Ahead of the curve

Defence is a world leader in Unmanned Aircraft Systems management, and new regulations will simplify their use, writes FLTLT Barrie Bardoe

UNMANNED Aircraft Systems (UAS) have experienced explosive growth in recent years following increased use by Defence, hobbyists and commercial industry.

The versatility and ability of UAS to provide frontline contexts while removing personnel from harm’s way, creates some exciting possibilities.

What isn’t well known, however, is the long-term, world-leading involvement of the ADF with UAS. In 1999, Defence issued design requirements for UAS and regulations followed around 2003, placing it well ahead of most militaries around the world.

With the huge upsurge in the use of UAS, the Defence Aviation Safety Authority (DASA) has moved to keep ahead of global practice.

The ADF’s long history of working with UAS began in the 1950s when the “Jindivik” target aircraft was developed that allowed pilots to undertake combat training with a real aircraft.

There are now many UAS in Defence service ranging from the Heron, which resembles a conventional light aircraft in size and appearance, through to units which are “hand held”.

The variety of UAS and their diversity in roles is expanding fast, and it is important that the regulation takes this into account. There are two main hazards inherent in the operation of UAS. They can represent a danger to other air-space users, and also personnel and infrastructure on the ground.

DASA Director Airworthiness Coordination and Policy Agency GPCAPT Terry Deeth said despite a number of upgrades to the regulations over the years, there were compelling reasons to change.

“With the rollout of the new Defence Aviation Safety Regulations (DASR) last year we realised it was time to upgrade the UAS regulations,” GPCAPT Deeth said.

“The old regs didn’t neatly port into the DASR environment for one thing, and they were unnecessarily burdensome. Fortuitously, Australia’s Civil Aviation Safety Authority (CASA) has recently issued new UAS regs, so there is scope for alignment.”

With the DASR aligning Australia with a global convention used by about 30 other nations, the new UAS regulations are also timely.

DASA Director of Aviation Certification Mark Wade said: “The European Aviation Safety Authority (EASA)
has also released ‘prototype’ regulations. Consequently there’s now potential for international alignment.

“Essentially we are militarising the EASA draft framework for UAS regulations. We intend, however, to align with CASA’s regulatory approach to sub 25 kilograms UAS rather than EASA’s.”

He said the new approach would have many benefits.

“It will help promote civil and military alignment, especially for smaller UAS. It will also help create a commonality of approach and shared lexicon with international airworthiness authorities,” he said. “For commanders it will provide greater flexibility as they will be able to authorise most UAS operations without the need for the DASA to issue an airworthiness instrument.”

Several large international militaries have been briefed by Defence on the proposed new regulatory approach.

GPCAPT Deeth said they had been “enthusiastic and are keenly monitoring our progress, because they expect it will address problems with their own regulations.”

The new UAS regulations are due to be published in September, galvanising the ADF as a world leader in this field.