



UDS (Pty) Ltd

BVLOS Operations

Robert Hannaford Co-Founder & Technical Director

- UDS (Pty) Ltd has been formed to take advantage of the progress in the latest commercial unmanned technologies currently available
- Areas of focus are: Conservation, Surveillance, 3D mapping and a host of engineering services
- Core Competencies
 - Design, Fabrication & Systems Integration
 - Light Engineering
 - Embedded Microprocessor Development
 - Mobile Application Development across all Smartphone platforms
 - Flight and Training on RPAS Systems

- ROC was issued 09 October 2015
 - Approval issued for
 - Class 1A R-VLOS\V-LOS E <15kj H <400ft MTOM < 1.5kg
 - Class 4A BVLOS E Any H <1500ft MTOM <150kg
 - Currently only ROC with BVLOS and night operations approval
 - 13200 hours logged since issue
 - 1 major accident reported to CAA (loss of aircraft)
 - 56 minor hazards, incidents & accidents reported

Restrictions & Limitations		
Limitations	Approvals Yes/No	Notes
Use of a public road as a place of take-off or landing of an RPA	Yes	With permission from the relevant local authority
Operations where objects or substances will be released, dispensed, dropped, delivered or deployed from an RPA	No	
Operations within a radius of 10kms from an aerodrome	Yes	With written permission from the relevant authorities and ATSU, if applicable
Operations adjacent to or above a nuclear power point plant, prison, police station, crime scene, court of law, national key point or strategic installation	Yes	With permission from the relevant authorities, as applicable. SACAA approval is required per operation
Operations overhead any person or group of people or within a lateral distance of 50m	No	
Operations within a lateral distance of 50m from any structure or building	Yes	With written permission from the relevant authorities, if necessary
Operations over a public road, along the length of a public road or at a lateral distance of less than 50m from a public road	Yes	With written permission from the relevant authorities, if necessary

UDS Specific Approvals (Limitations)	
Limitations	Approvals
Dangerous Goods	No
Operations within controlled airspace	Approved
Operations within restricted airspace	Approved
Operations within prohibited airspace	No
Operations above 400ft AGL	Approved
Night Operations	Approved
Other	N/a

Current Staff Compliment

- 25 Pilots
 - 23 Dual Rated (Fixed Wing & Multirotor)
 - 2 Single Rated (Multirotor)
- 10 Sensor Operator's
- 1 Accountable Manager
- 1 Responsible Person Aircraft
- 1 Responsible Person Flight Operations
- 1 Safety & Security Manager
- 1 Quality Manager
- 5 Administration and Compliance personal

Current RPAS Fleet Compliment (CAA Registered)

- 9 Fixed Wing
- 5 Multirotor
- 12 Pending LOA approval's

Staff Training

- All Pilots hold current CAA certified RPL licenses
 - Pilots have controlled airspace certification
 - Pilots receive aircraft specific training
 - UDS Internal BVLOS certification and checkout
 - Average 6 – 9 months before BVLOS PIC certification (minimum 200 hours)
 - Continued refresher training annually (UDS Induction, task related induction, rpl related induction, safety & quality induction & emergency response induction)
- All Sensor Operators hold current UDS Payload certification
 - Sensor Operators must complete RPL ground school training
 - Sensor Operators receive payload specific training
 - Continued refresher training annually (UDS Induction, task related induction, safety & quality induction & emergency response induction)
- Safety & Security Manager (is a commercial helicopter pilot specializing in night operations)
 - Safety Management System Course (CAA Approved)
 - UDS Internal Risk Management Application Tool
- Quality Manager
 - Quality Assurance Course (CAA Approved)

Current Operations (90% of all operations are night time)

- Conservation Areas 25km radius - Fixed Wing
 - 6km radius Multirotor Missions
- Industrial Site's 25km radius - Fixed Wing
 - 6km radius Multirotor Missions
- Container Depot's 6km radius - Multirotor Missions
- Rail Yards & Infrastructure 25km radius - Fixed Wing
 - 6km Multirotor Missions

Current Operation Statistics

- Average Multirotor hours per month 200
- Average Fixed Wing hours per month 400
- Average operational days 20
- 6 teams currently operating (team consists of Pilot & Sensor Operator)
- Average hours flown per night 6

Typical Operation Procedures

- Off Site Survey – Remote Research Online
- CAMU Application completed and sent to ATNS
 - Gps Co-ordinates (Proposed Area of Operation)
 - Operational VHF frequencies
 - Aircraft Reg No
 - Date & Times of Proposed Operation
- On Site Preparation
 - Cordon off Flight Area
 - All relevant CAA required paperwork completed
 - Site Briefing with all parties
 - Setup GCS and RPAS
 - Mission Planning & Upload Mission
 - Pre Flight Inspection
 - Mandatory Radio Call (Rpas Id & Mission Planned)
 - Launch, execute mission & recovery (Radio Calls every 15 minutes during operation)
 - Post Flight Inspection of RPAS
 - Mandatory Radio Call (Details Complete)
 - Complete Log File

Ongoing Development

- BARS Referenced Audit (Litson & Associates)
- Health Condition Monitoring and Predictive Maintenance for UAV's
- Release of Mobile App Accident & Incident Risk Management Tool (Redlist)
- On Line UDS Training & Evaluation Web Portal
- Ongoing development of Internal BVLOS flight training program
- Ongoing development of Safety and Operations training program

Thank You

