event of any Incident, the severity must be assessed. The following lists should help to identify Minor and Major Incidents:

MINOR INCIDENTS

- Any unusual or unexpected flight behaviour from the aircraft which does not result in damage or loss
- Any failure of any aircraft system which does not result in damage or loss

MAJOR INCIDENTS

- Any unusual or unexpected flight behaviour from the aircraft which results in damage or loss
- Any significant damage to the aircraft caused by an aircraft system failure
- Any significant danger or damage to persons, possessions or property during Flight Operations
- Any public encroachments or aircraft incursions which required preventative measures to avoid

Incident Logging

All MINOR incidents will be logged in the Aircraft Operating Hours Log as well as the Nova Centric LTD Incident Log. Upon noting a minor incident, the logbook should be checked for similar occurrences. If a minor incident occurs three times, then an investigation should be initiated to identify the cause and consider implementing steps to reduce the likelihood of this incident occurring again.

All MAJOR incidents require an investigation as outlined in the Investigation Procedure section. The Incident Log should also be updated.

Investigation Procedure and Report

Any investigations undertaken by Nova Centric LTD will follow the procedure shown below to generate an Investigation Report with the following contents:

INTRODUCTION

The introduction contains the context for the Incident and confirms the major facts as to the companies and people involved, why they were present and the reason for the flights being carried out.

DESCRIPTION OF EVENTS

This is a factual account of the events leading up to and immediately after the incident as well as the incident itself. Its aim is to provide an agreed basis upon which the analysis is carried out.

Importantly any assumptions should be clearly stated, and all data provided should have its authenticity and derivation stated. If there are doubts, then these should also be clearly articulated so that future analysis can take this into account.

ANALYSIS

The analysis of events sets out to find explanations for what is described in the description of events. Wherever possible the analysis draws upon known concepts, models and physical understanding to ensure that the events as described have a logical explanation.

The analysis should set the scene for any conclusions and provide traceability from the facts to the conclusions in a logical and auditable way.

CONCLUSIONS

The conclusions are derived from the analysis, which themselves are based upon the facts in the description of events or the facts as they pertain to concepts, models and physical understanding exposed within the analysis. A strong conclusion is one where this traceability is good and can stand up to scrutiny.

RECOMMENDATIONS

The aim of the recommendations is to provide the organisations or personnel identified for the report with those items and actions that can lead to a safer operation, and which address the short-comings highlighted through the investigation process.

Mandatory Occurrence Reporting

The UK Air Navigation Order states “Any incident which endangers or which, if not corrected, would endanger an aircraft, its occupants or any other person” is a reportable occurrence. CAP382 now requires that a reportable occurrence is filed on the ECCAIRS European-wide reporting system through the Joint Research Council website at http://www.aviationreporting.eu/aviationreporting.

Incidents involving injury to a person should also be reported by Nova Centric LTD to the Air Accident Investigation Branch by phoning 01252 512299.

3.9 Flight Team Composition

For Confetti Media Group productions, as a minimum, a flight team must consist of a Pilot and an Observer.

If it is determined through planning and pre-production that more crew are required due to a more complex shoot, then the flight team must be scaled up accordingly and the PIC must be satisfied that there is adequate crew in place.

3.10 Operation of Multiple Types of SUA

Normal operations by Nova Centric LTD will normally only be conducted with one SUA in the air at one time. However, there may be occasions where Nova Centric LTD considers it safe to operate two SUAs at the same time to meet a client's requirements and in this instant, there will be two Remote Pilots, one controlling one aircraft, but there will be a Remote Pilot appointed who will have the overriding responsibility for the safe operation of both aircraft.

3.11 Qualification Requirements

Nova Centric LTD will ensure that all Nova Centric LTD pilots acting as the Pilots-in-Command of its SUA hold a SUA pilot competency assessment or qualification recognised by the CAA.

3.12 Crew Health

All Nova Centric LTD pilots-in-command and other crew members will be instructed in the 'I'M SAFE' mnemonic and will be trained to use it as a proactive self-assessment tool.

It is the responsibility of the individual to determine if they are in a physically and mentally fit condition to participate in Nova Centric LTD operations.

All crew members must be capable of clearly reading a vehicle registration number plate from twenty metres.

Crew members shall not attend a flight operation if they are under the influence of alcohol.

Nova Centric LTD also has a strict no drugs policy. All Flight Crew members taking prescription drugs should seek professional guidance and also advise the Remote Pilot.

Any crew member who begins to feel unwell and are unable to continue with their assigned responsibilities should advise the Remote Pilot or Observer immediately.

3.13 Logs and Records

Nova Centric LTD will maintain up-to-date information and operational logbooks for:

- Aircraft and Pilot Operating Hours
- Battery Charge
- Aircraft Maintenance
- Incidents / Accidents

See Appendix C for examples of these logbooks.

3.14 Operator Training Programmes

All Nova Centric LTD pilots acting as Pilots-in-Command on commercial drone operations will be subject to regular assessment by the Nova Centric LTD accountable manager on an annual basis for competency and currency.

To maintain currency a pilot must have flown a SUA for more than 2 hours in the previous 3 months.

3.15 CAA Permission

A copy of the Permission for Commercial Operations issued to Nova Centric LTD by the CAA is included in this Operations Manual as Appendix D.

4. OPERATIONS

4.1 Role Training and Currency

All Nova Centric LTD pilots will have to hold a pilot qualification recognised by the CAA for SUA commercial operations and will be assessed by the Nova Centric LTD Accountable Manager as being knowledgeable and competent to fly Nova Centric LTD's SUAs in Nova Centric LTD's potential operating environments.

All Nova Centric LTD pilots will be expected to maintain flying skills currency through hands-on flying with Nova Centric LTD SUAs, other SUAs they have access to or appropriately configured simulators.

4.2 Area of Operation

The anticipated areas of operation are rural and semi-rural environments across, but not limited to, the East Midlands. On occasion, urban and indoor operations may be required. The viability of all operation is to be determined on case-by-case basis.

Commercial drone operations conducted in UK airspace will be assessed in advance using comprehensive site risk assessment forms and procedures, see Appendix E.

4.3 Operating Limitations and Conditions

All Nova Centric LTD operations will be conducted within the limitations stipulated within CAP393 Articles 94, 94A, 94B and 95 and CAP722 or as updated in the PfCO issued by the CAA to Nova Centric LTD.

The standard limitations are:

- Visual Line of Sight (VLOS) in accordance with Article 94
    - To a maximum vertically above ground of 400'
    - Up to a maximum distance from the Remote Pilot of 500m

  providing in both cases the pilot can identify and monitor the SUA
- Not over or within 150m of Open Air Assemblies of more than 1000 people (Article 95)
- Not over or within 50m horizontally of a Congested Area (CAP722)
- Not within 50m of people not under the control of the Remote Pilot of the SUA although this distance is reduced to 30m during take-off and landing (Article 95)
- Not within 50m of Vehicles, Vessels and Structures not under the control of the Remote Pilot (Article 95)
- Not inside or within 1km of a flight restriction zone of a protected aerodrome without ATC or CAA permission.

4.4 Methods to Determine the Intended Tasks and Feasibility

For all Nova Centric LTD commercial drone operations, the designated Remote Pilot will assess the intended task using the Pre-Flight Site Research Form (see Appendix E). Details captured on the form from the customer will include:

- Contact Details
- Work Required
- Date and Time Constraints
- Location of Work (Latitude and Longitude if possible)
- Landowner Details
- Other Nearby Air Users (if known)
- Any Other Relevant Information

A completed Pre-Flight Site Research Form will be retained for at least three years for future reference if required.

The designated Remote Pilot will be responsible for determining the method of operation for the intended task, identifying resources and assessing the task's feasibility. If he or she has any reservations, he will discuss the reservations with the Nova Centric LTD Accountable Manager before proceeding with the task.

4.5 Operating Site Planning and Assessment

As part of the research into task feasibility, the Nova Centric LTD Remote Pilot will use whatever tools and facilities deemed necessary and available to him. These may include:

- Client Information
- Current and Relevant Aeronautical Charts
- Integrated Aeronautical Information Package – United Kingdom
- SkyDemonLight and NoFlyDrones- Online Aeronautical Charts
- NOTAMinfo.com to confirm NOTAMs
- Google Earth
- Google Maps

The task will only go ahead if the Remote Pilot is satisfied the necessary controls and safeguards can be put in place for a safe operation.

4.6 Communications

Contact telephone numbers for the following will be recorded on the Pre-Flight Site Research Form, and the On-Site Survey Form, which can be found in Appendix E, before departure to the site:

- Landowner(s)
- Observer and Crew
- Client Contact
- Local Police Station
- Local Hospital
- Local Air Traffic Control (ATC)
- Local Air User Clubs

Where possible, contact will be made with the Landowner(s) and the ATC before any physical site survey in conducted.

4.7 Pre-Notification

Pre-Notification is required if a planned flight operation is to take place within two and a half nautical miles of an aerodrome or airport with an Aerodrome Traffic Zone (ATZ) or Controlled Traffic Zone (CTR). The Remote Pilot will contact the ATC in person at least twenty-four hours before the planned flight to advise the controller of the planned flight operation. Contact details for the tower will be recorded on the relevant On-Site Survey Form.

If there is a local air user club nearby the Remote Pilot will endeavour to contact the club and enquire about any likely activity on the day of the proposed flight operation.

If the planned flight operation is to take place in areas where there is likely to be members of the public, the Remote Pilot will inform the local police. The contact and telephone number will be recorded on the On-Site Survey Form.

If the flight operation is to take place in a highly populated area, such as a housing estate, a leaflet drop and/or a door-to-door advisory campaign will be considered at least seven days in advance to advise members of the public of proposed flight operations. Operations in public areas where public address systems are available require a Nova Centric LTD crew member to announce planned flight operations at least one hour before commencement.

All relevant Nova Centric LTD crew members will be advised of a planned flight operation at least twenty-four hours in advance.

4.8 Site Permissions

The designated Remote Pilot will obtain permission from all relevant landowners or land occupiers over which flight operations are to be conducted. Where possible, permission will be sought in writing. Where it is available in writing a copy of the permission will be carried on site. No flight operations will commence without permission, either written or verbal, from the relevant landowners or occupiers for the main take-off and landing site.

4.9 Weather

In the week leading up to any flight operation the designated Remote Pilot will obtain long, medium and short-range weather forecasts. Twenty-four hours before the proposed flight operations the Remote Pilot will determine whether the planned flight operations will go ahead.

Weather and other forecasts, such as solar activity, will be obtained using readily available resources, which may include:-

- UAV Forecast
- XC Weather
- Weather Channel
- Weatherpro
- Accuweather

4.10 On Site Procedures

Before setting up on-site in accordance with the On-Site Arrival Checklist, see Appendix F, the Remote Pilot or a designated crew member will carry out the following measurements:

- GPS/GLONASS satellite coverage, a minimum of seven satellites over a good spread will be required for all operations, using the aircrafts GPS system.
- Wind speed at surface level, using a handheld anemometer.

If the Remote Pilot feels confident that the proposed flight operations can be safely carried out, then the operation can progress, and the Remote Pilot can complete the On-Site Arrival Checklist.

The Remote Pilot will then carry out the On-Site Survey, see form in Appendix E, to familiarise him or herself with the local geography of the site. This will be completed by physically walking around the site to identify any hazards and any identified will be marked on the On-Site Survey Form. Where an Observer is present, the Observer will accompany the Remote Pilot.

The Remote Pilot must be satisfied that all risks identified are acceptable and will sign off the On-Site Survey before proceeding to the next stage.

4.11 Assembly and Functional Checks

The SUA will be assembled and checked in accordance with the relevant SUA Assembly Checklist, see Appendix F.

The Remote Pilot will check the day prior to the flight operation that all necessary software and firmware updates have been completed on the SUA to be flown and if necessary, a test flight has been conducted.

4.12 Pre-Flight Checks

The SUA will be prepared for flight by the Remote Pilot following the Pre-Flight Checklist, see Appendix F.

4.13 Flight Procedures

When the Remote Pilot is satisfied the SUA is ready for launch, he or she will follow the Launch Checklist, see Appendix F.

During flight, the Remote Pilot will conduct situational awareness updates with the Observer if present. Situational awareness updates will include:

- SUA position and responsiveness
- SUA battery status
- Horizon scans and airspace assessments
- Landing site incursions
- Alternate landing site incursions
- Air incursions (air users / birds)
- Potential adverse weather changes
- Ground incursions, in particular dangers to the Remote Pilot

Prior to landing, the Remote Pilot will go through the Landing Checklist.

4.14 Post Flight and Between Flight Checks

The SUA will shut down, made safe and checked in accordance with the Post Flight Checklist, see Appendix F.

4.15 Emergency Procedures

The Emergency Procedures for Nova Centric LTD's SUA are set out in Appendix G.

APPENDICES

Appendix A – SUA Technical Specification

Manufacturer	DJI
Model	Mavic Pro Platinum (M1X)
Type-Configuration:	Multirotor
Overall Dimensions (H x L x W):	83mm x 83mm x 198mm (Folded)
Weight:	0.743 Kg
Propulsion:	Battery Powered Electric, 4 motors
Energy Store:	LiPo, Required voltage: 11.4v
Flight Control Computer:	DJI -DJI Inspire 1 Integral
Lost link response:	If GPS is available, return-To-home-point, automatic landing
C2 Link:	Line-of-Sight, spread spectrum R/C 5.8 GHz
Maximum range:	15km or 9.3 miles
Flight Control Station:	DJI Mavic Pro Controller
Operating temperature range:	0 C to + 40 C
Maximum operating wind speed:	10 m/s or 22 mph
Maximum/Average flight time:	30/21 Minutes
Maximum speed:	40.4 mph (Sport mode, no wind)

Manufacturer	DJI
Model:	Mavic Mini
Takeoff Weight	249g
Dimensions	Folded: 140x81x57mm (LxWxH)
	Unfolded: 159x202x55mm (LxWxH)
	Unfolded with propellers: 245x289x55mm (LxWxH)
Diagonal Distance	213mm
Max Ascent Speed	4 m/s (S Mode)
	2 m/s (P Mode)
	1 m/s (C Mode)
Max Speed (Sea Level)	13 m/s (S Mode)
	8 m/s (P Mode)
	4 m/s (C Mode)
Max Takeoff Altitude	3000m
Max Flight Time	30 Mins (measured while flying at 14kph in windless conditions)
Max Pitch Angle	30° (S Mode)
	20° (P Mode)
	20° (C Mode)
Transmission Power (EIRP)	Model MT1SS5: 5.725-5.850GHz
GNS	GPS and GLONASS
Lost link response:	If GPS is available, return-To-home-point, automatic landing
Maximum/Average flight time:	30/21 Minutes

Manufacturer	DJI
Model:	Mavic Mini 2
Takeoff Weight	249g
Dimensions	Folded: 138x81x57mm (LxWxH)
	Unfolded: 159x203x56mm (LxWxH)
	Unfolded with propellers: 245x289x56mm (LxWxH)
Diagonal Distance	213mm
Max Ascent Speed	5 m/s (S Mode)
	3 m/s (P Mode)
	2 m/s (C Mode)
Max Speed (Sea Level)	16 m/s (S Mode)
	10 m/s (P Mode)
	6 m/s (C Mode)
Max Takeoff Altitude	4000m
Max Flight Time	31 Mins (measured while flying at 14kph in windless conditions)
Max Pitch Angle	40° (S Mode)
	25° (P Mode)
	25° (C Mode)
Transmission Power (EIRP)	Model MT1SS5: 5.725-5.850GHz
GNS	GPS, GLONASS and GALILEO
Lost link response:	If GPS is available, return-To-home-point, automatic landing
Maximum/Average flight time:	30/21 Minutes

Manufacturer	DJI
Model:	AVATA
Takeoff Weight	249g
Dimensions	Folded: 138x81x57mm (LxWxH)
	Unfolded: 159x203x56mm (LxWxH)
	Unfolded with propellers: 245x289x56mm (LxWxH)
Diagonal Distance	213mm
Max Ascent Speed	5 m/s (S Mode)
	3 m/s (P Mode)
	2 m/s (C Mode)
Max Speed (Sea Level)	16 m/s (S Mode)
	10 m/s (P Mode)
	6 m/s (C Mode)
Max Takeoff Altitude	4000m
Max Flight Time	31 Mins (measured while flying at 14kph in windless conditions)
Max Pitch Angle	40° (S Mode)
	25° (P Mode)
	25° (C Mode)
Transmission Power (EIRP)	Model MT1SS5: 5.725-5.850GHz
GNS	GPS, GLONASS and GALILEO
Lost link response:	If GPS is available, return-To-home-point, automatic landing
Maximum/Average flight time:	30/21 Minutes

Manufacturer	DJI
Model:	NEO
Takeoff Weight	135g
Dimensions	130x157x38.5mm
Max Ascent Speed	3 m/s (S Mode)
	2 m/s (P Mode)
	0.5 m/s (C Mode)
Max Speed (Sea Level)	16 m/s (S Mode)
	10 m/s (P Mode)
	6 m/s (C Mode)
Max Takeoff Altitude	2000m
Max Flight Time	18Mins (measured while flying at 14kph in windless conditions)
Max Pitch Angle	40° (S Mode)
	25° (P Mode)
	25° (C Mode)
Transmission Power (EIRP)	Model MT1SS5: 5.725-5.850GHz
GNS	GPS, GLONASS and GALILEO
Lost link response:	If GPS is available, return-To-home-point, automatic landing
Maximum/Average flight time:	18 Minutes

Appendix B – Logbooks

COMBINED PILOT & AIRCRAFT HOURS LOGBOOK

Flight Ref	Date (dd/mm/yy)	Take-Off Time (hh:mm)	Landing Time (hh:mm)	Flight Duration (hh:mm)	Aircraft ID	Aircraft System Name	Battery Number	Pilot-in-Command	Observer Name	Location Name	Latitude (dd°mm'ss")	Longitude (dd°mm'ss")	Purpose of Flight	Comments and Minor Incidents
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MAINTENANCE LOGBOOK					***AIRCRAFT***	
DATE	***REASON FOR MAINTENANCE***	***WORK COMPLETED***	***COMPLETED BY***	***PARTS REPLACED***	***TEST FLIGHT SIGNATURE***	***NOTES***

BATTERY CHARGE LOGBOOK

BATTERY

DATE OF CHARGE	BATTERY RESIDUAL CHARGE %	CHARGE INPUT mAh	PRE-FLIGHT BATTERY CHARGE %	DATE OF USE	NOTES

INCIDENT LOGBOOK

DATE	TIME	INJURIES / DAMAGE	INCIDENT DETAILS	ACTION TAKEN / INCIDENT REPORT	NOTES

Appendix C – Requirements for Open Category

Operation		UAS			UAS Operator	Remote pilot	
Subcategory	Operating Area	Class	Mass/KE/Speed	Operating Date limitations	Registration	Min Age (solo flight)	Competency
All	- Max height 120m/400ft (see UAS.OPEN.010 [3] & [4] for specific obstacle and sailplane limits) - No dropping of articles - No carriage of dangerous goods				Minimum age 18	If directly supervising another remote pilot – 16	
A1	Fly over uninvolved people, but not over crowds	Privately built	<250g 'flying weight' and <19m/s	Nil	Only if 'camera' equipped (but not toys)	Nil	Read user manual
		Legacy (placed on market before 1 Jan 23)	<250g 'flying weight'			12	
		C0 (toy)	<250g MTOM and ≤19m/s			Nil	
		C0 (not a toy)				12	
	No intentional flight over uninvolved persons	C1	<900g MTOM or <80 J	Nil	Yes	12	- User manual - Online training - Online (foundation) test
		A1 Transitional (Article 22)	<500g 'flying weight'	Not after 31 Dec 22			- A2 CofC Theoretical test
A2	No closer than 30m horizontally from uninvolved persons (5m in 'low speed' mode)	C2 (can also be used in A3)	<4kg MTOM	Nil	Yes	12	- User manual - Online training - Online (foundation) test - Self-practical training - A2 CofC Theoretical test
	No closer than 50m horizontally from uninvolved persons	A2 Transitional (Article 22)	<2kg 'flying weight'	Not after 31 Dec 22			
A3	- No uninvolved people present within the area of flight. Maintain 50m separation from any uninvolved people - No flight within 150m horizontally of residential, commercial, industrial or recreational areas	C3	<25kg MTOM	Nil	Yes	12	- User manual - Online training - Online (foundation) test
		C4					
		Privately built	<25kg 'flying weight'				
		Legacy (placed on market before 1 Jan 23					

Appendix D – Flight Planning and Risk Assessment Forms

PRE FLIGHT SITE RESEARCH - Confetti Media Group

PROPOSED DATE OF FLIGHT
EXPECTED LENGTH OF FLIGHT

FLIGHT TEAM COMPOSITION	
PILOT IN COMMAND:	
OBSERVER:	
SUA TO BE USED:	
PAYLOAD OPERATOR:	
SPOTTER:	

OPERATING SITE LOCATION		
CUSTOMER:		
OPERATING SITE NAME:		
SITE LATITUDE:		
SITE LONGITUDE:		
ALTITUDE AMSL:		ft AMSL
DOWLOADED MAP TO GROUNDSTATION: (Tick)		
IS THERE VEHICULAR ACCESS:	YES	NO
WORK REQUIRED:		

ITEM	*ACTION TO COMPLETE*	*FINDINGS*
AIRSPACE	Airspace Class? (A,C,D,E,F,G) - ATC Permission Required?	
TERRAIN	What is the Terrain? (Flat, Mountainous, Boggy)	
PROXIMITIES	Other Aircraft (Aerodromes, Heli Pads, Model Sites)	
HAZARDS	Live Firing, High Intensity Radio Transmissions, Gas Venting	
RESTRICTIONS	Nuclear Power Stations, Prisons, High Intensity Radio	
SENSITIVITIES	Nature Reserves, Recreational Areas, Bye Laws	
PEOPLE	Local Habitation (Do we need to Letter Drop?)	
LIVESTOCK	Local Farms	
PERMISSION	Local Authority, Land Owner, Military Space	
ACCESS	Public Right of Way, Gates & Roads	
CORDON	Is a Cordon Required? (Do we need extra staff?)	
FOOTPATHS	Public Footpaths, Bridal Paths	
ALTERNATE	Alternative Operational / Take Off Sites	
RISK MITIGATION	Can the job be done at another time to avoid people, etc	
WEATHER	24 hour forecast	
NOTAMS	Any Notice to Airmen that may effect operations	

COMPLETED PRE-NOTIFICATION	*If Notified, Record Date, Time & Contact Name*
LOCAL AIR TRAFFIC CONTROL:	
REGIONAL AIR TRAFFIC CONTROL:	
MILITARY CONTROL:	
NOTICE TO AIRMEN:	
LOCAL AERO CLUB:	

ON SITE SURVEY

Confetti Media Group

	DATE	***WIND SPEED***	
		KNOTS	
PILOT:	***TEMP.***	***DIRECTION***	
OBSERVER:	*C		

ITEM	***ACTION TO COMPLETE***	***FINDINGS***
OBSTRUCTIONS	Masts, Power Lines, Buildings, Train Tracks, Trees, Lakes, Rivers, Canals or Industrial Hazards	
VISUAL LIMITATIONS	Anything that May Impair Vision? (Up to 5KM)	
CORDON	Is a Cordon Required? (Do we need extra staff?)	
LIVESTOCK	Any Animals or Wildlife Present Nearby?	
TERRAIN	Flat Surface, Rough, Sloped, Wet, Trees?	
PERMISSION	Do We Have the Land Owners Permission?	Signature:
PUBLIC	Public Right of Way, Footpaths, Gates	
AIR TRAFFIC	Do We Need & or Have Clearance?	
COMMUNICATION	Are Two Way Radios Required?	
PROXIMITY	Are We Far Enough Away from Buildings?	
TAKE OFF AREA	Where is the Safest Convenient Position?	
LANDING AREA	Where is the Safest Convenient Position?	
OPERATIONAL ZONE	Are there Any Hazards or Obstructions?	
EMERGENCY AREA	Where is the Safest Convenient Position?	

CONTACT NAME AND TELEPHONE NUMBERS
PILOT:
OBSERVER:
CLIENT:
LOCAL POLICE:
LOCAL HOSPITAL:
LOCAL AIR TRAFFIC CONTROL:

NOTES:

Appendix E –Flight Reference Cards and Checklists

E.1 Equipment Loading List

EQUIPMENT LOADING CHECKLIST - Confetti Media Group

ITEM	ACTION / CHECK	TICK
Ground Station & Leads	Check Condition & Functionality	
Camera Monitor & Leads	Check Condition & Functionality	
A / V Receiver & Leads	Check Condition & Functionality	
Telemetry Receiver & Leads	Check Condition & Functionality	
Laptop & Leads	Check Condition & Functionality	
Mobile Phone & Emergency No's	Check Condition & Functionality	
Anemometer	Check Condition & Quantity	
First Aid Kit & Fire Extinguisher	Check Condition & Contents	
Food (Snacks & Drink)	Check Condition & Contents	
Crew Identification	Check Requirements & Quantity	
Fluorescent Jacket(s) / Hard Hats	Check Condition & Quantity	
Two Way Radios	Check Condition, Charge & Function	
Clothing (Boots, Coat, Gloves)	Check Condition	
Air Navigation Map	Check Condition	
Checklists, Manuals & Logbooks	Check Condition & Current	
Notepad & Pens	Check Condition	
Call Sheets (Emailed)	Check Status	
Job File (Paperwork)	Check Condition	
Signs, Safety Tape, Cones	Check Condition & Quantity	
Wet Weather Contingency	Check	

ITEM	ACTION / CHECK	TICK
Flight Battery Packs	Charge & Check Condition	
Transmitter Battery Packs	Charge & Check Condition	
Camera Battery Packs	Charge & Check Condition	
Ground Station Battery	Charge & Check Condition	
Charger Battery Packs	Charge & Check Condition	
Mobile Phone Battery	Charge & Check Condition	

ITEM	ACTION / CHECK	TICK
Airframe	Check Condition & Airworthiness	
Camera Mount	Check Condition & Functionality	
Flight Controller / Transmitter(s)	Check Functionality	
Calibration Platform	Check Condition	

ITEM	ACTION / CHECK	TICK
Camera(s) & Lens(s)	Check Condition & Functionality	
Camera Connection Leads	Check Condition	
Camera Memory Cards	Check Condition & Space	
Camera to Airframe Lanyard	Check Condition & Security	
Camera Attachment Bolt	Check Condition	

ITEM	ACTION / CHECK	TICK
Multi Function Battery Charger	Check Condition & Functionality	
Required Charger Leads	Check Condition	
Battery Checker	Check Functionality	

ITEM	ACTION / CHECK	TICK
Screwdrivers (Flat / Cross Drive)	Check Condition	
Allen Keys	Check Condition	
Pliers (Standard / Long Nose)	Check Condition	
Cable Ties (Various Sizes)	Check Condition & Quantity	
Side Cutters	Check Condition	
Nylock Propeller Nuts	Check Condition & Quantity	
Spare Props. (Tractor & Pusher)	Check Condition & Quantity	
Small Socket Set	Check Condition	

NOTES:

E.2 On Site Set Up checklist

SITE SET UP CHECKLIST - Confetti Media Group

ITEM	ACTION / CHECK	TICK
WINDSPEED CHECK	CHECK WINDSPEED IS WITHIN LIMITS	
SITE SURVEY	CARRY OUT SITE SURVEY WITH OBSERVER	
CREW IDENTIFICATION BADGES	ISSUE AS REQUIRED	
HARD HAT / FLOURESCENT JACKETS	ISSUE AS REQUIRED	
TWO WAY RADIOS	ISSUE AS REQUIRED	
CORDON, SIGNS AND SAFETY TAPE	SETUP IF SURVEY FINDS REQUIREMENT	
FIRST AID KIT	POSITION TO BE EASILY ACCESSIBLE & INFORM CREW OF LOCATION	
CALIBRATE PLATFORM / LANDING PAD	POSITION AS REQUIRED & ENSURE LEVEL WITH SPIRIT LEVEL	
AIRFRAME	UNLOAD & CHECK AIRFRAME FOR ANY TRANSIT DAMAGE	
PROPELLERS	CHECK CONDITION (Splits, chips or cracks - Replace if Required)	
FLIGHT PLAN / BRIEF	CONFIRM FLIGHT PLAN & BRIEF CREW, OBSERVER & EXAMINER	
CREW / HELPERS	POSITION AS REQUIRED TO MAINTAIN SAFE FLYING ZONE	

Note: The calibration platform displays a compass rose and should be positioned so that North is aligned correctly. This compass rose can then be consulted in the event of a fly away action to ascertain approximate heading quickly.

E.3 SUA Assembly and Functional Checklist

ASSEMBLY AND FUNCTIONAL CHECKLIST - Confetti Media Group

DJI MAVIC PRO

ITEM	*ACTION / CHECK*	*TICK*
AIRFRAME	CHECK FOR DAMAGE, WEAR, TIGHTNESS OF FITTINGS, CONDITION AND SECURE FITMENT OF PROPELLERS AND SECURE ATTACHMENT OF CAMERA	
FLIGHT BATTERY	RECORD PRE-FLIGHT BATTERY POWER % AND FIT INTO AIRFRAME (Flight Batteries Must Be No Lower than 90%)	
TRANSMITTER	SWITCH ON RC, CHECK BATTERY POWER IS AT LEAST 80%, ENSURE TRIMS ARE NUETRAL AND ALL SWITCHES ARE IN THERE CORRECT POSITIONS	
GIMBAL	REMOVE GIMBAL CLAMP TO RELEASE CAMERA.	
MEDIA	ENSURE SD CARD IS INSERTED. FORMAT IF NECESSARRY.	
AIRFRAME	ENSURE AIRCRAFT IS LEVEL ON THE CALIBRATION PLATFORM	
POWER ON	CALL "POWERING ON" AND SWITCH ON FLIGHT BATTERY	
SELF DIAGNOSTIC	WAIT FOR DIAGNOSTIC TO FINISH	
AUDIO VISUAL MONITOR	CHECK FUNCTION & QUALITY OF AUDIO VISUAL LINK FROM CAMERA	
CALIBRATION	CALIBRATE GYRO AND COMPASS IF REQUIRED	
CAMERA GIMBAL	TEST FOR CONTROL AND OPERATION AND POSITION FOR TAKE OFF (Lens parallel with ground level)	
GROUND STATION	SWITCH ON AND LOAD SOFTWARE (Once loaded select *"Connect to system"*)	
TELEMETRY LINK	ENSURE TELEMETRY FEED IS BEING RECEIVED AND DISPLAYS ARE CONNECTED - SWITCH TO 'ATTI' MODE AND CONFIRM YELLOW LED ON REAR OF SUA.	
FLIGHT MODE	SWITCH BACK TO DESIRED MODE OF OPERATION (GPS)	
SATELLITE CAPTURE	MONITOR SATELLITE CAPTURE ON SCREEN UNTIL SATELLITES ARE CAPTURED - MINIUM 10 SATS	
GPS POSITION FIX	CONFIRM GPS POSITION FIX	
FLIGHT PLAN (if used)	LOAD IN FLIGHT PLAN FROM GROUND STATION IF REQUIRED (Beep for Each Waypoint)	
CAMERA	START RECORDING	
AIRCRAFT ALIGNMENT	REPOSITION AIRCRAFT IN TAKE OFF AREA ON LEVEL GROUND FACING INTO WIND	
AIRCRAFT READY	CALL "AIRCRAFT READY" AND PROCEED TO PRE FLIGHT CHECKLIST / FRC	

ASSEMBLY AND FUNCTIONAL CHECKLIST - Confetti Media Group

DJI INSPIRE 1 V.02

ITEM	*ACTION / CHECK*	*TICK*
AIRFRAME	CHECK FOR DAMAGE, WEAR, TIGHTNESS OF FITTINGS, CONDITION AND SECURE FITMENT OF PROPELLERS AND SECURE ATTACHMENT OF CAMERA	
FLIGHT BATTERY	RECORD PRE-FLIGHT BATTERY POWER % AND FIT INTO AIRFRAME (Flight Batteries Must Be No Lower than 90%)	
TRANSMITTER	SWITCH ON RC, CHECK BATTERY POWER IS AT LEAST 80%, ENSURE TRIMS ARE NUETRAL AND ALL SWITCHES ARE IN THERE CORRECT POSITIONS	
MEDIA	ENSURE SD CARD IS INSERTED. FORMAT IF NECESSARRY.	
AIRFRAME	ENSURE AIRCRAFT IS LEVEL ON THE CALIBRATION PLATFORM	
POWER ON	CALL "POWERING ON" AND SWITCH ON FLIGHT BATTERY	
SELF DIAGNOSTIC	WAIT FOR DIAGNOSTIC TO FINISH	
TRAVEL MODE	COME OUT OF TRAVEL MODE (VIA APP OR TOGGLE LANDING GEAR BUTTON X 4 IN QUICK SUCCESSION.	
AUDIO VISUAL MONITOR	CHECK FUNCTION & QUALITY OF AUDIO VISUAL LINK FROM CAMERA	
CALIBRATION	CALIBRATE GYRO AND COMPASS IF REQUIRED	
CAMERA GIMBAL	TEST FOR CONTROL AND OPERATION AND POSITION FOR TAKE OFF (Lens parallel with ground level)	
GROUND STATION	SWITCH ON AND LOAD SOFTWARE (Once loaded select *"Connect to system"*)	
TELEMETRY LINK	ENSURE TELEMETRY FEED IS BEING RECEIVED AND DISPLAYS ARE CONNECTED - SWITCH TO 'ATTI' MODE AND CONFIRM YELLOW LED ON REAR OF SUA.	
FLIGHT MODE	SWITCH BACK TO DESIRED MODE OF OPERATION (GPS)	
SATELLITE CAPTURE	MONITOR SATELLITE CAPTURE ON SCREEN UNTIL SATELLITES ARE CAPTURED - MINIUM 10 SATS	
GPS POSITION FIX	CONFIRM GPS POSITION FIX	
FLIGHT PLAN (if used)	LOAD IN FLIGHT PLAN FROM GROUND STATION IF REQUIRED (Beep for Each Waypoint)	
CAMERA	START RECORDING	
AIRCRAFT ALIGNMENT	REPOSITION AIRCRAFT IN TAKE OFF AREA ON LEVEL GROUND FACING INTO WIND	
AIRCRAFT READY	CALL "AIRCRAFT READY" AND PROCEED TO PRE FLIGHT CHECKLIST / FRC	

E.4 Pre Flight Checklist

PRE FLIGHT CHECKLIST - Confetti Media Group

ITEM	ACTION / CHECK	TICK
CREW, PUBLIC & CLIENT	ENSURE ALL CREW, PUBLIC AND CLIENT ARE IN CORRECT SAFE POSITIONS	
CLEARENCE	DOES THIS FLIGHT OPERATION HAVE CLERANCE FROM AIR TRAFFIC CONTROL IF REQUIRED?	
POWER UP	CALL "*TAKING OFF*" AND START MOTORS (Left & Right sticks to outer corners)	
TAKE OFF	TAKE ONE FINAL LOOK AROUND, CHECK WITH OBSERVER THAT THEY AGREE IT IS SAFE TO FLY, POWER UP AND TAKE OFF, CLIMB TO APPROXIMATELY 2 METERS	
CONTROL TEST	TEST YAW AND CYCLIC CONTROLS (Use small gentle movements and ensure aircraft reacts correctly)	
FUNCTION TEST	ENGAGE POSITION AND ALTITUDE HOLD TO TEST FUNCTION (Aircraft should hold position and altitude)	
FLIGHT BATTERY CHECK	CHECK BATTERY STATUS AND SATELLITES BEING TRACKED	
ACTIVATE PAYLOAD	CALL *"Camera Free"* TO ADVISE THE PAYLOAD OPERATOR THAT THE CAMERA MAY NOW BE MOVED	
OPERATION	CONFIRM WITH THE OBSERVER THAT THE PLANNED FLIGHT OPERATION IS STILL GOOD TO GO AHEAD	

E.5 Pre-Landing Checklist

LANDING CHECKLIST - Confetti Media Group

ITEM	ACTION / CHECK	TICK
LANDING AREA	NO MEMBERS OF CREW WITHIN 5 M OF THE LANDING AREA	
FOREIGN OBJECT DEBRIS	LANDING AREA CLEAR OF FOREIGN OBJECT DEBRIS	
PUBLIC	PUBLIC AT LEAST 30 M FROM LANDING POINT	
CAMERA	ENSURE CAMERA IS POINTING FORWARDS AND LEVEL	
LANDING GEAR	LOWER LANDING GEAR IF RAISED	
ORIENTATION	ORIENTATE AIRCRAFT POINTING AWAY FROM LANDING POSITION	
REVERSE	REVERSE AIRCRAFT INTO LANDING POSITION	
CALL	CALL *'CLEAR'*	
DESCENT	DESCEND SLOWLY INTO LANDING POSITION	
DISARM	DISARM MOTORS	

E.6 Post Flight Checklist

ITEM	ACTION / CHECK	TICK
POWER DOWN	WALK TO AIRCRAFT, POWER OFF, CALL *"Aircraft Safe"*	
TRANSMITTER	SWITCH OFF CONTROL TRANSMITTER	
REMOVAL	REMOVE THE AIRCRAFT FROM THE LANDING AREA	
DATA RECORDING	RECORD PILOT, AIRCRAFT AND BATTERY DETAILS IN THE RELEVANT LOGBOOKS	
AIRFRAME	CHECK FOR DAMAGE, WEAR, TIGHTNESS OF FITTINGS, CONDITION AND SECURE FITMENT OF PROPELLERS AND SECURE ATTATCHMENT OF CAMERA	
BATTERIES	REMOVE FLIGHT BATTERY FROM AIRFRAME.	
GIMBAL	ENSURE GIMBAL CLAMP IS REPLACED	
MEMORY CARD	REMOVE MEMORY CARD FROM CAMERA AND BACKUP TO GROUND STATION PC IF REQUIRED	
REVIEW	REVIEW IMAGES AND EVALUATE WITH CREW AND CLIENT IF REQUIRED	
END MISSION	CALL "MISSION COMPLETE" - BEGIN BREAKDOWN OF EQUIPMENT READY TO LEAVE SITE.	

Appendix G – SUA Emergency Procedures

F.1 Pilot Incapacitation

Symptom/Issue	Warning	Pilot Action	Crew Action	Remarks
Pilot incapacitation		Activate RTH (Return to Home)	Pick up controller. Confirm launch area clear. Monitor video display (if still functioning). Initiate Return to Home procedure, OR land the SUA if trained to do so. Administer First Aid to pilot as appropriate Call Emergency Services if required	Administer first aid to pilot. When Return to Home is initiated: If below 20m the SUA will climb to 20m (if already above 20m the SUA will stay at the same height) The SUA will return directly to the launch position, hover for 15 seconds then gradually descend until it lands and the motors will automatically disarm. Complete CAP 382 MOR ECCAIRS.

F.2 Airspace Incursion

Symptom/Issue	Warning	Pilot Action	Crew Action	Remarks
Airspace Incursion	Visible or audible signs of another air user in the location.	Climb or descend as appropriate. Alert crew to issue. When location of other air user has been identified move directly away, land if safe to do so.	Crew to prioritise the identification of the location of the other air user. Crew to keep pilot aware of what they can see. Ensure landing location is clear.	Record any relevant information relating to the airspace incursion for UK AirProx Board. Complete AirProx Form CA1904

F.3 Loss of Control Data Link

Symptom/Issue	Warning	Pilot Action	Crew Action	Remarks
Loss of Control Data Link	SUA unresponsive. Poor signal strength. SUA shows fast flashing amber lights	Alert crew to issue. Attempt to regain control of the SUA by changing flight mode from its current mode to an alternate and back: Sport on Mavic Atti on Inspire	Ensure landing location is clear. Monitor video display (if still functioning). Provide pilot with appropriate updates on status.	SUA will enter a 'failsafe' mode in this situation after 3 seconds. When failsafe is initiated: If below 20m the SUA will climb to 20m (if already above 20m the SUA will stay at the same height) The SUA will return directly to the launch position, hover for 15 seconds then gradually descend until it lands and the motors will automatically disarm. If SUA re-acquires link at any time the pilot can change the flight mode to regain control of the SUA by cycling the flight mode switch. Pilot must land the SUA as soon as it is safe to do so to investigate the issues. Complete CAP 382 MOR ECCAIRS.

F.4 Rogue SUA

Symptom/Issue	Warning	Pilot Action	Crew Action	Remarks
SUA flying without response from Pilot and uncontrollable	SUA unresponsive.	Alert crew to issue. Attempt to regain control of the SUA by changing flight mode switch. Attempt to initiate Return to Home using switch. Turn off Pilot Controller to attempt to force a failsafe. If this does not work turn controller back on again and try to regain control. If control regained, bring SUA home and land. If control not regained, prepare for crash landing. *Call "CLEAR"* Proceed to crash site if possible Inform local ATC if required Inform emergency services if required	Identify a landmark on the horizon to assist with identifying direction of flight, from launch area or mark location. Monitor video display (if still functioning). Provide pilot with appropriate updates on status. Take a bearing of the direction of flight. Inform local ATC if required Inform emergency services if required	Dependant on outcome possibly inform the relevant agencies and personnel. Complete CAP 382 MOR ECCAIRS.

F.5 Loss of Power (SUA)

Symptom/Issue	Warning	Pilot Action	Crew Action	Remarks
Loss of power (SUA)	Uncommanded descent	Alert crew to impending crash. Attempt to regain control by changing flight mode switch. If control regained, bring SUA home and land. If control not regained, prepare for crash landing. *Call "CLEAR"* Proceed to crash site if possible Inform local ATC if required Inform emergency services if required	Identify a landmark on the horizon to assist with location of SUA. Monitor video display (if still functioning). Provide pilot with appropriate updates on status. Proceed to crash site if possible Inform local ATC if required Inform emergency services if required	Carry out post crash management procedure. Complete CAP 382 MOR ECCAIRS.

F.6 Loss of Power (Ground Control Equipment)

Symptom/Issue	Warning	Pilot Action	Crew Action	Remarks
Loss of power (ground control equipment)	Tablet screen extinguished. Green connection light and / or white power lights on RC extinguish. SUA shows fast flashing amber lights.	Alert crew to the loss of control. Ensure landing site is cleared. Watch behavior of machine to ensure failsafe is operating correctly. If not initiate Rogue SUA procedure.	Monitor video display (if still functioning). Provide pilot with appropriate updates on status.	If SUA experiences control data loss for more than 3 seconds it will enter the failsafe mode. When failsafe is initiated: If below 20m the SUA will climb to 20m (if already above 20m the SUA will stay at the same height) The SUA will return directly to the launch position, hover for 15 seconds then gradually descend until it lands and the motors will automatically disarm. If SUA re-acquires link at any time the pilot can change the flight mode to regain control of the SUA. Pilot must land the SUA as soon as it is safe to do so to investigate the issues. Complete CAP 382 MOR ECCAIRS.

F.7 Unexpected Behaviour In Flight

Symptom/Issue	Warning	Pilot Action	Crew Action	Remarks
Unexpected behavior in flight		Alert crew to the loss of control. Ensure landing site is cleared. Pilot must land the SUA as soon as it is safe to do so to investigate the issues.	Monitor video display (if still functioning). Provide pilot with appropriate updates on status.	

F.8 Lithium Polymer Battery Fault

Symptom/Issue	Warning	Pilot Action	Crew Action	Remarks
Swelling of battery or overheating From impact damage following aircraft crash, dropping of battery or charging malfunction		Alert crew to the fault. *Call "CLEAR"* If RPA is in flight and still under control land immediately in a safe area away from public. Inform emergency services as required. Cordon off area 30m radius from battery/SUA. *If necessary* and safe to do so use extinguisher.	Crew to keep location of fire clear. Inform emergency services as required. Cordon off area 30m radius from battery/RPA. *If necessary* and safe to do so use extinguisher.	LiPo batteries are highly dangerous and can explode Keep distance until safe to approach First on scene of SUA: approach battery with extreme caution, wearing PPE (goggles, fire resistant gloves), LiPo bag and with fire extinguisher to hand. Dispose of battery in accordance to safety guidelines OR safely discharge battery. Complete CAP 382 MOR ECCAIRS.

F.9 SUA Fire

Symptom/Issue	Warning	Pilot Action	Crew Action	Remarks
Smoke / fire		Alert crew to the fire. *Call "CLEAR"* If RPA is in flight and still under control land immediately in a safe area away from public. Inform emergency services as required. Cordon off area 30m radius from battery/RPA/crash site. If safe to do so use extinguisher.	Crew to keep location of fire / crash site clear. Inform emergency services as required. Cordon off area 30m radius from battery/RPA/crash site. If safe to do so use extinguisher.	LiPo batteries are highly dangerous and can explode Keep distance until safe to approach First on scene of RPA: approach battery with extreme caution, wearing PPE (goggles, fire resistant gloves), LiPo bag and with fire extinguisher to hand. Dispose of battery in accordance to safety guidelines. Complete CAP 382 MOR ECCAIRS.