



Unmanned Aerial Vehicles (UAV)

for Benthic Habitat, Mangrove and Dredge Plume Mapping

TECHNOLOGY AND APPLICATION

WorleyParsons have found that UAVs provide a rapid approach to quickly map benthic habitat, mangroves and dredge plumes at comparatively minimal cost to traditional methods.

WorleyParsons remote helicopter-based image capture system utilises a high resolution digital camera and integrated GPS/Inertial Navigation Unit (GPS/INU) to undertake mapping surveys. Standard functions such as zoom and shutter speeds can also be adjusted remotely by the pilot.

WorleyParsons has designed methodologies using repeatable flight paths to validate against baseline imagery. Imagery is flown at set intervals, taking overlapping photos of the landscape below. Images are typically captured from 50-100 metres above sea-level.

The imagery can be analysed using state-of-the-art image classification and segmentation techniques to map:

- Seagrass
- Mangroves
- Dredge plumes

RESULTS

Mapping using WorleyParsons' proven UAV technology not only reduces health and safety risks of field personnel, but also provides superior image capture to that of aerial or satellite imagery at a fraction of the cost. It can be captured monthly together with routine monitoring.

DIVERLESS SOLUTIONS

Proud recipients of:

- 2012 - Consult Australia Award Winner for Technological Innovation
- 2012 - Finalist IFAP Safety Innovation
- 2011 - Golden Gecko Environmental Excellence Award Winner
- 2011 - APPEA Safety Innovation Award - Overall Winner
- 2011 - APPEA Safety Innovation Award - Industry Choice Winner



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