

Firefighting drones

Drones are aircraft that can fly without a pilot on board. They are also called **Remotely Piloted Air Systems (RPAS)**.



A drone (RPAS). Image: Sergeant Ross Tilly (RAF)/MOD, [OGL v1.0](#), via Wikimedia Commons.

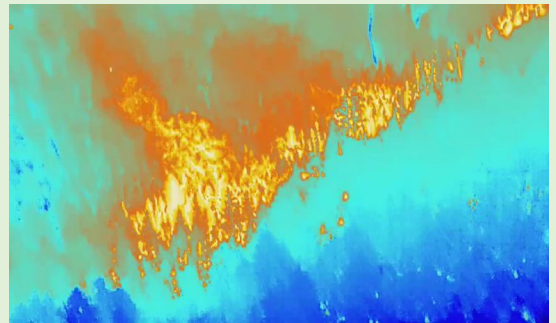


Aerial drone view of a fire photo. Image: Tom Fisk on [Pexels](#).

They can **prevent** people being put into **dangerous situations** e.g. firefighters can assess a fire from a safe distance with a drone instead of having to go close to the fire.

What are they used for?

- Intelligence (finding out information).
- Surveillance (watching something closely).
- Targeting (choosing the right target e.g. finding people or fire hot spots using thermal imaging when firefighting).



An image from an infrared video taken above a fire in Oregon, USA. The Bureau of Land Management drone team fly hundreds of missions during fire season. Find out more [here](#).

Image: Bureau of Land Management Oregon and Washington from Portland, America, Public domain, via Wikimedia Commons.



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Drone bases

Remotely Piloted Air Systems need air bases to operate from. These might need:

- a runway for take-offs and landings
- a taxiway between the runway and hangars (place where RPAS are kept when not being used)
- air traffic control to prevent any accidents
- fuel storage tanks
- accommodation for the crew members and maintenance staff.



An air base that RPAS operate from. Image: Federal Government of the United States, Public domain, via Wikimedia Commons.

Minecraft challenge

Can you build a base for firefighting drones in Minecraft?

- What types of buildings and equipment will be on your base?
- Will the hangars be big enough for all your RPAS?
- How easy is it for the RPAS to get from the hangar, across the taxiway to the runway for take-off?
- Will there be any markings on the runway?

If you do not have access to Minecraft you could:

- draw your design
- build your own using simple materials.



Image: Jay Fenney

Not an official Minecraft resource. This project was supported by the Royal Academy of Engineering under the *Ingenious Awards* scheme. For educational use only. Developed with

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