



**DRONEHAB
AUSTRALIA**

DRONEHAB PTY LTD · BOWEN BASIN, QUEENSLAND

Capability Statement

Aerial survey & mapping, multispectral and thermal analytics, precision and ground-based weed control, and environmental & offset management — delivered as one CASA-certified operation.

MINING · LAND & AGRICULTURE · ENVIRONMENTAL · ENERGY · GOVERNMENT

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WHO WE ARE

Integrated land management, from the air and the ground

Dronehab is a specialist Australian aerial and ground vegetation-management company, established in 2023 and based in the Bowen Basin. We bring drone and ground-based weed control, aerial survey and mapping, multispectral and thermal analytics and compliance reporting together under one CASA-certified operation.

From a single mobilisation we can survey a site, map an infestation, treat it and report it — safe, accurate and auditable land-management outcomes for mining, government, environmental and agricultural clients, without handing work down a chain of subcontractors.

WHAT WE DO

Aerial survey & mapping

Orthomosaics, LiDAR point clouds, terrain models, contours, volumes and change detection — RTK / PPK survey accuracy, delivered as GIS layers.

Multispectral & vegetation analytics

NDVI and related indices from a dedicated multispectral sensor — vigour, density and stress.

Thermal survey & fauna

Radiometric thermal for hot-spot and asset inspection, plus heat-signature detection of nocturnal and cryptic fauna.

Precision & ground weed control

Drone, GPS-guided UTV and handheld application for declared, woody and riparian weeds — every pass recorded.

Environmental, offset & rehabilitation

Offset vegetation management, koala-habitat and mine-rehabilitation support, monitoring and reporting.

Reporting & compliance

GPS spray records, treatment maps and GIS datasets that satisfy mine environmental teams, auditors and regulators.

CAPABILITY

Aerial survey & mapping

High-resolution aerial capture — flown on the DJI Matrice 400 carrying a Phase One iXM full-frame survey camera — processed to survey accuracy with RTK / PPK control and independent checkpoints. From a single flight we build a calibrated orthomosaic and a photogrammetric 3D surface — the basis for terrain models, contours, volumes and multi-temporal change detection — alongside weed-density and vegetation-condition layers, all delivered in the coordinate system and formats your team already works in.



SURVEY-GRADE RGB ORTHOMOSAIC — REHABILITATION LANDFORM

SURVEY OUTPUTS

MAPPING

Orthomosaics — high-resolution, georeferenced RGB
3D point cloud — colourised, photogrammetric
Weed-density & vegetation-condition layers
GIS-ready feature and boundary layers

TERRAIN & MEASUREMENT

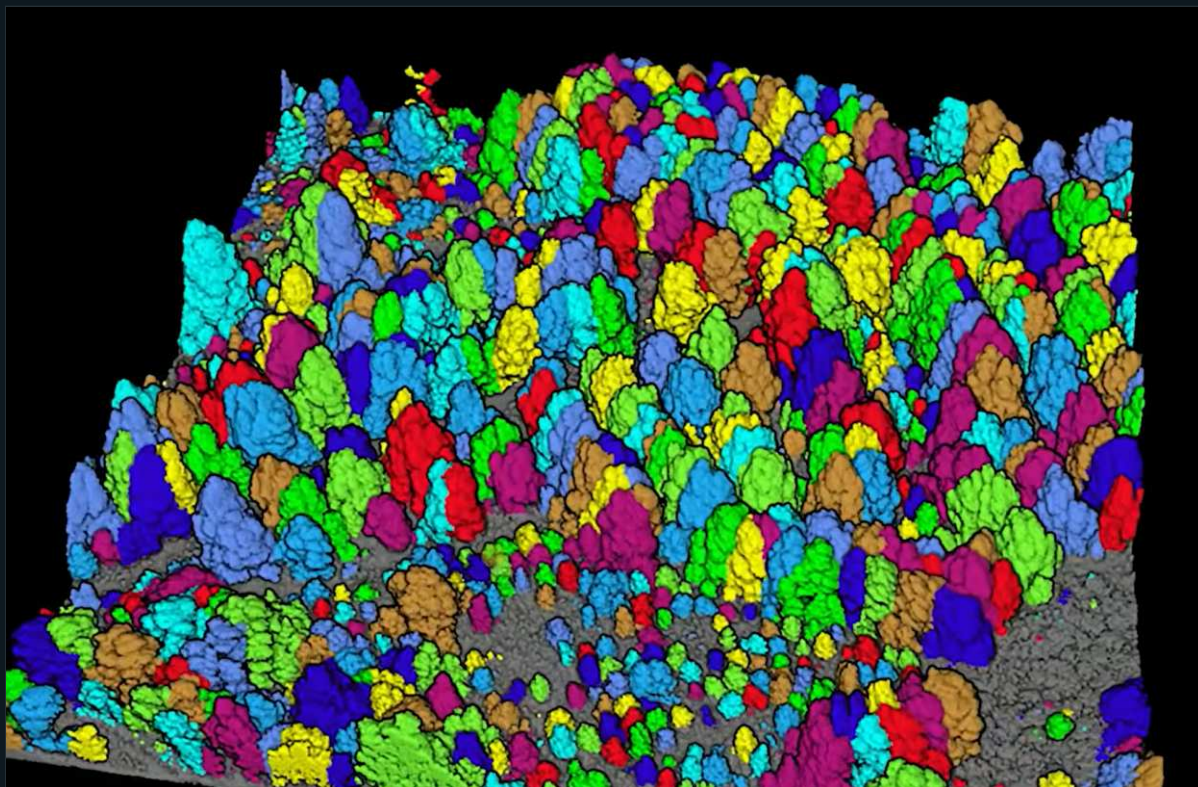
Digital surface & elevation models (DSM / DEM)
Contours and cross-sections to your interval
Volumes — stockpile, cut / fill and earthworks
Multi-temporal change detection

APPLICATIONS Mine & infrastructure survey · rehabilitation & landform monitoring · offset baseline & condition · stockpile reconciliation · erosion & drainage.

CAPABILITY

LiDAR & canopy structure

Active laser scanning — the Zenmuse L3 flown on the DJI Matrice 400 — measures the ground and the vegetation above it in one pass. Returns reach through gaps in the canopy to recover the terrain beneath, and the cloud itself is classified and segmented: canopy height and structure resolved to the individual tree, each crown isolated and measurable.



LIDAR POINT CLOUD — INDIVIDUAL-TREE SEGMENTATION ACROSS NATIVE CANOPY



CANOPY SURFACE WITH DERIVED CONTOURS

CAPTURED

Zenmuse L3 on the Matrice 400 —
high-density laser scanning

DELIVERED

Classified point cloud (LAS / LAZ),
DTM / DSM, canopy height model,
individual-tree segmentation,
contours

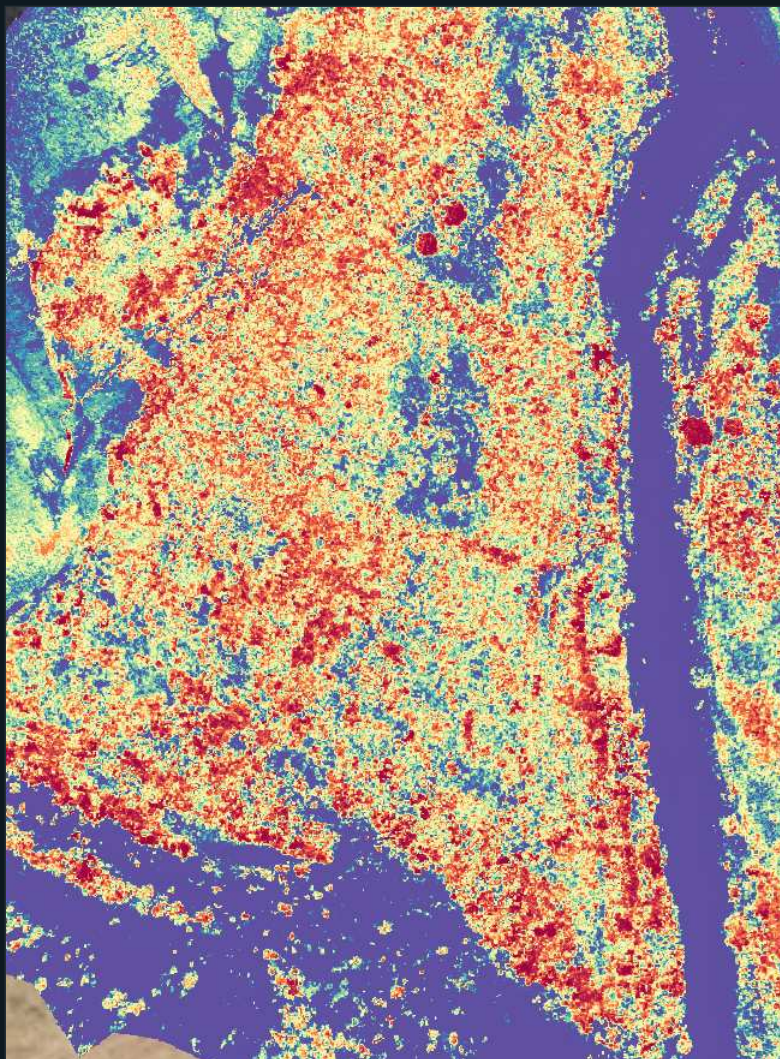
USED FOR

Terrain under vegetation, canopy
structure, offset & rehab monitoring

CAPABILITY

Multispectral & vegetation analytics

We fly a dedicated multispectral sensor — the DJI Mavic 3 Multispectral — capturing near-infrared, red-edge, red and green bands, then compute NDVI and related indices to turn canopy reflectance into a clear, comparable picture of vegetation vigour, density and stress. Used to target weed control, track rehabilitation establishment and monitor change between rounds.



MULTISPECTRAL NDVI — RELATIVE VEGETATION VIGOUR AND DENSITY ACROSS THE SURVEY AREA

CAPTURED

DJI Mavic 3 Multispectral — NIR, red-edge, red & green bands

ANALYSED

NDVI and related vegetation indices — vigour, density, stress

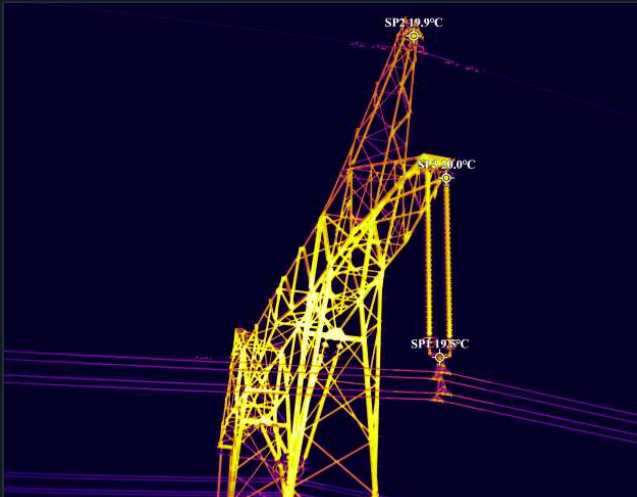
USED FOR

Weed targeting, rehab establishment and round-on-round change

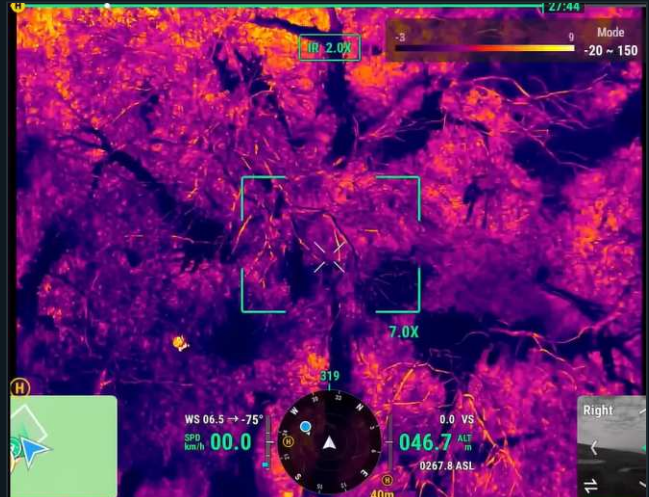
CAPABILITY

Thermal survey & fauna detection

Radiometric thermal adds a layer the eye can't see – surface heat. Flown day or night, it pinpoints heat anomalies across a site and reveals warm-blooded animals against a cool background, supporting both operational inspection and ecological survey.



ASSET INSPECTION – SPOT TEMPERATURES ON A TRANSMISSION STRUCTURE



FAUNA SURVEY – LIVE RADIOMETRIC FEED OVER CANOPY

THERMAL SURVEY

Calibrated, georeferenced thermal mapping and targeted inspection across operational and rehabilitated land.

Hot-spot & spontaneous-combustion detection in spoil and stockpiles

Electrical, mechanical and conveyor inspection

Water, seepage and moisture mapping

Fire-scar and post-burn assessment

THERMAL FAUNA SURVEYS

Heat-signature detection of nocturnal and cryptic fauna, flown at dawn, dusk or night for maximum thermal contrast.

Koala, glider, macropod and feral-animal detection

Pre-clearance and pre-disturbance fauna spotting

Presence, distribution and relative abundance

RGB-confirmed and reviewed by our ecologist / SQP

CAPTURED

Zenmuse H30T on the Matrice 400, with the Matrice 4T for rapid-response – radiometric thermal paired with RGB and zoom for identification

DELIVERED

Georeferenced thermal mosaics, anomaly / detection maps, GIS layers

FLOWN

Day or night to suit the target – CASA-approved operations

Environmental, offset & rehabilitation

We manage offset and rehabilitation country end-to-end — baseline and repeat condition survey, declared-weed mapping and control, and reporting aligned to OAMP and EPBC obligations. Infestations are mapped and species-attributed over the orthomosaic with area calculations, so every round of works is measured against the last: what was found, what was treated, what changed. The result is a defensible evidence chain from paddock to compliance report, reviewed by our ecologist / Suitably Qualified Person.



WEED INFESTATIONS MAPPED AND SPECIES-ATTRIBUTED, WITH AREA CALCULATIONS

MAPPED

Species-attributed infestations with area calculations

MONITORED

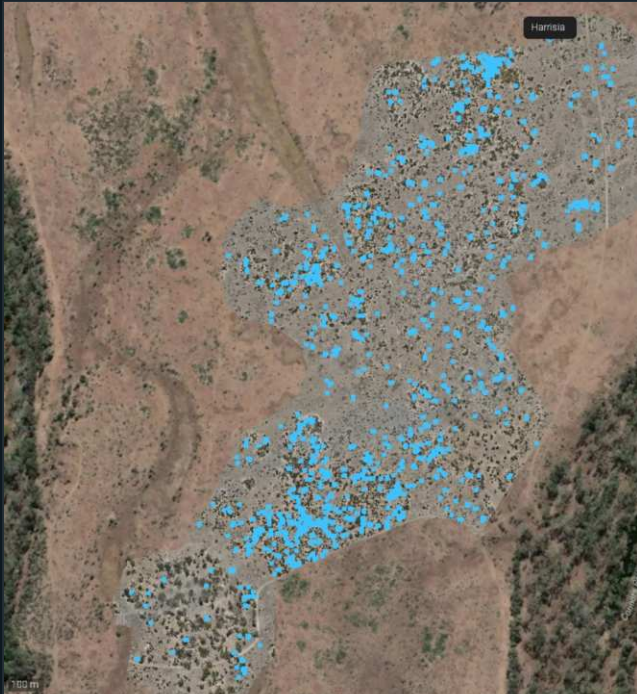
Round-on-round change detection against baseline

REPORTED

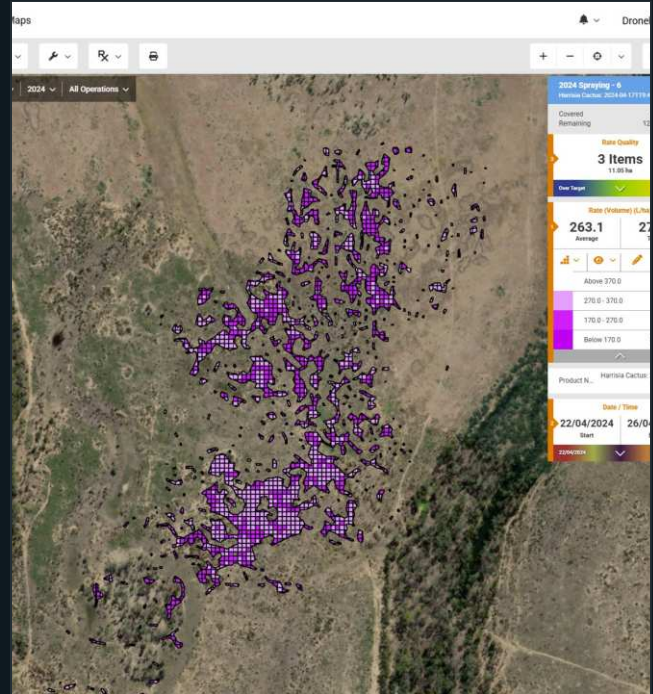
Aligned to offset (OAMP) and EPBC obligations

Closed-loop weed control

Most providers do one end of this. We do all three: map the weeds wall-to-wall, treat them with rate-controlled application, and hand back the record.



DETECT — WALL-TO-WALL WEED MAPPING



TREAT & RECORD — AS-APPLIED COVERAGE WITH RATE QUALITY BY BLOCK

Mapping drives the spray plan. Application is variable-rate, held on-target and recorded pass-by-pass — and every job is returned with GPS spray records, product and rate data, and treatment maps, so works can be verified, regrowth monitored and compliance demonstrated.

01

Detect

Wall-to-wall aerial weed mapping over a survey-grade orthomosaic.

02

Treat

Variable-rate application — DJI Agras T100 aerial and GPS-guided ground units — held on-target.

03

Record

GPS spray records, product rates and treatment maps for every job.

One crew, every method

Detection, chemistry, application, verification and reporting all sit inside one CASA-certified operation. No subcontract chain, no hand-offs between a survey provider, a spray contractor and a consultant — one accountable crew and one evidence standard from first flight to final report.



AERIAL APPLICATION — RIPARIAN CORRIDOR, FIELD RIG IN SUPPORT



SPOT TREATMENT WITH MARKER DYE — HARRISIA CACTUS



PILOT IN COMMAND — FIELD OPERATIONS

APPLICATION METHODS

AERIAL

Agras T100 — variable-rate spray & spreading

GROUND

GPS-guided UTV — boom & spot

HANDHELD

Knapsack & spot — sensitive and riparian country

MECHANICAL

Chainsaw / cut-stump — woody weeds

Method is matched to species, density and terrain — and methods are combined on the same job where the country calls for it.

CHEMISTRY & QUALIFICATIONS

Every applicator holds ChemCert / AHCCHM307. Products are selected to species and situation and applied to label, with water and product rates matched to infestation density block by block. Mixing, handling and hygiene are recorded on every job, with compliant dangerous-goods storage in place.

RUN AS A PROGRAM, NOT A VISIT

Baseline detection sets the treatment plan. Every application is verified against it from GPS as-applied records, regrowth is monitored round-on-round against the baseline, and follow-up treatment is scheduled until control is achieved — the same cycle that ran four campaigns on the case-study program in this document.

PLANNING, REPORTING & FIELD TECH

PLANNED

Treatment planning and works programs, built over the survey baseline and aligned to OAMP / EPBC obligations where offsets apply

RECORDED

RTK / PPK positioning, variable-rate flow control, GPS guidance on ground rigs, spray-diary capture on field tablets — every pass geolocated as it happens

REPORTED

GPS spray records, as-applied coverage maps, product & rate data and compliance summaries — delivered in your GIS formats

In the field



VARIABLE-RATE APPLICATION ALONG A MINE SERVICES CORRIDOR – LIVE COVERAGE AND VOLUME ON THE OPERATOR DISPLAY



AERIAL TREATMENT ACROSS OFFSET COUNTRY – AREA AND APPLIED VOLUME RECORDED IN FLIGHT



AERIAL SPRAY UNIT WITH THE FIELD RIG – SELF-CONTAINED MOBILISATION



OFFSET COUNTRY BETWEEN TREATMENT ROUNDS



TWO AIRCRAFT ON THE SAME TASK



CUT AND TREATED WOODY WEED – MARKER DYE CONFIRMING COVERAGE

DATA & DELIVERABLES

Built for your GIS and survey environment

Coordinate system	Delivered in your nominated datum and projection — e.g. GDA2020, MGA Zone 55 / 56. We work to your coordinate system, not ours.
Accuracy & control	RTK / PPK georeferencing with surveyed ground control and independent checkpoints; orthomosaics typically ~1.5–2.5 cm/pixel GSD, accuracy verified and reported per project.
Deliverable formats	Raster (GeoTIFF / ECW), vector / GIS (SHP, GeoPackage, KML / KMZ) with attribution and areas, CAD (DWG / DXF), point cloud (LAS / LAZ), plus CSV and PDF map products.
Certification	Regulated deliverables certified in-house — survey-grade outputs by our RPEQ-certified surveyor; environmental deliverables reviewed by our ecologist / Suitably Qualified Person.
Data handling	All project data held as commercial-in-confidence; deliverable ownership and access arrangements set per engagement.

FLEET & EQUIPMENT

Owned and field-ready

AERIAL PLATFORMS

DJI Matrice 400 — heavy-lift survey & inspection

- Phase One iXM full-frame survey camera
- Zenmuse H30T radiometric thermal / zoom
- Zenmuse L3 LiDAR

DJI Matrice 4T — thermal & rapid inspection

DJI Mavic 3 Multispectral — NDVI / indices

DJI Agras T100 — aerial spray & spreading

GROUND

GPS-enabled UTV spray units

Boom and spot-spray equipment

Handheld and knapsack units

Chainsaw / cut-stump treatment

DATA & SUPPORT

GPS tracking, mapping & GIS software

Spray-diary & application recording

Field tablets & digital reporting

Mine-compliant vehicles; DG storage

CREDENTIALS & COMPLIANCE

Certified, prequalified, site-ready

CASA REOC ARN 1210588	CHIEF REMOTE PILOT RePL 1210579	CASA APPROVAL Above 400 ft	CHEMICAL HANDLING ChemCert / AHCCHM307
SAFETY RECORD Zero recordable injuries since May 2023	SURVEY CERTIFICATION RPEQ, in-house	ECOLOGICAL SIGN-OFF Ecologist / SQP, in-house	SITE READINESS Mine-inducted crews

SAFETY & ASSURANCE

Crews are trained to the specific requirements of each task – chemical handling, aerial operations, ground application and mine-site procedures – and work under job-specific SWMS with site inductions held current. Chemical work is performed by ChemCert / AHCCHM307-qualified applicators with full handling, hygiene and application record-keeping on every job. Zero recordable injuries since operations commenced in May 2023.

PREQUALIFICATION & SUPPLIER SYSTEMS

Avetta	Pegasus · Onsite Track Easy	ICN Gateway
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Current registrations – ICN Gateway Business ID 1890843.

APPROVED VENDOR & SUPPLIER

	
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Registered / approved supplier to the organisations above.

Declared-weed control on an environmental offset

A resource-sector client needed *Harrisia* cactus (a declared weed) controlled across an environmental offset along a riparian corridor — with works evidenced to compliance standard. Dronehab delivered the full loop: high-resolution aerial survey to find every infestation, variable-rate application to treat it, and as-applied records to prove it.

304 HA SURVEYED @ 1.4 CM/PX	37.5 HA TREATED · 4 CAMPAIGNS	97.62% ON-TARGET APPLICATION	4/4 RATE QUALITY "GOOD"
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Target species	<i>Harrisia</i> cactus (declared) — scattered infestation across riparian and offset country
Treatment	Grazon Extra + Hasten Oil + metsulfuron; variable-rate, water rate matched to density per block
Campaigns	4 rounds, Apr–Jul 2024 — 11.04, 11.81, 7.63 and 7.06 ha
Verification	GPS as-applied records per pass — 0.008 ha over-target and 0.00 ha under-target across the program
Deliverables	Weed maps (GIS), as-applied coverage maps, product & rate records, treatment summary for compliance reporting

Every figure on this page is drawn directly from the survey and as-applied application records for this program. Site and client details withheld; full records available on request.

TRACK RECORD

Significant projects

2023	22,000+	250+	8	3
ESTABLISHED	HECTARES MANAGED	FARMS SERVICED	SPECIALISTS	QLD · NSW · VIC

BHP2025 · \$150,000

Vegetation Offset Management, Reporting & Surveying

Aerial surveying, weed-density mapping, treatment planning, GPS field reporting and compliance documentation supporting environmental offset monitoring and vegetation-condition assessment.

BHP2025 · \$125,000

Dysart Agistment Land Weed Spraying Program

Site-specific treatment planning, chemical application and GPS-tracked spray records across agistment and mine-associated land.

STANMORE RESOURCES2024-current · \$400,000

Offset Area Weed Control & Monitoring

Aerial vegetation surveys, targeted weed control, GPS-mapped ground and drone application, monitoring and reporting supporting environmental compliance and rehabilitation.

STANMORE RESOURCES2024-current · \$500,000

South Walker Creek Mine Vegetation Management

Mine-site aerial and ground weed control, weed-density surveying, treatment planning, GPS spray records, post-treatment monitoring and compliance reporting.