

| PROJECT TITLE | PROJECT OVERVIEW | INVOLVEMENT |
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| Air Quality | Bayan Airag Mine Mongolia : Copper and Gold : Design a dust monitoring network and select air quality monitoring equipment suitable for operation in extreme cold environments. | Author |
| Analysis | Xstrata Coal : develop a water management strategy for the Xstrata Northern Operations. Review the efficiency of the Narama and Ravensworth West mine water management system. | Author |
| | Integra Coal : Review the stability of Camberwell diversion drain against "DIPNR Guidelines for the Design of Stable Drainage Lines on Rehabilitated Minesites in the Hunter Coalfields". | Author |
| Benchmarking | BHP Mt Arthur Coal : Benchmarking Water Use : Compare Coal Handling and Preparation Plant water usage with industry standards based on ROM per quantity of reused, recycled and fresh water. Forecast CPP water usage trends. | Author |
| | Wambo Coal : Benchmarking Water Use : Review the current water management system, document how water is re-used across the site, estimate any significant future water requirements and provide recommendations on improvements to the system. | Author |
| Environmental Assessment | Newcastle Port Corporation : Environmental Assessment at K3 Berth at Kooragang Island. Audited environmental performance at this multi-user wharf facility. Developed a management plan to enable a common, systematic environmental management approach by all users. Recommended improvements to pollution control infrastructure. | Author |
| | Surface Water Environmental Assessment : Assess the impacts from a proposed coal bed methane pilot wells with respect to surface drainage and water disposal. | Author |
| | Grants Road Sands : Surface Water Environmental Assessment : Assess the impacts from a proposed quarry plan on surface water yields and quality. Develop an OPSIM daily time step dynamic water balance model to simulate the mine water balance out 30 years. Size dams and a wetland, develop a conceptual surface drainage network. | Author |
| | Rio Tinto Coal Australia : Several Stream Impact Assessments for proposed Hunter River Salinity Trading Scheme discharge points. | Author |
| | Managed an Environmental Impact Assessment to obtain development consent for an 8mtpa open cut coal mine. | Client |

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| Environmental Assessment | Wildlife Habitat Council : Opportunities Report for Corporate Wildlife Habitat Programme Certification for Unimin Salt Ash sand mine. Undertake a site inspection and prepare an opportunities report for WHC certification of the Unimin site. The International Certification recognizes commendable wildlife habitat management and environmental education programs at individual sites. WHC certification adds value to programs by providing third-party credibility and an objective evaluation of projects. Major corporations such as 3M, Bayer, Bridgestone, Citigroup and General Motors participate in the WHC Corporate Wildlife Habitat Programs. | Author |
| Environmental Assessment & Modelling | Warkworth Mining Limited : Surface Water Environmental Assessment. Assess the impacts from a proposed mine plan on surface water yields and quality. Developed an OPSIM daily time step dynamic water balance model to simulate the mine water balance out 21 years. Size dams and develop a conceptual surface drainage network. | Author |
| Environmental Audits | Kaltim Prima Coal : East Kalimantan, Indonesia : Audit team leader; audited and updated ARD management procedures | Auditor |
| Environmental Systems | Prepare statutory Water Management Plans and Erosion and Sediment Control Plans for Bloomfield Collieries and Rio Tinto Coal Australia. | Author |
| | Newcastle Stevedores : Develop a generic Environmental Management Plan for Berth operations. | Author |
| | Rio Tinto Coal Australia : Develop environmental procedures for ARD management and tailings management | Author |
| | BHP Mt Arthur Coal : Review the site water classification and reporting practices and benchmark against the Minerals Council of Australia Water Accounting Framework and the practices of comparable industry operators. | Author |
| | Rio Tinto Coal Australia : Developed environmental management plans for HVO South and Carrington Mines | Author |
| | Rio Tinto Coal Australia : Develop Environmental Procedures: ARD Management; C&A Tailings Management; | Author |

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| Greenhouse Gas | Coal & Allied : Managed the response to the Australian Greenhouse Challenge. Managed specialist consultants to carry out energy audits; identify and initiate site specific projects to improve energy efficiency; estimate the company's annual GHG emissions and savings; and justify and initiate site based research to improve estimates of coal seam methane emissions. | Project Manager |
| Hydrology | Hydrologic studies and permits for creek diversions e.g. Bayswater Creek, Farrells Creek | Author |
| Infrastructure | Mine Water Management : Guide projects from concept stage through the financial and regulatory approval process to final design and the initiation of construction. Maintain an oversight and budgetary accountability during construction. Pipeline & pump systems; Hunter River Salinity Trading Scheme discharge facilities; small dams. | Project Manager |
| | Xstrata Coal : Civil/Mechanical Design of a Hunter River Salinity Trading Scheme discharge facility. | Designer |
| | Supply divers for river pump suction maintenance and dam maintenance. | Contractor |
| Licencing | Prepare licence and approval applications under the Water Management Act 2000 and Water Act 1912 for river crossings, dams, levees, stream diversions, dewatering and monitoring bores. | Author |
| Modelling | Bloomfield Collieries : Develop a dynamic daily water balance model for Rix's Creek Mine RXC to support a statutory Water management Plan. | Author |
| | Bloomfield Collieries : Update the site OPSIM daily water balance model for Rix's Creek Mine to update the site Water Management Plans and forecast the performance of alternate water management strategies. | Author |
| | Xstrata Coal : Develop a simple model and perform a water balance for the Narama and Ravensworth West mining operation. | Author |
| | Anglo Coal : Develop an OPSIM Model of Dartbrook Underground Site : Develop a dynamic daily water balance model for Dartbrook Coal Mine. The mine is on care and maintenance. The emphasis was on forecasting recovery of the water table in the goaf and modelling strategies that maximised consumption of water on site. | Author |
| | Rio Tinto Coal Australia : Operate & maintain OPSIM water balance models for 2 mine site. Monthly runoff estimations; forecasting; HRSTS modelling; individual structure modelling; monthly & annual reporting. Period : 2008 to date. | Author |

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| Monitoring | Lighting surveys for Rio Tinto Coal and Xstrata. Assess against design levels at receiver from AS 4282–1997 Control of the Obtrusive Effects of Outdoor Lighting. | Author |
| | Rio Tinto Coal Australia : Download, maintain, validate data, analyse and report on a network of 90 piezometers and 3 weirs, 2007 to date. | Contractor |
| | Operate and maintain an environmental monitoring programme for a large open cut mine in the Hunter Valley of NSW. Elements of the programme included blasting, fine and coarse particulates, noise, weather and water. Activities included contract preparation, contractor management, cost control, network design, data review and interpretation, internal and external reporting. | Project Manager |
| | Attended noise monitoring at mine sites. | Contractor |
| Monitoring : Hydraulics | Develop stream rating curves for gauging stations in creeks and streams | Designer |
| Monitoring Equipment | Anglo Coal : Design, supply and install 88 vibrating wire piezometers at 16 locations for Dartbrook Mine and the Drayton South Development Project. | Contractor |
| | Rio Tinto Coal Australia : Supply and install 24 vibrating wire piezometers at 10 locations for Carrington West Wing Project. | Contractor |
| | Rio Tinto Coal Australia : Design and install open hole piezometers for exploration. Obtain monitoring bore licences. | Contractor |
| | Manufacture and install monitoring weirs from simple weir plates to fully instrumented sites | Contractor |
| Monitoring Systems | Rio Tinto Coal Australia : Prepare field manuals for groundwater monitoring, including photography, survey & ground trothing | Author |
| Noise Abatement | Develop and retrofit noise abatement equipment to a Komatsu 830E haul truck. Sound power level measurements, liaise with Komatsu regarding design and manufacture. | Project Manager |
| Noise Management | Noise and climatic monitoring, analyse, functional design, install and operate a noise warning system at a mine in the Hunter Valley of NSW. | Project Manager |
| Permits | Develop and maintain a GIS database of water licences and approvals for Rio Tinto Coal Australia NSW. The database has simplified renewals, applications for approvals, compliance and reporting. Ongoing maintenance of the database of more than 150 licences, obtaining new licences and licence renewals. | Author |
| Personnel | Provide environmental role support personnel for periods from 2 to 6 months to Rio Tinto Coal Australia and BHP Energy Coal. Roles from Graduate level to Specialist. | Contractor |

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| Rehabilitated Landforms | Rio Tinto Coal Australia : Design landforms for overburden emplacements on uplands and flood plains for Environmental Impact Assessments and Mining Operations Approvals. | Designer |
| Rehabilitation | Managed an ongoing rehabilitation programme for an open cut mine site mine site of about 50 hectares per annum. | Project Manager |
| Rehabilitation Drainage | BHP Mt Arthur Coal : A remedial drainage system was required to prevent ongoing heavy erosion due to (mainly) concentrated surface flows. Design a batter reconstruction that was stable against ongoing seepage, a sediment dam and drop structure. | Designer |
| | BHP Mt Arthur Coal : Define catchments and design contour drains to direct surface runoff into proposed and existing sediment dams. Size the proposed dams in accordance with 'Managing Urban Stormwater : Soils and Construction: Volume 2E Mines and Quarries'. Prepare a design report. | Designer |
| | BHP Mt Arthur Coal : Design a 700 metre long rock lined drain to convey runoff down a rehabilitated overburden emplacement. Identify alternate drainage designs and channel armour. | Designer |
| Rehabilitation Superintendent | Sibelco Australia : Provide "Independent Rehabilitation Superintendent" service to Salt Ash Sand Mine | Contractor |
| Reporting | Rio Tinto Coal Australia : Annual Environmental Management Reports : Prepare Water Licencing, Surface Water and Groundwater Management and Monitoring Sections | Author |
| | Rio Tinto Coal Australia : Prepare and submit Annual Environmental Management Reports | Author |
| Surface Drainage | Rio Tinto Coal Australia : Design surface drainage network to address several alternative mine layouts looking forward 12 years. Design and size 5 proposed dams in accordance with 'Managing Urban Stormwater: Soils and Construction: Volume 2E Mines and Quarries'. | Designer |
| | Develop an open cut dewatering strategy looking out 5 years, draft pipeline designs, cost estimates, mapping and report preparation. | Author |
| | Hydrologic design of drains and dams in advance of mining, and on rehabilitated landforms. | Designer |

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| Training | Develop and deliver training on the site specific operation of the Hunter River Salinity Trading Scheme. | Trainer/Author |
| | ACMER : Prepare & present "Water Management in Mines" | Trainer/Author |
| Training & Systems | Centerra Gold Mongolia : Provide training to Mongolian nationals; Develop a simple EMS structure. | Trainer/Author |
| Water Management | Operate discharge points under the Hunter River Salinity Trading Scheme, monitoring and statutory reporting | Operator |
| Water Quality | Vegetation Impacts Investigation : Investigate causes of tree dieback. | Author |
| Water Treatment | Rio Tinto Coal Australia : Flocculate Sediment Dams at Hunter Valley Operations West Pit. Sampling, jar testing, flocculant selection, dosage estimates & treatment in the field. | Contractor |
| Mine Closure | Pilbara Iron : Reviewed and updated the biennial closure costing estimation process for Pilbara Iron, WA. The revised process used a first principles approach, and developed and linked policy, planning, infrastructure, disturbance and rehabilitation registers. The system was GIS based and continuously updated. | Project Manager |