

Fact Sheet 3

DRONES

What are drones?

Sometimes referred to as Remotely Piloted Aircraft Systems (RPAS) or Unmanned Aerial Vehicles (UAVs), drones are proving to be a notable piece of technology when thinking about the skies of the future. A drone is essentially a miniature aircraft that can be piloted from the ground using a remote control. In the past, drones had only been used by specially trained military personnel and model aircraft enthusiasts. Today, due to continued improvements in technology and lower costs, drones offer a number of versatile uses to many sectors of society.

For example, drones are currently being used by meteorologists to better predict the weather¹, by farmers who want to develop better agricultural processes, and by disaster response teams who utilise drones to offer a range of critical support².



Man piloting commercial drone

Purpose

The Strategic Police Plan commits to the provision of Policing for a safe, protected and resilient Scotland. This requires designing and maintaining services which meet rising and evolving demands in a constantly changing environment. To meet these demands now and in the future Scotland's police service must adapt and proportionately adopt the necessary technologies which will enable them to protect the safety and wellbeing of our communities (as outlined in the Policing Principles - Section 32 of Police and Fire Reform Act 2012).

This series of public focused and user-friendly factsheets has been developed to provide an overview of the benefits of emerging technology and upcoming developments within policing, the policies that will govern them, and the ethical, privacy and human rights implications.

¹<https://uas.noaa.gov/News/Articles/ArtMID/6699/ArticleID/824/Using-Drones-to-Help-Improve-Weather-Forecasts>

² <https://www.precisionhawk.com/blog/how-drones-aid-in-disaster-response>

It is predicted that drones may become the standard mode of delivery for consumer goods in the near future³, and be a typical element of light-shows at large-scale concerts or theatre productions.

Why use drones used in policing?

Although drone technology has been around since the mid-20th century, it is only within the last decade or so that they have begun to be incorporated into public safety operations and to support certain policing activities across the world.

In Canada, drones are used by the Royal Canadian Mounted Police to assist in aerial support of search-and-rescue operations in difficult to reach terrains⁴. Camera-fitted devices are also used by more than half of the 26 cantonal police corps in Switzerland⁵, mainly for aerial photography of traffic accidents.

Throughout the UK, many police departments utilise drones for a number of purposes. Lincolnshire Police have notably used thermal scanner enabled drones for uncovering a large cannabis farm; and Norfolk Police have deployed drones for crowd control and public order cases.

With the rise of drone usage in the UK and beyond, there has also been increased scrutiny regarding their implications for civil society. Augmented technology such as 3D-scan modelling, thermal detection, and real-time biometric analysis can now be applied to drone devices. As a result, importance should be placed on ensuring transparent and robust oversight and operating procedures are in place when thinking about the kind of work for which drones could be used.

Police Scotland implementation and use of the technology

Police Scotland have been using drones to support their role to protect the public since May 2019. Police Scotland's main operational drone is the DJI M210 model – a quadcopter with an endurance of 20 minutes – which is used by a number of police forces and commercial users across the UK and globally.



DJI M210 drone

³ <https://uk.finance.yahoo.com/news/worldwide-drone-delivery-industry-2030-101300970.html>

⁴ www.priv.gc.ca/en/opc-actions-and-decisions/research/explore-privacy-research/2013/drones_201303

⁵ Klauser, F., (2021). Policing with the drone: Towards an aerial geopolitics of security. Security Dialogue, p.0967010621992661.

Police Scotland's M210s have been fitted with a dual sensor camera system including thermal imaging technology. Images captured by the camera mounted on the drone are beamed directly to a ground unit which is operated by a camera operator.

Police Scotland also possess DJI Phantom drones. These smaller drones do not have thermal imaging capability and are primarily used for officer training. There are currently 10 police officers trained to operate the drones; four officers in Aberdeen; two in Inverness and four in Glasgow.

Drones can assist Police Scotland with a variety of incident types from missing person searches to pre-planned event monitoring and aerial photography of crime scenes or incidents. Between 1 May 2019 and 31st May 2021 Police Scotland's drones were used on 215 occasions. The majority of these deployments were for photographic tasks or to assist in the search for missing persons (see data box below).



The use of drones by Police Scotland offers several significant advantages. Police Scotland has one helicopter which on occasion cannot deploy due to weather conditions, difficult terrain or if it is assisting an incident in another part of the country. Drones provide a flexible alternative to the helicopter and strengthens Police Scotland's air support capability. Police Scotland's DJI M210 drones can operate in low visibility and can operate in close proximity to difficult terrain (e.g. near cliff faces or dense foliage). Having access to drones and trained officers in Aberdeen, Inverness and Glasgow allows a rapid local police response to incidents that require urgent air support, regardless of whether the police helicopter is available.

The police helicopter consumes large amounts of fuel and is costly to operate. Although a critical asset to Police Scotland, the use of drones as an alternative to the police helicopter also offers significant cost savings and contributes to a reduction of carbon emissions.

What safeguards are in place?

All Police Scotland drone operations are governed by the Civil Aviation Authority (CAA) and are fully compliant with aviation legislation. The CAA has granted Police Scotland a Standard Permission and Operational Authorisation to undertake drone activity in support of policing operations in both urban and rural environments.

Police Scotland's Air Capacity

(as of May 2021)

3x DJI M210 Drones

4x DJI Phantom Drones

1x Helicopter



Police Scotland's current drone activity is based on the 2013 UK Home Office publication 'Surveillance Cameras Code of Practice'. This document is widely referred to by Police Forces in England & Wales and outlines guiding principles that are designed to provide a framework for drone operators so that there is proportionality and transparency in their use of systems. Police Scotland is now developing its own Code of Practice which will focus specifically on drone operations for Police Scotland. This Code of Practice will be publicly available.

Assurance for citizens

All technology, but particularly technologies used in policing, must be carefully considered before being implemented. It is recognised that if not carefully controlled, the use of drones in policing could potentially impact on human rights such as Freedom of Assembly and Association (Article 11), Freedom of Expression (Article 10), Freedom of Religion (Article 9), and the Right to Privacy (Article 8). However, with a robust governance framework and a human rights based approach in

place to assess the impact of drone use in different social contexts, Police Scotland will be at the forefront of the ethical implementation of technology.

Police Scotland will take steps to alert the public when operating drones. Officers who operate the drone will remain in close proximity to maintain line of sight of the device, wear high visibility uniform and have a marked police vehicle present. Where possible, announcements on social media (@polscotair) and engagement with people in the area will be undertaken prior to flying the drone.

As with all new technology there are human rights, equalities and ethical implications. These require careful consideration and, if necessary, measures must be put in place to protect individuals and groups.

Police Scotland are committed to policing by consent and will only deploy drones for legitimate policing purpose, where it is considered necessary and appropriate to do so. Drones are not deployed to undertake covert surveillance. Data Protection Impact Assessment (DPIA) and Equalities and Human Rights Impact Assessment (EqHRIA) were completed before drones were deployed operationally in May 2019. These are reviewed and updated annually to reflect changes in legislation, policy and technology.

Looking forward

Police Scotland and the Scottish Police Authority is committed to policing by consent and in the public interest. The current approach to the use of drones is consistent with this commitment and we continually evaluate and assess to improve our use of drones.

Police Scotland has also recently purchased downlink technology for the drones. This will allow the drone operator to transmit live footage from the camera to an Area Control Room (ACR), providing real time information and situational awareness to a Police Commander.

Technology continues to evolve rapidly and it is vital that policing keeps pace. Any change to the existing approach to police use of drones will be carefully considered by the Scottish Police Authority and views of experts and keys stakeholders sought.

Further reading

[Police Scotland's evaluation report](#) on the use of drones was published on 9 March 2021

To keep up to date with our work, please keep an eye on the Scottish Police Authority's [website](#) where you can find papers and watch livestream committee discussions, and follow us on Twitter:

@ScotPolAuth @policescotland

Keeping up to date

5 October 2021