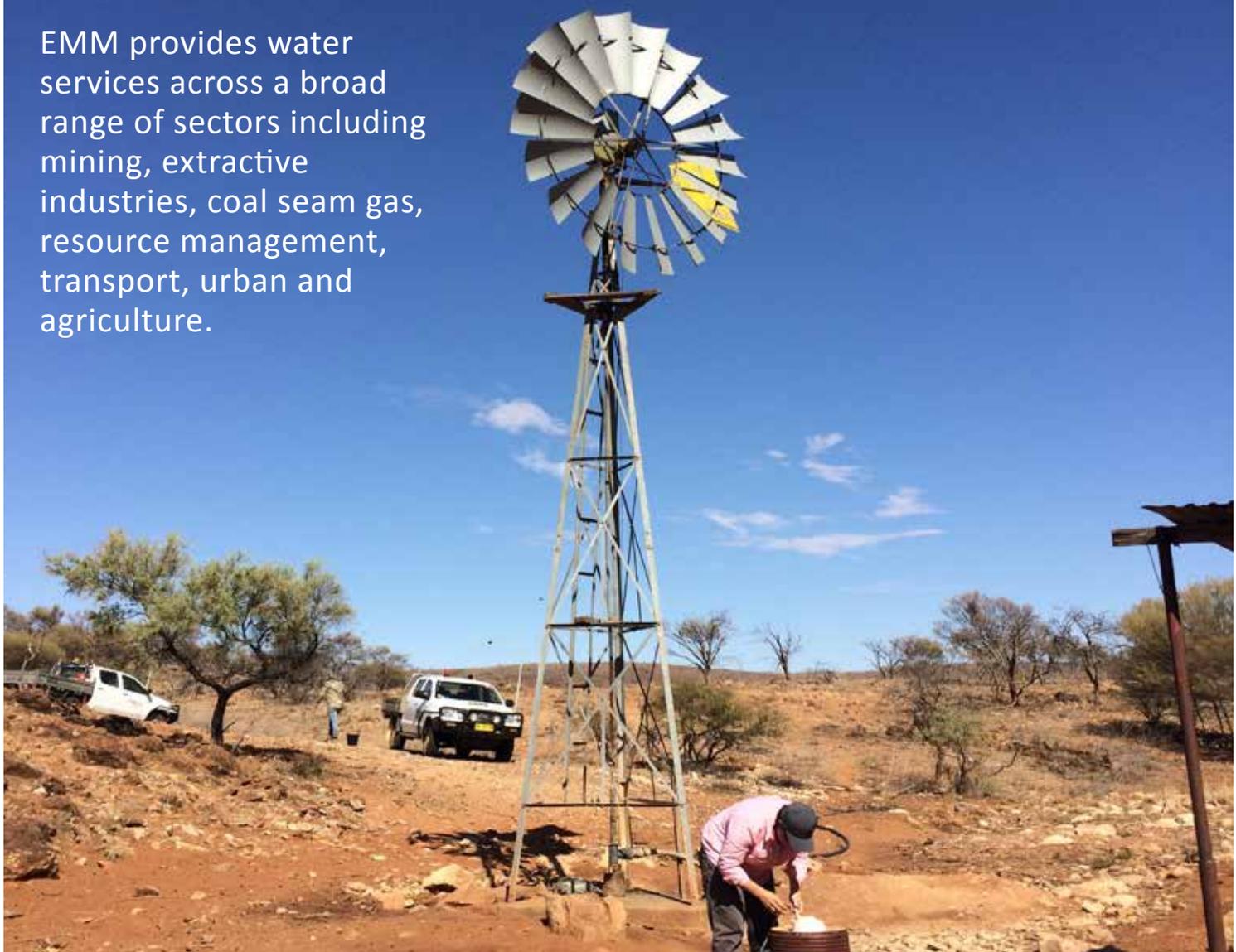


## Water



The EMM water team is dedicated to providing integrated water solutions and high quality deliverables tailored to clients' needs. We specialise in integrated surface water and groundwater assessments, including water policy, design, modelling, monitoring, quality, management, supply and dewatering and stakeholder engagement.

EMM provides water services across a broad range of sectors including mining, extractive industries, coal seam gas, resource management, transport, urban and agriculture.



EMM's water team have extensive experience in Australia and overseas across a broad range of projects, industries and geographies.

We specialise in providing integrated water assessment and reporting which integrates both surface and groundwater systems, and overall water policy. We have demonstrated success in our efficient and effective approach to water assessments for our variety of clients.

EMM as a company have a distinguished reputation in undertaking high quality environmental assessment and approvals.

## EMM's WATER SERVICES

### OVERALL WATER SERVICES

- Groundwater and surface water impact assessments and management plans
- Strategic water advice (regulation, policy, trading and licensing)

- Water monitoring strategies and plans (tailored triggers and trigger action response plans)
- Irrigation and agriculture water supply options and licensing
- Environmental compliance
- Water quality and hydrochemistry assessments
- Flood risk management
- Concept design concepts and feasibility assessments (dams, culverts, pumps, water treatment plants)
- Subcontractor management

### WATER MODELLING

- Site water balance modelling and management (supply, reuse, treatment and disposal)
- Conceptual model development (cross sections and block diagrams)
- Numerical groundwater modelling (Modflow, Surfact, MT3D, AnAqSim, Winflow, WISH)
- Water quality modelling (MUSIC)
- Flood modelling (TUFLOW, RAFTS)
- Drainage design and analysis (TUFLOW, DRAINS)



#### GROUNDWATER SPECIALIST SERVICES

- Drilling investigations (including monitoring bores, large diameter irrigation bores, reinjection and dewatering bores, spear point systems)
- Aquifer characterisation (hydraulic testing and analysis)
- Dewatering and water supply
- Aquifer reinjection
- Contaminated site assessment
- Groundwater dependent ecosystems (identification, assessment and management)
- Groundwater sustainable yield assessments

#### WATER MONITORING

- Design of networks (surface and groundwater)
- Drilling specification design for groundwater monitoring
- Ongoing sampling (field, laboratory analysis and isotopes)
- Data analysis and interpretation

#### OUR PEOPLE

EMM have established a quality team of highly motivated and innovative groundwater and surface water specialists. Our team have the skills and experience to address all water related matters for projects and resolve and implement work with other specialist contractors (ie drilling pumping tests). We work with our clients to provide pragmatic advice and achieve practical and efficient outcomes. Our team provide services nationally with the team located in Sydney, Newcastle, Perth and Adelaide.

Project teams are tailored to project requirements, and timely, efficient and quality delivery. Our senior professionals are recognised leaders within the water field, and provide high level advice to government and industry.



#### SYDNEY

Ground floor, Suite 01, 20 Chandos Street  
St Leonards, New South Wales, 2065  
T 02 9493 9500 F 02 9493 9599

#### NEWCASTLE

Level 1, Suite 6, 146 Hunter Street  
Newcastle, New South Wales, 2300  
T 02 4907 4800 F 02 4907 4899

#### BRISBANE

Level 4, Suite 01, 87 Wickham Terrace  
Spring Hill, Queensland, 4000  
T 07 3839 1800 F 07 3839 1866

#### ADELAIDE

Level 1, 70 Pirie Street  
Adelaide, South Australia, 5000  
T 08 8232 2253

## INNOVATION

We partner with EMM's GIS team to pioneer innovative and efficient data management, data collection and science communication solutions. Including: drone based field assessments, real-time data mapping, high quality graphics, and project specific customised solutions.

To promote efficiency, improve data quality and reduce risk on projects, we employ GPS-enabled digital data collection in the field, with field tablets pre-loaded with GIS software and in-house base maps to enter in situ geo-referenced data (bore

details, water levels, physicochemical field parameters, spring locations, flow details etc). This can be synced to the office based team and clients for real time updates, significantly reducing data entry time and transcription errors.

EMM's water team values effective science communication. We have extensive experience in and success with regulator and community consultation and are able to communicate technical concepts clearly and accurately using multiple media.



*Drone view of groundwater monitoring bore drilling program*