

Health, Safety and Environment Management System

HSE-PRO-018 Remotely Piloted Aircraft Procedure

Table of Contents

| | | |
|------|---|----|
| 1 | Intent..... | 3 |
| 2 | Scope | 3 |
| 3 | Abbreviations | 3 |
| 4 | Definitions..... | 3 |
| 5 | Duty, Obligations and Responsibilities | 4 |
| 5.1 | JCU..... | 5 |
| 5.2 | JCU staff and students..... | 5 |
| 5.3 | Dean, Research..... | 5 |
| 5.4 | Chief Pilot | 5 |
| 5.5 | Chief Maintenance Controller..... | 6 |
| 5.6 | Remote Pilot-in-Command..... | 6 |
| 5.7 | Maintenance Personnel | 7 |
| 5.8 | Payload Specialist / Non-Controlling Observer..... | 8 |
| 6 | RPA Operations..... | 8 |
| 6.1 | Approval process to Undertake JCU RPA Operation | 8 |
| 7 | On Site Requirements..... | 9 |
| 8 | Post Flight Requirements..... | 9 |
| 9 | Insurance..... | 10 |
| 10 | Drug and Alcohol Management | 10 |
| 11 | Incident Reporting | 11 |
| 12 | Field Trips | 11 |
| 13 | Non- JCU Remote Pilots-In-Command and JCU Property..... | 11 |
| 14 | Private or Recreational Operations using JCU RPAs..... | 11 |
| 15 | Personal Information | 11 |
| 16 | Related Documents, Legislation and Other Resources..... | 12 |
| 16.1 | Related Documents and Other Resources..... | 12 |
| 16.2 | Regulatory Authorities and Other Relevant Entities..... | 12 |
| 16.3 | Related Legislation, Codes of Practice and Standards..... | 12 |
| 17 | Administration..... | 12 |
| 17.1 | Approval Details..... | 12 |
| 17.2 | Revision History | 13 |

1 Intent

The purpose of this procedure is to ensure James Cook University (JCU) manages authorised operations of Remotely Piloted Aircraft (RPA) so that all operations are carried out safely and comply with all applicable rules, laws and regulations.

NQ UAV is a Townsville based business which provides individuals and organisations with a range of RPA services.

JCU has entered into an arrangement with NQUAV, where JCU will operate RPAs under NQ UAV's under NQ UAV's Remote Operators Certificate.

2 Scope

This Procedure applies to all JCU RPA Operations.

The Procedure provides information for all JCU staff and students involved in JCU RPA Operations to ensure JCU staff and students conduct all JCU RPA Operations in a safe manner.

Any JCU RPA Operation, regardless of its purpose, and regardless of the type, size or weight of the RPA used, must be authorised in accordance with this Procedure.

3 Abbreviations

| Acronym | Meaning |
|---------|---|
| AGL | Above Ground Level |
| ALA | Aircraft Landing Area |
| AROC | Aeronautical Radio Operator Certificate |
| nm | Nautical Mile |
| CASA | Civil Aviation Safety Authority |
| CASR | Civil Aviation Safety Regulation |
| FROL | Flight Radio Operator Licence |
| RPA | Remotely Piloted Aircraft |
| RPAS | Remotely Piloted Aircraft System |
| UAV | Unmanned Aerial Vehicle |
| VFR | Visual Flight Rules |

4 Definitions

| Term | Definition |
|--------------------|--|
| JCU Pilot Register | means the register managed by the Dean, Research which contains details of the licensed Remote Pilots-In-Command. |
| JCU Premises | means all land, waterways, buildings or other sites which are owned and/or operated by JCU or could reasonably be considered to be |

| | |
|-------------------------------|--|
| | under the control of JCU. |
| JCU Purpose | means any purpose in connection with the operation of JCU including research and education. This includes any flying hours required to be logged by Remote Pilots-In-Command for licensing requirements. |
| JCU RPA Operations | means any operation of an RPA, including flying, maintaining, or modifying an RPA on JCU Premises and/or for a JCU Purpose. For the avoidance of doubt JCU RPA Operations include Normal Operations, Proceduralised Operations and Special Operations. |
| JCU RPA Register | Means the register managed by the Dean, Research and contains a list of all approved RPAs that are authorised to be used in JCU RPA Operations. |
| Normal Operations | RPA operations that meet the following requirements: <ul style="list-style-type: none"> • below 400ft; • more than 3nm from an ALA; • more than 30m from a person not involved in the operation; • not over populous areas; • during day VFR conditions; and • in visual line of sight. |
| Personal Information | means information or an opinion (including information or an opinion forming part of a database) whether true or not and whether recorded in a material form or not, about an individual whose identity is apparent or can reasonably be ascertained, from the information or opinion |
| Proceduralised Operations | Any RPA operation that has a complete set of procedures specific to that location or style of operation. This includes, but is not limited to: <ul style="list-style-type: none"> • operations in controlled airspace of JCU Townsville Campus (Douglas) and Cairns Campus (Smithfield); and • operations within 3nm of an ALA at Orpheus Island Research Station. |
| Special Operations | RPA operations that require exemptions, permissions or approvals by CASA beyond that defined as a Normal or Proceduralised operation. These may include, but are not limited to: <ul style="list-style-type: none"> • night visual flying; • convoy operations; • visual line of sight assisted; • high altitude visual line of sight; • operations at and near aerodromes or in controlled airspace; • over populous areas; • operations in close proximity to people; and • beyond visual line of sight. |
| Standard Operating Conditions | As defined in CASR 101 as RPA operations that: <ul style="list-style-type: none"> • below 400ft AGL; • more than 3nm from a controlled aerodrome; • more than 30m from persons not involved in the operation; • not over populous areas; • during day VFR conditions only; and • in visual line of sight. |

5 Duty, Obligations and Responsibilities

Flying RPAs can be a dangerous activity. Education and training of JCU staff and students in the operation of RPAs can reduce the risks associated with these activities.

5.1 JCU

Although JCU operates RPAs under the NQ UAV Remote Operators Certificate, JCU has a duty to ensure:

- the health and safety of workers and others during all JCU RPA Operations; and
- that all JCU RPA Operations being conducted comply with all applicable rules, laws and regulations.

5.2 JCU staff and students

JCU staff and students must comply with this Procedure before commencing a JCU RPA Operation.

Visitors to JCU are not authorised to fly RPAs under any circumstances on JCU Premises and/or for a JCU Purpose.

5.3 Dean, Research

The Dean, Research has a JCU-wide oversight of JCU RPA Operations. More specifically, he/she is responsible for the following:

- Maintaining the JCU RPA Register to ensure currency of all RPAs listed thereon;
- Maintaining the JCU Pilot Register to ensure currency of licenses for all qualified Remote Pilots-In-Command thereon;
- Ensuring all RPAs are listed on NQ UAV's Remote Operators Certificate and noted on JCU's aviation insurance policy;
- Ensuring all Remote Pilots-In-Command are listed on JCU's aviation insurance policy;
- Ensuring all RPAs are maintained to required standards.

5.4 Chief Pilot

The Chief Pilot is a suitably qualified and experienced RPA operator who is responsible for ensuring all JCU RPA Operations are conducted in compliance with the *Civil Aviation Act 1988* (Cth) and the CASR.

The Chief Pilot is an NQ UAV employee and reports to the Managing Director of NQ UAV, CASA and the Dean, Research as well as other regulatory bodies as required.

The Chief Pilot is also responsible for:

- maintaining a record of qualifications held by each Remote Pilot-In-Command;
- having control of all controller training and operational matters affecting the safety of all JCU RPA Operations;
- maintaining a complete and up-to-date reference library of operational documents as required by CASA for the class of operations conducted by JCU;
- being responsible for all communication between JCU, NQ UAV and CASA; and
- reviewing and approving applicable flight plans.

5.5 Chief Maintenance Controller

The Chief Maintenance Controller controls all RPA maintenance on behalf of JCU.

The Maintenance Controller is an NQ UAV employee and reports to the Managing Director of NQ UAV, the Dean, Research and CASA.

The Chief Maintenance Controller is also responsible for:

- ensuring personnel performing maintenance on the RPAs are competent by keeping records of personnel permitted to perform maintenance;
- developing, enforcing and monitoring RPAs maintenance standards;
- maintaining a record of RPAs unserviceability, RPAs hours, cycles and other information relevant to the scheduling of maintenance;
- ensuring maintenance activities are conducted in accordance with the procedures specified in the Maintenance Manual;
- liaising with CASA with regard to all maintenance and technical issues relating to all JCU owned RPAs;
- following manufacturer's instructions, recommendations and bulletins;
- determining more efficient, safer, economical and time minimising procedures and processes;
- assessing how new payloads interact with the RPA electrically, mechanically and structurally;
- ensuring that all payloads or modifications are attached to the RPA (both passive and active) conform with the RPA's specification; and
- approving all new payloads and determining if the payload will be approved for the Remote Pilot-in-Command to swap off and on.

5.6 Remote Pilot-in-Command

The Remote Pilot-In-Command is a JCU staff member or student authorised to undertake a JCU RPA Operation.

The Remote Pilot-in-Command is responsible for:

- the safe flying of the RPA;
- ensuring the RPA under his or her control is operated in accordance with this Procedure, the NQ UAV Operations Manual and the applicable flight manual;
- ensuring that each flight is conducted according to any law, rule, regulation or conditions required for that flight;
- carrying his or her own UAV Controllers Certificate or Remote Pilot License with him or her on operations;
- ensuring logbooks, insurance and SkyWard logs remain up-to-date;
- conducting safe operations from pre-flight, start-up, during flight and after landing until after shutdown and storage of the RPA; and
- completing a risk assessment prior to and during JCU RPA Operations to ensure control mechanisms remain effective throughout the mission.

The Chief Pilot in conjunction with the Dean, Research authorises the Remote Pilot-in-Command to carry out a JCU RPA Operation. A Remote Pilot-in-Command will report to the Chief Pilot, Senior Base Pilot, the Dean, Research and regulatory bodies as required.

All Remote Pilots-In-Command will be required to have appropriate licenses, internal qualifications and a demonstrated level of competency.

All Remote Pilots-In-Command must have a CASA issued Unmanned Aerial Vehicle (UAV) Controller's Certificate or Remote Pilot License.

To obtain a (UAV) Controller's Certificate or Remote Pilot License, JCU staff and students should first email chief.pilot@jcu.edu.au. The relevant JCU staff member or student will then be contacted by the Chief Pilot to commence the licensing process.

A Remote Pilot-In-Command must satisfy the following requirements:

- hold a current UAV Controller's Certificate or Remote Pilot License issued by CASA;
- hold a current AROC or FROL;
- have a minimum of 5 hours' experience on the type of RPA to be used (under supervision) and maintain 5 hours of flights in a 90 day period;
- have demonstrated competency in flight to the Chief Pilot; and
- have demonstrated a good sense of safety.

In addition, for Special Operations, the Remote Pilot-in-Command must satisfy the following additional requirements:

- internal training for the type of 'special' operation;
- appropriate endorsement on internal license; and
- demonstrated competency in flying RPAs to the satisfaction of the Chief Pilot.

Each Remote Pilot-In-Command will be qualified on a class of RPAs. Any changes will need to be approved and CASA will issue the relevant Remote Pilot License or UAV Controller's Certificate to reflect new RPA types and weights class that may be operated by the Remote Pilot-In-Command. After the CASA updates are confirmed, the Remote Pilot License will be updated.

Upon induction, Remote Pilots In-Command will receive digital copies of all operations, flight and maintenance manuals and associated documents/software to appropriately plan, execute and log JCU RPA Operations.

The Remote Pilot-In-Command must be listed on the JCU Pilot Register and noted on JCU's aviation insurance policy. The Remote Pilot-In-Command must contact the Dean, Research to ensure he or she is listed on the JCU Pilot Register and noted on JCU's aviation insurance policy before undertaking a JCU RPA Operation.

To ensure Remote Pilots-In-Command maintain an adequate level of competency in operating an RPA, they will be:

- inducted to standard procedures for planning, executing and reporting requirements of all operations;
- inducted into the software and documents to be used; and
- subject to initial and annual evaluations (knowledge and flight competency) by the Chief Pilot and the Dean, Research.

5.7 Maintenance Personnel

The Maintenance Personnel maintain the RPAs.

Maintenance Personnel are JCU employees and will report to the Chief Maintenance Controller and regulatory bodies.

The Maintenance Personnel have the following functions and responsibilities:

- to complete all maintenance to the best of their technical ability;
- notify the Chief Maintenance Controller of any and all defects found during any maintenance;
- follow manufacturer's instructions, recommendations and bulletins; and
- determine more efficient, safer, economical and time minimising procedures and processes and notify the Chief Maintenance Controller of the new methods before implementing.

5.8 Payload Specialist / Non-Controlling Observer

The Payload Specialist / Non-Controlling Observer are JCU employees and report to the Remote Pilot-in-Command.

The Payload Specialist / Non-Controlling Observer have the following functions and responsibilities:

- to not interfere with the flying operation of the Remote Pilot-in-Command;
- to assist the Remote Pilot-in-Command with any emergency if requested or directed by the Remote Pilot-in-Command;
- to assist the Remote Pilot-in-Command with observations of potential hazards both to the RPA and the general public; and
- maintain knowledge of how to activate the failsafe mechanism of the RPA.

6 RPA Operations

6.1 Approval process to Undertake JCU RPA Operation

JCU staff and students undertaking JCU RPA Operations must ensure they are authorised by the appropriate personnel prior to operation.

JCU staff and students wishing to undertake a JCU RPA Operation should contact the Dean, Research in the first instance with any queries on this Procedure.

All JCU RPA Operation requests must first be submitted to chief.pilot@jcu.edu.au for review and approval.

Permission and approval to fly over JCU Premises must be sought by emailing rpas@jcu.edu.au.

Before each JCU RPA Operation takes place, the relevant JCU staff member or student will be required to file the flight plans in Skyward, complete a Pre-Flight Risk Assessment (NQU 0095 in iAuditor) and send an email to chief.pilot@jcu.edu.au for review and approval.

For all Normal and Proceduralised operations, approval requests must be submitted at least 1 week (7 calendar days) in advance of the JCU RPA Operation.

All Special Operations will require a minimum of 2 months (63 calendar days) for approval. This is to allow for exemptions to be issued by CASA, ensure appropriate documentation and training is in place, and all updates and maintenance on affected RPAs has been completed (if required).

The Chief Pilot will review the flight plan and risk assess the proposed JCU RPA Operation. The Chief Pilot may provide:

- approval for the JCU RPA Operation;
- additional information or identification of risks prior to approval;
- additional required steps to be undertaken prior to, or during the mission; and
- additional requirements on the operation such as, but not limited to:
 - phone calls to controlling authorities;
 - radio broadcasts;
 - flight parameter requirements;
 - flight path requirements; and
 - crew requirements.

For additional information on the approval process, JCU staff and students can email rpas@jcu.edu.au.

All RPA's used in JCU RPA Operations by JCU staff and students must be:

- owned by JCU;
- listed on the NQ UAV's Remote Operators Certificate;
- a noted on JCU's insurance policy; and
- listed on the JCU RPA Register,

before the JCU RPA Operation can be undertaken.

All RPAs to be used in JCU RPA Operations must be purchased using a purchase requisition and the approved process that is outlined in FMPM 711 – Procurement Procedure.

Non JCU owned RPAs are not to be used for JCU RPA Operations.

JCU staff and students must complete the Planning Checklist for use of Remote Piloted Aircraft before carrying out a JCU RPA Operation.

7 On Site Requirements

When arriving onsite to carry out a JCU RPA Operation, the following shall be conducted by the Remote Pilot-in-Command:

- site familiarisation to identify hazards and launch and recovery areas (primary and emergency);
- on-site risk assessment / job safety assessment (NQU 0042 in iAuditor);
- a safety briefing to all personnel involved and spectating nearby;
- a Pre-Flight Checklist that is specific to the RPA being used;
- a 'Take 5' prior to all individual flights/sorties;
- safely conducting the RPA operations; and
- Post-Flight checklists that is specific to the RPA being used.

Any maintenance conducted onsite will require NQU 0060 (in iAuditor) to be completed. This is submitted and needs to be forwarded to chief.maintenance@jcu.edu.au to be logged with the RPA maintenance records.

8 Post Flight Requirements

On completing a JCU RPA Operation, the Remote Pilot-In-Command shall log the flights and battery use in Skyward. The Remote Pilot-in-Command will notify the Chief Maintenance Controller (chief.maintenance@jcu.edu.au) of any required repair or maintenance to the RPA.

For the avoidance of doubt, any repairs and / or maintenance to the RPA must be undertaken only by the Maintenance Personnel.

9 Insurance

All Remote Pilots-In-Command must be listed on JCU's aviation insurance policy before they can undertake any JCU RPA Operations.

All RPAs operated by the Remote Pilot-In-Command must be listed on JCU's aviation insurance policy before they can be flown.

If the Remote Pilot-In-Command and/or the RPA are not listed on JCU's aviation insurance policy, then the JCU RPA Operation is not authorised by JCU and will not be covered by JCU's aviation insurance.

It is the responsibility of the Dean, Research and the Remote Pilot-In-Command to ensure the Remote Pilot-In-Command is listed on the JCU's aviation insurance policy and to ensure that the RPA the Remote Pilot-In-Command plans to operate is listed on the JCU's aviation insurance policy. JCU's aviation insurance policy only covers those Remote Pilots-In-Command and RPAs declared to the insurer and noted on the policy.

All Remote Pilots-In-Command are to be declared by submitting the following information to the JCU Insurance Officer:

- Remote Pilot-In-Command's name and date of birth;
- details of the pilot's UAV Controller's Certificate or Remote Pilot License issued by CASA;
- RPA type (e.g. Multirotor < 7kg);
- Hours in command of this type of RPA;
- approximate number of logged RPA hours of flight;
- Date and other details of any flying accidents or offences.

RPAs and Remote Pilots-In-Command are to be disclosed to the JCU Insurance Officer by submitting an email to insurance@jcu.edu.au

If a claim is made on JCU's aviation insurance policy as a result of a JCU RPA Operation, an excess may apply.

10 Drug and Alcohol Management

Drugs and alcohol testing may occur at any time.

Drugs or alcohol cannot be consumed 8 hours prior to planning or executing JCU RPA Operations.

JCU staff or students undertaking a JCU RPA operation who exceed the permitted level of 0.02 grams of alcohol in 210 litres of breath will be providing a positive test result and therefore will not be approved to undertake a JCU RPA Operation until a negative test result has been provided.

11 Incident Reporting

In the event of any incident, the Remote Pilot-in-Command or the Non Controlled Observer are to report the incident by:

Contacting:

- 000 / 112 if anyone is injured;
- local air traffic controllers;
- Chief Pilot and / or Director-Divisional Operations and the Dean, Research; and
- any additional parties identified during the Pre-Flight Risk Assessment.

And:

- Documenting and photographing all aspects of the incident immediately and on location and report the incident using form NQU 0009 in iAuditor;
- Assisting with an investigation of the incident if required and ensuring processes and documentation is amended to incorporate recommendations as a result; and
- Following the additional requirements outlined in the HSE-PRO-014 Incident and Hazard Management Procedure.

12 Field Trips

Any JCU RPA Operation approved for the purpose of study or research by JCU staff or students that is conducted off-campus may be considered a field trip. JCU field trips are to be managed in accordance with HSE-PRO-007 Field Trip Procedure in addition to this Procedure.

13 Non- JCU Remote Pilots-In-Command and JCU Property

Non-JCU Remote Pilots-In-Command must not operate on behalf of JCU or operate as Remote Pilot-in-Command of any JCU owned RPA's without the prior written approval from the Dean, Research and the Chief Pilot. For more details contact rpas@jcu.edu.au.

Permission and approval to fly over JCU Premises must be sought by emailing rpas@jcu.edu.au.

14 Private or Recreational Operations using JCU RPAs

RPAs that are not owned by JCU must not be used over JCU Premises and/or for a JCU Purpose for any reason under any circumstances by JCU staff and students or visitors to JCU.

15 Personal Information

JCU staff and students should note that their Personal Information may be supplied to NQ UAV as part of the approval process contained in this Procedure. Any emails sent by JCU staff and students to chief.pilot@jcu may be passed onto to NQ UAV as part of the approval process and will be done so in accordance with JCU's Information Privacy Policy and relevant legislation.

JCU staff and students should be aware that Personal Information of third parties may be collected while undertaking JCU RPA Operations, for example, taking photographs of

individuals. If JCU staff and students are concerned about the use of any video footage or photographs taken as a result of carrying out a JCU RPA Operation, they should contact the Dean, Research in the first instance for further advice prior to use of any such footage or photograph.

16 Related Documents, Legislation and Other Resources

16.1 Related Documents and Other Resources

| | |
|---------------|--|
| NQUAV | NQ UAV NQU 0002 – Operations Manual |
| | NQ UAV NQU 0061 – Flight Manual |
| | NQ UAV NQU 0058 – Maintenance Manual |
| JCU Procedure | FMPM 711 – Procurement Procedure |
| | HSE-PRO-007 Field Trip Procedure |
| | HSE-PRO-014 Incident and Hazard Management Procedure |
| JCU Registers | JCU RPA Register JCU Pilot Register |

16.2 Regulatory Authorities and Other Relevant Entities

CASA

Air Services Australia

Australian Defence Force

16.3 Related Legislation, Codes of Practice and Standards

| | |
|-------------------|--|
| Legislation | <i>Work Health and Safety Act 2011 (Qld)</i> |
| | <i>Work Health and Safety Regulation 2011 (Qld)</i> |
| | <i>The Civil Aviation Act 1988 (Cth)</i> |
| | <i>The Civil Aviation Safety Regulation 1988 (Cth)</i> |
| Standards | |
| Codes of Practice | |

17 Administration

NOTE: Printed copies of this procedure are uncontrolled, and currency can only be assured at the time of printing.

17.1 Approval Details

| | |
|----------------------------|--|
| Policy Sponsor | Deputy Vice Chancellor, Services and Resources |
| Version no. | 1.0 (16-1) |
| Date for next Major Review | 20/12/2019 |

17.2 Revision History

NOTE: A minor amendment will not result in a change of the next major review date.

Approval date - the date the Policy Sponsor approved the establishment, minor or major amendment or disestablishment

Implementation Date - the date the procedure was published in the Policy Library and is the date the procedure takes effect

| Version | Approval date | Implementation date | Details | Author |
|---------------|---------------|---------------------|-----------------------|--------------------|
| 1.0 (16-1) | 20/12/2016 | 22/12/2016 | Procedure established | HSE System Officer |

| | |
|----------|---------------------------|
| Keywords | Remotely piloted aircraft |
|----------|---------------------------|

| | |
|------------------------|---|
| Consultation Committee | Health, Safety and Environment Advisory Committee (HSEAC) |
| Contact Unit | safety@jcu.edu.au |