

Year of Autonomy 2017

Remotely Piloted Aircraft Systems



Who Am I?

Bryan Stanislas
Membership Director for ARPAS-UK

My Background:

Marine Media Specialist working in TV, Film, Onshore and Offshore sectors for aerial and underwater imaging over the last 25 years as well as 15 years serving in UK Fire and Rescue.



Who is ARPAS-UK

ARPAS-UK is the professional body of the fast evolving RPAS industry working on behalf of its members to influence regulation and promote safe operational best practice.

It is a trade association and professional body which supports and acts on behalf of the remotely piloted aircraft community, from start-up businesses to larger established operations.

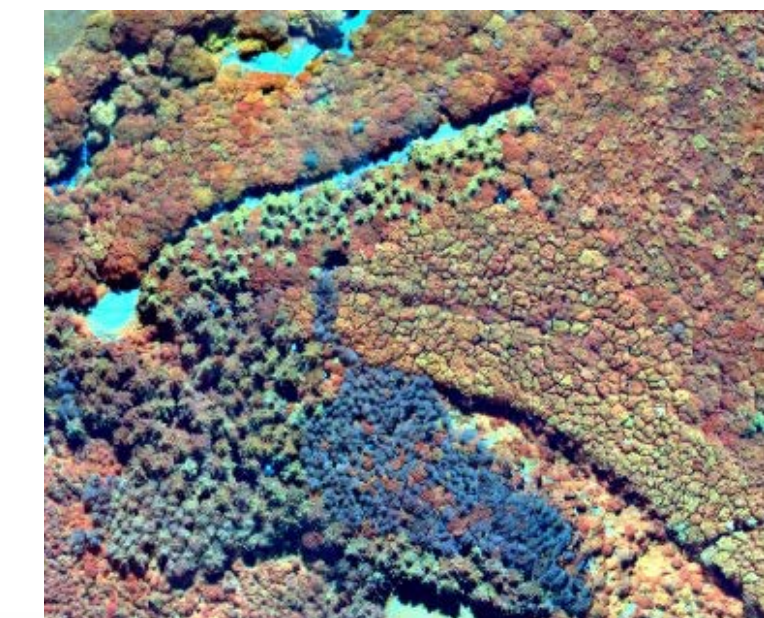
ARPAS-UK members continue to break new ground in markets where RPAS (sometimes referred to as UAVs or drones) are delivering significant benefits.



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Members hail from various sectors including:

- Research and Development of RPAS
- Media, TV & Movie industries
- Mapping
- Structures Inspection
- Linear Infrastructures (power lines, rail)
- Survey & Mapping
- Agriculture
- Emergency Services



Current Regulations

- Civil Aviation Authority (CAA) regulate UK Airspace.
- Air Navigation Order 2016 - Articles 94/95 govern the use of RPAS.



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Current Regulations

- The person in charge of a small unmanned aircraft may only fly the aircraft if reasonably satisfied that the flight can safely be made.
- The person in charge of a small unmanned aircraft must maintain direct, unaided visual contact - visual line of sight (VLOS) or extended by use of spotters using extended visual line of sight (EVLOS) with the aircraft sufficient to monitor its flight path in relation to other aircraft, persons, vehicles, vessels and structures for the purpose of avoiding collisions.

Current Regulations

- If commercially flying the operator must be adequately trained, hold a Permission for Commercial Operations (PfCO) issued by the CAA and hold relevant insurance.
- Stay below 400ft (121m) altitude and within 500m of control point.
- The person in charge of a small unmanned aircraft must maintain direct, unaided visual contact with the aircraft sufficient to monitor its flight path in relation to other aircraft, persons, vehicles, vessels and structures for the purpose of avoiding collisions.

Current Regulations

- Stay at least 50 away from buildings, structures, vessels not under the operators control.
- Stay at least 150m away from congested areas and crowds over 1000 people not under the operators control.
- The person in charge of a small unmanned aircraft must maintain direct,unaided visual contact with the aircraft sufficient to monitor its flight path in relation to other aircraft, persons, vehicles, vessels and structures for the purpose of avoiding collisions.

Autonomous Use of RPAS

- ‘Autopilot’ software already widely used within UK by RPAS operators for such tasks as general and 3D mapping, agricultural, survey, media etc.
- Operator **MUST** have a failsafe override for manual control in the event of system error, manned flight collision avoidance/incursion and evasive manoeuvres.
- Any autonomous operations **MUST** be approved by CAA within the operators Flight Operations Manual.



Challenges Faced

- Safely developing Autonomous RPAS industry to fit in with manned flight use of airspaces.
- Overall acceptance by sceptics and commercial manned flight operators.
- Any Government and Military restrictions placed upon industry for Autonomous flight by RPAS.

Opportunities Available

- Further development of accurate autonomous flight system software.
- Accurate mapping, 3D modelling, creative and Agri sectors.
- Autonomous R and D for Emergency Service use such as Search and Rescue (SAR) and protracted POLICE, FIRE and RNLI incidents.

“The Global drone industry is estimated to be worth £127 Billion by 2020”

– Bloomberg.com



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for more details on UK drone use
please visit www.arpas.uk



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***Thank You
for listening.***

Any questions?



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