Timber Queensland Growth Scholarships

Training to obtain a Remote Pilot Licence (RePL) - Multirotor 25kg

Learning activity under the TQ Growth Scholarship

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Introduction

The use of Remotely Piloted Aircrafts (RPA) is a crucial skill in the forest and natural resource management space. Drones can nowadays be used to map forested areas; conduct inventories; estimate forest structure, health and carbon storage; help with early fire and disease detection and much more. Demand for such skills is likely to increase in a variety of contexts, and remote monitoring can offer great efficiency gains over field sampling of forest characteristics, particularly over larger areas.

As part of my learning activity under the TQ Growth scholarship, I therefore decided to undertake a Remote Pilot course and obtain a licence for a Multirotor drone of up to 25kg.

Focus of Learning Project

The goal of my REPL course was to gain both theoretical and legal knowledge and practical competencies in operating Multirotor RPA applicable to forest management in Australia. The course issued me with the licence to operate the appropriate drones in a professional context, which is a requirement to be able to employ Verterra's company drones for a variety of forestry projects. It also provided me the practical skills to operate the most common drones, as well as comprehensive knowledge on, amongst others, aeronautics, meteorology, operational rules and air law, and RPAS operations and procedures.

Significant Learnings & Outcomes

The course leading up to gaining my Remote Pilot License was a comprehensive and in-depth learning experience that pushed me to familiarize myself with a vast amount of information that I had previously not been exposed to. Condensed into one week, the course conveyed me knowledge on how drones work, both at a theoretical level and in terms of developing fundamental drone flying skills, in a variety of weather conditions (wind conditions changed a lot as we were practising).

I learned about the importance of completing pre-flight inspections, , and maintaining drones to ensure their functionality. I also became familiar with the process of checking airspace notifications and legal requirements for using a given airspace.

Finally, the course went into detail on possible applications of drones in industry.The one-week course culminated in a comprehensive theoretical exam, and practical exam in the field.

I believe it to be critical for professionals working In the Queensland forest industry to continue to grow and maintain a diverse skillset, to efficiently contribute to forest management aspects. I would see it as a benefit for the Queensland forest industry to have a workforce with the ability to use remote sensing tools to contribute to projects that require efficient data collection, mapping, monitoring and evaluation of forest assets.

To date, I have already applied my skills in monitoring the performance of a reforestation project close to the Wyaralong dam, by using an automated flight that systematically covers the relevant areas. By repeating this activity during quarterly monitoring events, a photographic timeline of project development can be created, and future monitoring capacity improved and risks to tree health and survival more rapidly detected.

Conclusion

To conclude, I deem the Remote Pilot License and associated course to have equipped me with highly valuable skills which will be of use to myself and Verterra in a variety of projects to come. Being now one of only 3 members of staff in Verterra with the license to operate drones, this will also increase our capacity to undertake projects that specifically require drone imagery for monitoring. I have also improved my understanding of many concepts and theory relating to remote sensing technology more generally, which will be of use for processing and analysing remotely sensed (incl. satellite) data.

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