

# Review Document of PSNI Use of Unmanned Aerial Vehicles

## Executive Summary

The PSNI air support unit is the most diverse and unique air support unit operating within the United Kingdom. It operates from one location at Aldergrove and utilises a wide range of aerial platforms to meet the varied demands of the organisation and the community. The environment and operating challenges presented are unlike any other air support unit within the United Kingdom which is primarily due to the threat that exists against the public, uniform police officers and indeed aircraft/crew.

In common with the rest of PSNI the Air Support Unit's purpose is to keep people safe. The unit does this by:-

1. Preventing crime and harm to individuals and our society. Aircraft are used to assist police officers managing public disorder, crime hotspots, reports of dangerous driving and terrorist incidents.
2. Detecting those who commit crime. The unit works pro-actively in support of District Policing. Frequently following suspects from crime scenes and directing colleagues towards the offenders.
3. Protecting the vulnerable. We are regularly tasked to search for missing vulnerable persons, move individuals who are at risk from their environment or transport seriously ill casualties to hospital. In a 5 month period we lifted 10 critical casualties and located 12 vulnerable missing persons.

A considerable period of time is also devoted to supporting District officers attending public calls for assistance. Reports of domestic violence, sexual attacks, paramilitary assaults and robbery have all been used to draw police into an area for attack. The presence of an aircraft can facilitate a speedy, safe police response to such a call for help.

Similarly at security alerts the presence of Air Support Unit can expedite the resolution of an incident minimising the impact to the public in general and residents in particular.

In 2013 the Air Support Unit received **4,067** separate tasking's of which **260** had to be declined. This was for a variety of reasons ranging from tasks being deemed as higher priority, no aircraft being available due to scheduled / unscheduled maintenance or the prevailing weather conditions which inhibited the use of resourced platforms.

PSNI air support unit on a continual basis review their capacity and capability to ensure the service they provide is delivered in the most effective and efficient manner.

It was for this reason that PSNI sought to purchase Unmanned Aerial Vehicles. Their use was seen as vital in mitigating and minimising gaps in the capability and effectiveness in the provision of air support.

The terminology "Unmanned aerial vehicles" is now widely referred to as small unmanned aircraft (SUA) and as such this term will be referred to throughout this document.

Since purchasing the SUAs PSNI have deployed them 114 times overtly. This has significantly closed the gap between the operational demand for Air Support and our ability to support District policing.

However, weather conditions, the journey time for operations to react to the operational need, PSNI's development of the tactic and other operational issues have resulted in a residual gap.

Nevertheless tangible benefits have been realised, and as the technology evolves, along with PSNI's familiarity with it, we are confident the gap can be further reduced.

### **Purpose of the Review Document**

The purpose of this post implementation review document is to provide a response to recommendation 8 of the Northern Ireland Policing Board Human Rights Annual Report 2013. The recommendation states, *In the course of the post-implementation review of UAS to be provided to the Policing Board PSNI should identify and explain the extent to which UAS has been used for surveillance purposes together with a detailed explanation of the framework within which PSNI uses UAS for overt surveillance and for surveillance which does not relate to a specific operation or investigation.*

### **Operational use of Small Unmanned Aircraft**

In May 2013 PSNI purchased three SUA systems. This consisted of nine SUAs;

- 3 micro craft with a wing span of 3.3 feet
- 3 small craft with a typical wingspan of 9.1feet
- 3 vertical take-off and landing quadcopters

There is also a considerable amount of equipment required to operate each SUA type. The total cost was in the region of £1.5 million.

These were first operationally used at the G8 world leader's event in Enniskillen under a temporary authority provided by the Civil Aviation Authority. On 11<sup>th</sup> October 2013 PSNI were given an annual authority to commence SUA operations. Since first use at G8, until 11<sup>th</sup> December 2014, there have been 114 overt operational deployments in support of specific operations.

A substantial amount of time has been invested in the area of training of operators. This was to ensure that the implementation of the systems into the operational arena was progressed in a structured and managed approach with the safety of the public, operators and property being key drivers to the success of the project. In addition, PSNI has a clear obligation to satisfy the Civil Aviation Authority that our operators are fully conversant in the operation of the SUAs and that they are utilised in a safe and proficient manner minimising risk. Throughout the period there has been regular contact with the Civil Aviation Authority and they have had oversight of operations.

All operations involving the deployment of SUA assets are under the control of the Air Support Unit. All SUA deployments require a fully trained Vehicle Operator who is responsible for the take-off, flight and landing of the aircraft, as well as a fully trained Mission Operator who is responsible for all other aspects of the flight. Flights can be conducted under Visual Line of Sight rules, allowing the SUA to operate at a height of not above 400ft and at a distance of not beyond 500m from the operator, or under specific conditions Extended Visual Line of Sight rules allowing the SUA to operate at a height of not above 800ft and at a distance of not beyond 1500m from the operator.

The SUAs have been widely utilised in support of numerous aspects of overt policing providing downlinks to police commanders enabling situational awareness of events and an overview of the surrounding areas. Their use has markedly increased the flexibility of tactical options in the provision of air support. In addition to the enhanced service, the use of the systems has enabled considerable cost savings to be made by utilising SUAs instead of conventional resourced aircraft. A traditional police aircraft can cost in excess of £1,000 per hour to operate. There is no hourly cost in operating an SUA. (Neither of these figures includes crew or operator costs).

There have been deployments to Royal visits, The Belfast Marathon, The Giro Italia and other event management including public order. In addition to the high profile events the systems have been widely deployed in the provision of "top cover" for scenes of crime, high risk search operations and assisting in the resolution of security alerts.

The following is a breakdown of our operational deployments:-

Districts

BCPD	29
D	22
E	26
F	32
G	5
Total	114

Further opportunities for deployments have been curtailed by a number of operational factors:-

- i. It takes a considerable period of time to deploy a SUA team to incidents. This can mean that it can become impractical to deploy on some spontaneous incidents.
- ii. The number of SUA operators was kept small, (partly because of initial and continuous training costs) but also to ensure the operations were delivered to a consistently high standard. This can mean there are gaps in coverage.
- iii. Weather extremes can prevent the safe deployments of SUAs.
- iv. There is no precedent in western policing for the use of SUAs to support District Policing. PSNI have had to develop the tactics, ensuring they are safe and effective. Without similar benchmarks we have adopted a very conservative approach.

- v. There is a danger of "transfer of malice" with the SUA operators becoming the subject of the threat.
- vi. There remains a degree of self-restraint by Districts and a lack of awareness amongst the wider Search and Rescue community.

Going forward we have a number of plans in place to mitigate these inhibitors and increase our overt deployments.

### **Framework for Overt Surveillance**

When the air support unit receives a request to provide aerial support, the specific task is firstly examined to ensure that it is achievable and proportionate to deploy one of our aerial platforms. After this initial assessment is conducted the most effective and efficient platform is then selected to perform the task which may be a plane, helicopter or SUA. The air support unit does not deploy its assets as a matter of routine patrolling; they are deployed if the right circumstances exist in support of a request. The exception to this would be in the provision of training; in respect of SUA training, this takes place in areas to which the public do not have access.

### **Benefits Realisation**

Since the inception of the SUA programme the air support unit has been able to increase their capability and capacity by providing an enhanced, flexible, tactical response in the provision of air support in a more effective and efficient manner. In essence, this has enabled PSNI to be self-sufficient in the provision of air support during times of unprecedented high operational demands.

Two examples are highlighted which, although similar in nature, had two very different outcomes due to being able to deploy SUAs to support the respective operations.

*Example 1* – Incident occurred in an urban environment which air support initially responded to. On the following day of the clearance operation air support was unavailable to assist military with their task regarding the clearance. This resulted in the operation taking two and a half days which exposed police officers securing the scene, incurred significant costs and drew severe criticism from members of the public who had been requested to leave their homes. The approximate cost of the operation was £39,000 (Costs are based on District resource costs)

*Example 2* – Incident occurred in an urban environment which air support initially responded to. On the following day of the clearance operation resourced aircraft were unavailable and SUAs were deployed. The clearance operation took four hours resulting in limited exposure of police and military to attack, saving in resourcing costs and minimal impact to the public. There approximate cost of the operation was £18,000 (Costs are based on District resource costs)

As a direct result of being able to operationally deploy SUAs in example 2, the cost of a protracted police operation was minimised as was the impact on the local community. In addition the risk to police officers involved in the operation was mitigated significantly.

## **HANDLING / RETENTION AND DISPOSAL OF PRODUCT OBTAINED FROM SUA SYSTEMS**

When the SUA systems are deployed on operations they downlink the recording from the SUA in encrypted format from launch to recovery into the hard drive of a laptop used to control the systems. All recordings are stored in the hard drive of the laptop which is stored at a secured facility.

The product is transferred from the laptop by compact flash card, as in the resourced aircraft, and inserted into a Home Office approved device which produces an evidential disc. The disc is then marked and exhibited to the required evidential standard. This ensures that there is a clear auditable and accountable process for any recordings obtained when SUAs are deployed.

The review, retention and disposal of recordings from SUA is regulated and handled in compliance with the management of police information (MOPI) 2010 which was reviewed on 15<sup>th</sup> June 2013. In summary the policy provides clear direction and obligation on time periods that specific documents / records and recordings must be held and when they can be disposed of.

Product obtained by SUA as a result of a request for deployment and which is required for a specific police purpose, should be retained for a minimum of ten years in compliance with the PSNI's current Review, Retention and Disposal Schedule.

All other imagery/recording retained and not required for a specific police purpose will be reviewed and destroyed after 28 days. This may include deployments for testing or training where no evidential product has been obtained, but will also include those instances where the SUA is deployed to protect police at static locations and where the imagery does not assist investigations.

## **Conclusion**

The implementation, management and subsequent deployment of the SUAs into the air support unit has been successful in supporting officers in keeping people safe.

The project has increased:-

1. Our Effectiveness – We have reduced the gap between the need for air support and the ability to deliver the service. This is a direct result of the additional capacity and the particular capabilities.
2. Our Efficiency – The deployment of SUAs has allowed protracted police operations, requiring Air Support, to be delivered with tangible savings.
3. Our Legitimacy – We are better able to facilitate the policing with the community strategy. The technology reduces the impact on the community from security operations. UAS free up our helicopters in order that they can support officers



engaged in preventing/detecting crime, protecting our communities and searching for missing/vulnerable persons.

This is an evolving area of police work and the air support unit is committed to ensuring its potential is maximised with due regard to regulatory compliance and minimising adverse impact on community confidence in policing.