

DRONES SET TO BECOME MORE WIDELY USED IN MINING

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Legal Briefings - By **Jay Leary, Sian Reece**

Surveillance, rather than mining, is usually one of the first things associated with unmanned Aerial Vehicles (**UAVs**), commonly known as drones, but the benefits they can bring to the resources sector are significant.

UAVs have the potential to change the way mines and mining land are monitored, with the flow-on effect being a raft of safety and efficiency improvements for companies. The agricultural sector is already extensively using UAVs to increase productivity through precision agriculture and remote monitoring.

However, despite the huge potential, the use of UAVs in Australia's mining sector has been relatively limited. This is at least in part due to the restrictive licencing requirements under the Civil Aviation Safety Regulations (**CASR**).

Following industry consultation and due to the now widespread availability of UAVs, the Civil Aviation Safety Authority (**CASA**) is currently in the process of removing the licencing requirements for commercially used UAVs weighing less than 2kg.

These amendments reduce the complexity of legally operating drones and may therefore make their use in mining more widespread and viable. This, in turn, can reduce the cost and time required in the monitoring and maintenance of mines.

HOW UAVS CAN BENEFIT THE RESOURCES SECTOR

UAVs have two obvious features: they can fly, and they are unmanned (but controlled remotely by an operator). These characteristics are not of themselves particularly useful unless combined with another feature. In the context of surveillance and media, this has been the addition of a camera or other recording device. The agricultural sector also uses UAVs for surveillance and related purposes, but there are also examples of the addition of crop spraying technology to UAVs used in farming. UAVs have also been used to assist with livestock mustering activities.

In the resources sector, UAVs have an obvious surveillance application, including in the following ways:

- to survey or monitor exploration land,
- to monitor mining lease perimeters and the condition of related infrastructure such as haul roads,
- to assist in the condition monitoring of the mine itself, including to identify potential subsidence or deterioration of benches, and
- to monitor the deployment of equipment and personnel.

Although it is early days, operators are beginning to see the potential for safety and productivity improvements through UAV use for these activities. There may also be the potential for UAVs to be used in other mining activities with the addition of appropriate equipment, such as dust suppression and environmental sampling.

CURRENT UAV RESTRICTIONS

Under Part 101 of CASR, **to operate a small** UAV (less than 100kg) for a commercial purpose, the organisation operating the UAV is required to hold an Operator's Certificate. 'Commercial purpose' is interpreted very broadly by CASA to include use in a commercial operation such as the operation of a mine. In addition, the organisation is required to have a certain person (or persons) filing the position of chief UAV controller and maintenance controller.

Once these requirements are satisfied, the operation of the UAV is still subject to Standard Operating Conditions. Under these Conditions, unless approval is obtained from CASA, UAVs cannot fly:

- above 400 feet,
- over populous areas,
- within 30 metres of a person not associated with the flight operation,
- within 3 nautical miles of an aerodrome,
- within a controlled airspace, or
- at night.

PROPOSED AMENDMENTS

CASA are finalising proposed amendments to Part 101 of CASR which will remove the licencing requirements noted above for UAVs which weigh less than 2kg and are used for a commercial purpose.

The amendments will permit the unlicensed operation of these UAVs where:

- the UAV is flown in Standard Operating Conditions (that is, the Conditions outlined above), and
- the operator maintains visual line of sight with the UAV.

CASA has noted that unlicensed operators of these UAVs will not be able to apply for approval to fly outside of Standard Operating Conditions (and instead would be required to obtain the relevant licences).

According to CASA, the amendments are set to be passed into law in the second half of 2016.

NEXT STEPS FOR MINING COMPANIES

In anticipation of the proposed amendments becoming law, companies should look to consider:

- reviewing existing operating practices to identify whether UAVs could be deployed for safety, productivity or other gains,
- identifying appropriate employees to be the UAV operator (this will require them to satisfy certain requirements relating to aviation competency and experience), and
- ensuring that any identified potential use of UAVs is compliant with other legal requirements, for example privacy and industrial relations requirements with regard to any monitoring or recording of individuals at the mine site.

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KEY CONTACTS

If you have any questions, or would like to know how this might affect your business, phone, or email these key contacts.



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