



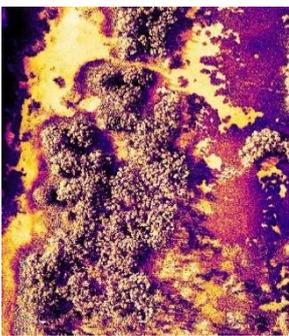
CAPABILITY STATEMENT

Drone Data Acquisition Services

Earth Systems utilises its expertise in cutting-edge drone technology, non-invasive survey operations and high quality data processing techniques to provide spatial services for a range of environmental investigations. Drones are becoming used more frequently for the collection of environmental data as they can provide current and high quality data at extremely low costs.



Our drone technology can capture high resolution orthoimagery, video and elevation data with the use of various cameras and sensors. Earth Systems has the potential to capture multispectral imagery (NDVI), radiometric thermal imagery and video and precision LiDAR imagery. Earth Systems also has the capability to attach additional payloads to assist with noise, air and water sampling.



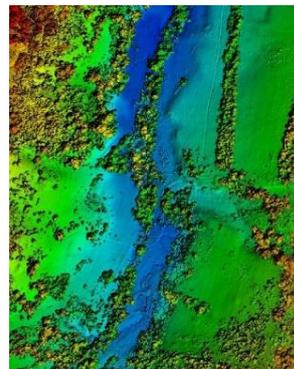
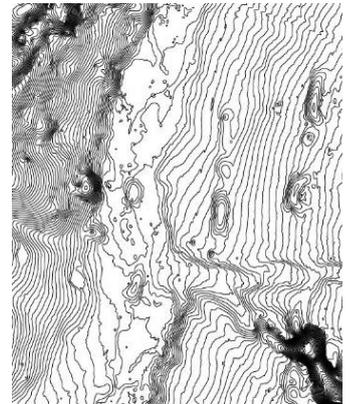
Earth Systems' experience of drone operations enables environmental data to be collected more rapidly and accurately compared with remote sensing. Our specialists have the potential to survey large areas including river floodplains and forests at an accuracy of up to 1cm over a few days, providing extremely high density and quality data within rapid timeframes.

Earth Systems' in-house team works closely with our drone specialists to process the data and develop valuable outputs such as georeferenced imagery, digital elevation models (DEMs) and 3D models. These can be analysed with GIS software that can deliver industry leading spatial mapping to assist with a range of environmental services at a cost-effective price.

SERVICES PROVIDED

The services provided by the Earth Systems drone team include:

- Animal management and conservation including species identification, population and density estimates, ecosystem rehabilitation surveys and habitat utilisation zone identification
- Plant and forestry conservation including species identification, plant health and stress evaluation, soil property and moisture analysis, crown estimation and coverage, and canopy height identification
- Terrain modelling including topography, morphology, erosion monitoring and potential river bathymetry identification
- Hydrology and flood analysis including drainage and water management, watershed, drainage basin and water flow mapping, and detection of groundwater inflows
- Mine assessments including pit and dump management, waste inventory design, volume calculations, AMD identification and monitoring, haul road design and resource calculation
- Site assessment and management including slope and land use analysis, identification of sampling locations, infrastructure mapping, construction feasibility studies, fly throughs and real-time viewing and aerial imagery



Earth Systems has a range of packages that suits all applications. Please contact us for further details.

