



# CAPABILITY STATEMENT



**TRUSTED LEADERS IN THE CIVIL CONSTRUCTION,  
MINING & TUNNELLING INDUSTRY**

PROJECT MANAGEMENT | TUNNELLING | MINING | ENVIRONMENTAL | GEOTECHNICAL ENGINEERING | SURVEYING



## ABOUT US

JDK Geotech (JDK) provides leading engineering and project management solutions for large-scale projects. Our success is built on mutual trust, consistent delivery standards and professional responsibility across all levels of our organisation.

As a leading engineering & technical services delivery firm, we deliver unparalleled support and innovative solutions in Australia and internationally. JDK was established in 2016 to provide professional engineering and project management services tailored to specific project requirements. Today, we are proud to represent government agencies, tier one construction companies and work alongside management consulting firms throughout Australia.

Specialising in the seamless delivery of large-scale infrastructure projects, both short-term & fixed contracts, JDK have built a strong reputation across multiple sectors. Our suite of geological, geotechnical, environmental and project management solutions are delivered by highly experienced professionals, well regarded throughout the industry.

The JDK team offers technical advice for myriad domestic and international sectors, including the civil construction, tunnelling, mining and environmental industries. Our mandate to listen to your needs and place your requirements at the core of each project is what underpins every service we provide.

## OUR CULTURE

Our core values uphold the importance of personal customer service and professional responsibility. Our services management team prioritise effective communication aligned to the JDK vision and values aimed at delivering positive working culture. Our culture supports strong collaboration in teams fostering innovative thinking.

## VISION

JDK's vision is to help Australia thrive by meeting and exceeding the expectations of all our stakeholders. As an Australian owned organisation, our engineering solutions support a positive future for the country and is up held by every JDK team member.

## MISSION

JDK's mission is to deliver consistent & effective engineering and project management services to benefit communities throughout Australia.

# WHAT WE DO

At JDK, we provide a range of engineering solutions that assist Australian infrastructure & mining sectors to create a better Australia. From analysis to execution, we help our clients build value and support communities through innovative engineering and construction services. We specialise in project management, geotechnical engineering and geological design, rockfall remediation, mining and environmental management.

## WE COMBINE INSIGHT WITH EXPERIENCE TO DELIVER RESULTS

### We respect your business

At JDK, we focus on our customers at all times. We listen to your goals, understand your needs and respect your vision. We believe in building strong relationships based on trust and professional responsibility. Our clear communication and mutual respect are key to delivering consistent and high-quality results.

### We support your success

Our consulting team supports your vision and helps to drive your success. We have the proven professional expertise needed to work with our growing client base and a proven record of delivering innovative solutions across industries and disciplines. Our experienced and highly professional team solves complex problems and delivers professional solutions for every project we approach.

### We respond to your needs

At JDK, we believe in strength through flexibility. We can respond to your changing needs over time to deliver relevant solutions based on real-world conditions. Our team is proactive, adaptive and highly motivated. We understand and respect altered project scopes and address changing requirements quickly without adding unwanted complexity.

## Our expertise

1. Since our inception in 2016, our engineering team has specialised in the delivery of technical services & project management of mining, construction and infrastructure projects for Australian and international clients
2. JDK offers diverse geotechnical engineering solutions for large-scale public and commercial projects. Our ability to meet project specifications, exceed best practice guidelines and deliver exceptional geotechnical engineering and project management solutions are due to the calibre, ethics and experience of our people.

## Our capabilities

SECTORS	ENGINEERING DESIGN	MANAGEMENT SOLUTIONS	TECHNICAL SCOPE	TESTING SERVICES
<b>INFRASTRUCTURE</b>	Tunnel design	Construction management	Project engineering	Compaction and deflection testing
<b>MINING</b>	Feasibility studies (mining, civil and environmental)	Project management	Geotechnical engineering	Nuclear density testing
<b>POWER (HYDRO)</b>		Owner Representative	Mining and exploration	NATA approved testing & reporting
<b>TRANSPORTATION</b>	Tunnel design analysis and design review	Waste water management	Geology environmental engineering	SPT & CPT testing
<b>GOVERNMENT</b>	Third-party design review	Environmental management	Surveying	Hazardous material assessments & characterisation
	Geotechnical interpretative and baseline reports	Systems engineering management	Quality	Asbestos assessment's & clearance certificate
	Blast design, PPU Testing	Quality management	Assurance and quality control (QAQC)	
	Foundation design	Occupational health and safety	Structural assessments	Proctor compaction testing
	Rock cut and tunnel design			

# PROFESSIONAL SERVICES

## PROJECT/CONSTRUCTION MANAGEMENT

- Project set up and delivery.
- Quality assurance/quality management implementation.
- Due diligence reporting.
- Compliance scoping, pre-feasibility, and feasibility studies.
- Change management and project improvement strategy.



## GEOTECHNICAL/GEOLOGICAL ENGINEERING DESIGN

- Pile inspections/vibration monitoring, PPU testing.
- Roped access for geological mapping geological outcrops.
- Groundwater studies.
- Construction inspections & reporting.
- As-built condition documentation.
- Drilling investigation and core logging. Soil classification and laboratory testing review.
- Instrumentation installation and monitoring



## ROCKFALL REMEDIATION

- Stability analysis and design review.
- Rockfall analysis, remediation and prevention.
- Design of rockfall protection systems and support.
- Construction inspections; As-built condition documentation.
- Landslide analysis, 3D modelling and forecasting.



## TUNNELLING

- Geotechnical assessments and rock characterisation.
- Tunnel stability analysis and support design review.
- Preparation of baseline and interpretative geotechnical reports.
- Feasibility studies and mine roadway alignment studies, longwall design.
- Planning and execution of geotechnical site investigations.
- Review and design drawings for construction.
- Borehole drilling, core logging and geological mapping of cabins, tunnels and portals.



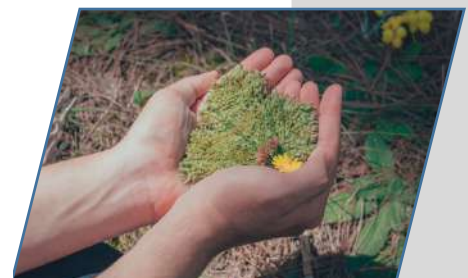
## COAL AND HARD ROCK MINING

- Project management/coordination of longwall move and take off.
- Site inspections and field mapping review.
- Drilling investigation and core logging
- Support design and review of existing mines workings.
- Evaluation and design of primary and secondary support requirements.
- Insitu stress monitoring/ground movement monitoring.



## ENVIRONMENTAL INVESTIGATION

- Environmental site investigation reports.
- Slope remediation and reclamation design.
- Environmental remediation advice.
- Site inspections and mapping review.
- Contamination sampling, analysis and air monitoring through our





# INTEGRATED MANAGEMENT SYSTEM

JDK strives to ensure our management standards are proficient with industry best.

Our integrated management system is compliant with the following workplace standards:

- ✓ Quality Management to ISO 9001
- ✓ Occupational Health and Safety Management to ISO 45001
- ✓ Environmental Management Systems to ISO 14001



JDK's streamlined, integrated management system aims to provide high-quality outcomes delivered in a safe and efficient manner. Our specialist management team can provide the know-how to ensure your project complies with all regulatory requirements.

## Quality assurance

Each project is an opportunity to build on our knowledge. JDK sets and follows project-specific guidelines that always meet and often exceed project specifications. We never compromise on standards and follow a strict work ethic based on professional accountability and attention to detail.

## Workplace health & safety

JDK is dedicated to all aspects of workplace health and safety.

We make the following commitments to the people who define our success:

- We provide valuable employment opportunities for emerging professionals
- We encourage education and professional connections through industry conferences and functions
- We pride ourselves on consistent training to ensure continuous improvement
- We meet and exceed all occupational health and safety guidelines
- We promote ongoing performance improvement through management and risk mitigation
- We are committed to personal health and safety at all times

JDK observes occupational health and safety systems aligned to ISO 45001. We are committed to ongoing reporting, health assessment and workplace evaluation of HIRAC (Hazard Identification, Risk Assessment and Control process) protocols to eliminate work-related injuries.

# NOTABLE PROJECTS

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## WARRINGAH FREEWAY UPGRADE



<b>Client</b>	CPB & Downer Joint Venture
<b>Expertise</b>	Geotechnical engineering
<b>Sectors</b>	Infrastructure, transportation, government
<b>Location</b>	Sydney, NSW

### Project Description

The Western Harbour Tunnel and Warringah Freeway Upgrade is a major transport infrastructure project that will make it easier, faster and safer to get around Sydney. By creating a western bypass of the Sydney CBD, the Western Harbour Tunnel will take pressure off the Sydney Harbour Bridge, Sydney Harbour Tunnel, Anzac Bridge and Western Distributor corridors to improve transport capacity in and around Sydney Harbour.

### Approach and Innovation

JDK provided construction phase services for the project, focusing on daily geotechnical/geological data capture. We assisted the sub-contractor Alliance full-time in project management and geotechnical delivery to the Client CPBDJV. Currently, JDK's consultants are working full-time on geotechnical assessments, compliance, inspections, and geological defect mapping and monitoring.

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## SYDNEY METRO WEST - WESTERN TUNNELLING PACKAGE



<b>Client</b>	Gamuda Australia and Laing O'Rourke Consortium (Alliance)
<b>Expertise</b>	Geotechnical engineering
<b>Sectors</b>	Infrastructure, transportation, government
<b>Location</b>	Sydney, NSW

### Project Description

Sydney Metro West will support a growing city and deliver world-class metro services to more communities. This new underground railway will connect Greater Parramatta and the Sydney CBD.

The Gamuda Australia and Laing O'Rourke Consortium is delivering the Sydney Metro West - Western Tunnelling Package. The contract includes the delivery of twin nine kilometre tunnels between Sydney Olympic Park and Westmead, the excavation of two new metro stations, a stabling and maintenance facility at Clyde, and a precast facility at Eastern Creek.

### Approach and Innovation

JDK provided full-time engineering services to Gamuda and Alliance during the ground investigation phase. Their primary role was to deliver the anchoring scope and provide support to the excavation and shotcrete team. They ensured compliance with technical specifications, managed subcontractors, maintained quality documentation, provided design recommendations, and worked with multiple teams to meet program targets.

# NOTABLE PROJECTS

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## SYDNEY METRO WEST (CTP) - CENTRAL TUNNELLING PROJECT



<b>Client</b>	Acciona Ferroviaria Joint Venture (AFJV)
<b>Expertise</b>	Project Management, Project Engineering
<b>Sectors</b>	Infrastructure, transportation, government
<b>Location</b>	Sydney, NSW

### Project Description

Acciona Ferroviaria Joint Venture (AFJV) was awarded the contract to design and construct the Sydney Metro West – Central Tunnelling Package. The contract includes the delivery of twin 11-kilometers tunnels and the excavation of five station boxes at Sydney Olympic Park, North Strathfield, Burwood North, Five Dock and The Bays.

### Approach and Innovation

JDK provided engineering services to AFJV during the excavation phase, primarily delivering anchoring scope and aiding the excavation and shotcrete team. Responsibilities included ensuring compliance, managing subcontractors, maintaining quality documentation, assisting in cost control, providing design recommendations, and reconciling claims and developing programs.

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## M6 PROJECT - STAGE 1



<b>Client</b>	Coffey - A Tetra Tech Company
<b>Expertise</b>	Geotechnical engineering
<b>Sectors</b>	Infrastructure, transportation, government
<b>Location</b>	Sydney, NSW

### Project Description

The M6 Stage 1 will deliver the missing link from Sydney's south to the wider Sydney motorway network.

- Twin four-kilometre tunnels linking the M8 Motorway
- Ramps between the main motorway tunnel and the surface intersection at President Avenue
- Tunnel stubs for a future connection to extend the M6
- A new intersection at President Avenue
- Provision of new shared cyclist and pedestrian pathways

### Approach and Innovation

JDK was engaged to undertake geotechnical site investigations under the management of Coffey. Our organisation was able to apply the systematic capture of geotechnical and geological information to suit the current AS1726 and was able to work autonomously in conjunction with the effective management of site safety and documentation protocols.

# NOTABLE PROJECTS

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## NORTHCONNEX



<b>Client</b>	LendLease Bouygues Joint Venture LSBJV
<b>Value</b>	\$3.72 Billion
<b>Expertise</b>	Project management, QA/QC
<b>Sectors</b>	Infrastructure, transportation and government
<b>Location</b>	Sydney, NSW

### Project Description

The NorthConnex project provides a multi-lane motorway that links the M1 Pacific Motorway at Wahroonga NSW to the M2 Motorway at West Pennant Hills, NSW. This project features twin motorway tunnels around 9 km in length and a height clearance of 5.30 m. The Sydney tunnels were constructed with three-lane capacity in each direction, including two lanes and a breakdown pull off-lane.

### Approach and Innovation

JDK Geotechnical Team was engaged to systematically capture geotechnical and geological information to the final installation of support. The JDK team interacted with several client teams across disciplines, providing extensive geotechnical expertise to help manage and control tunnelling risk, add value across critical areas of the project.

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## WESTCONNEX M4-M5



<b>Client</b>	Acciona Samsung Bouygues Joint Venture ASBJV
<b>Value</b>	\$3.2 Billion
<b>Expertise</b>	Geotechnical engineering
<b>Sectors</b>	Infrastructure, transportation and government
<b>Location</b>	Sydney, NSW

### Project Description

The WestConnex 3A project consisted of constructing the M4-M5 Link twin mainline tunnels between the M4-M5 to the Rozelle Interchange. The WestConnex is Australia's largest infrastructure project to date.

### Approach and Innovation

Under the direction of senior ASBJV management, JDK was responsible for providing extensive geotechnical expertise to interpret the practices used to manage and control tunnelling risk. JDK's geotechnical vast knowledge coupled with stakeholder communication enabled the efficient capability of our deliverables to the ASBJV team. JDK was able to utilise industry best practice to ensure geotechnical risk was identified, captured and communicated.



# NOTABLE PROJECTS

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## SYDNEY METRO (TSE)



<b>Client</b>	John Holland CPB Ghella Joint Venture (JHCPBG)/Pells Sullivan Meynink (PSM)
<b>Value</b>	\$11.5 Billion
<b>Expertise</b>	Project engineering, geotechnical engineering
<b>Sectors</b>	Infrastructure, transportation and government
<b>Location</b>	Sydney, NSW

### Project Description

The Sydney Metro City and Southwest project aims to provide rail tunnels and associated transportation infrastructure to Sydney's commuters and surrounding communities. The Sydney Metro project is Australia's second largest infrastructure project to date.

### Approach and Innovation

JDK was engaged to work on the Sydney Metro City & Southwest project, communicating successfully with multiple stakeholders and providing extensive geotechnical expertise throughout the project. The implementation of monitoring controls was completed at the highest quality and no client issues, or damage to existing infrastructure. Innovative data collection methods were employed by JDK throughout the project to deliver high-quality data capture for future works.

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## SYDNEY METRO CENTRAL WALK PROJECT



<b>Client</b>	Laing O'Rourke and Tunnelling Solutions
<b>Value</b>	\$955 Million
<b>Expertise</b>	Tunnelling, geotechnical engineering, project engineering
<b>Sectors</b>	Infrastructure, transportation and government
<b>Location</b>	Sydney, NSW

### Project Description

The Sydney Metro Central Station Main Works (CSM) – Central Walk contract included the Central Advanced Adit tunnel and the adjacent Central Walk project providing an underground concourse to Australia's busiest train station.

### Approach and Innovation

JDK was engaged in applying their systematic capture of geotechnical and geological information and expertise to control tunnelling risk for the Central Adit Tunnel project. After completing the Central Adit project, JDK was re-engaged to provide project engineering services delivering industry best reporting and reviewing methodology to systematically capture project requirement information to the client based on the design.

# NOTABLE PROJECTS

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## SYDNEY GATEWAY PROJECT



<b>Client</b>	Coffey - A Tetra Tech Company
<b>Expertise</b>	Geotechnical engineering
<b>Sectors</b>	Infrastructure, transportation, government
<b>Location</b>	Sydney, NSW

### Project Description

The Sydney Gateway is a major road interchange between the WestConnex and the airport terminals of Sydney Airport. Construction began in early 2021 and is expected to open in December 2024. The Sydney Gateway will provide a high-capacity connection from Sydney Airport and Port Botany to the new Westconnex St Peters Interchange once completed. Sydney Gateway is part of the NSW Government's vision to complete the missing links in the motorway network, improve traffic flow and reduce travel times.

### Approach and Innovation

JDK was engaged in the geotechnical site investigation work under the management of Coffey. JDK was able to undertake geotechnical investigation work autonomously alongside site safety and documentation management protocols effectively streamlining the delivery of Stage 2 of the investigative works of the project.

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## TRANSPORT ACCESS PROGRAM – REDFERN STATION



<b>Client</b>	Novorail and RedHill Civil Project
<b>Expertise</b>	Project management, Project Engineering
<b>Sectors</b>	Infrastructure, transportation, government
<b>Location</b>	Sydney, NSW

### Project Description

The transport access program is an initiative to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure. The project at Redfern Station is a major suburban railway station (6th busiest station in NSW) with an estimated patronage of 70,000 on an average workday (2018 figures). Redfern resides within the local government area of City of Sydney.

### Approach and Innovation

JDK was able to package a suite of onsite roles to help reduce the overall project cost. JDK delivered project management, estimating, quality, programming and construction administrative services to fit the needs of the client.

# NOTABLE PROJECTS

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## SYDNEY METRO (CSM) - CENTRAL STATION MAIN WORKS



<b>Client</b>	Laing O'Rourke (Sydney Metro / TfNSW)
<b>Expertise</b>	Geotechnical engineering
<b>Sectors</b>	Infrastructure, transportation, government
<b>Location</b>	Sydney, NSW

### Project Description

Sydney Metro platform upgrades were delivered by Laing O'Rourke (LOR) underneath the landmark Central Station - Central Walk - a new underground pedestrian concourse to help customers get around Sydney's busiest railway station. Major construction work has now been completed and is mostly open to the public. The renewal of Central Station was designed to cater to growing passenger numbers and improve accessibility.

### Approach and Innovation

JDK delivered the scope of work effectively, ensuring the Client did not damage sensitive surface rail infrastructure or disruption to the rail network. The implementation of systematic data capture and project management under the supervision of our client LOR was delivered effectively. Geotechnical capture through industry-best technology initiated through JDK's experience on similar infrastructure projects aided in a streamlined information transfer to the principal contractor to ensure they fulfilled the design requirements.

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## CENTRAL SUBWAY PROJECT



<b>Client</b>	San Francisco Municipal Transportation Agency (SFMTA) / JACOBS
<b>Value</b>	\$1.57 Billion
<b>Expertise</b>	Tunnelling, geotechnical engineering
<b>Sectors</b>	Infrastructure, transportation and government
<b>Location</b>	San Francisco USA

### Project Description

This large-scale project adds two new underground tunnels and four subway stations providing, a direct rapid transit link between downtown and the existing train line. The third Line Route on 3rd Street will vastly improve transportation from some of the city's busiest, most densely populated areas once commissioned.

### Approach and Innovation

Acting as the clients representative, JDK effectively engaged with multiple contractors to safely and effectively deliver the project's geotechnical reporting and instrumentation requirements. Through a systematic review of each project methodology, JDK was able to help achieve project outcomes on time and within budget effectively.

# NOTABLE PROJECTS

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## NARROWS INLET HYDRO PROJECT



<b>Client</b>	BluEarth Renewables / MPMSI
<b>Value</b>	\$287 Million
<b>Expertise</b>	Project coordination, engineering services, tender management (procurement)
<b>Sectors</b>	Infrastructure, government, power and water
<b>Location</b>	British Columbia, Canada

### Project Description

The project included the delivery and installation of the following infrastructure:

- Three hydroelectric generating stations with a combined design capacity of 33 megawatts.
- Chickwat Creek – Conventional run-of-river hydroelectric generating station with a design capacity of 19 megawatts.

### Approach and Innovation

JDK's professional interaction with relevant stakeholders, extensive geotechnical expertise and interpretation of the methodology used to manage and control risk proved highly successful. JDK completed all work safely, within budget and on time while meeting the requirements of the contract's design. Our precise inferences of ground conditions allowed the client to adhere to their deliverables schedule and utilise their resources efficiently.

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## CULLITON CREEK HYDRO PROJECT



<b>Client</b>	Tetra Tech
<b>Value</b>	\$4 Million
<b>Expertise</b>	Project management, geotechnical engineering
<b>Sectors</b>	Infrastructure, government, power and water
<b>Location</b>	British Columbia Canada

### Project Description

The facility involved the construction management and geotechnical rock-cut design in allowing the installation of a 3.20km long penstock (1.48m diameter buried pipe both HDPE and steel). The project boasted two 7.5 MW vertical axis Pelton turbines supplied by rainwater and 13km of 69 kV transmission lines.

### Approach and Innovation

JDK was able to utilise industry best practice for project deliverables effectively. The efficient implementation of blast design, rock anchor support design and rockfall remediation allowed the client to deliver the project on time and within budget. The technical expertise and construction management allowed the successful implementation of the project.

# NOTABLE PROJECTS

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## NORTH GOONYELLA COAL MINE - PEABODY



<b>Client</b>	Peabody Energy
<b>Expertise</b>	Geotechnical engineering
<b>Sectors</b>	Mining
<b>Location</b>	Bowen Basin region near Moranbah, QLD

### Project Description

Peabody Energy started redeveloping the North Goonyella Mine in QLD. The project includes upgrading the infrastructure and equipment, installing a new longwall system, enhancing the coal handling preparation plant, building a rail loop, and setting up an accommodation village for workers. The mine has premium hard-coking coal reserves exceeding 70 million tons.

### Approach and Innovation

JDK's management team was responsible for the acquisition delivery and supply of ongoing Geotechnical and Geological personnel when they were called upon.

JDK's Rock Engineering Team has been providing extensive geotechnical expertise in the coal industry toward the interpretation of similar coal seam (Goonyella Seam) current and forecasted conditions. JDK employs industry best practices to manage, control, and prevent underground risk during production and maintenance. All work by the JDK Team was completed safely, within budget, and on time while meeting the requirements of the mine's design and OMS standards.

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## APPIN COAL MINE - SOUTH32



<b>Client</b>	South 32
<b>Expertise</b>	Geotechnical Engineering
<b>Sectors</b>	Mining
<b>Location</b>	Wollongong, NSW

### Project Description

Appin Mine, owned and operated by Illawarra Coal, is an underground metallurgical coal mine. The mine encompasses Appin East, which features a raw coal stockpile capacity of up to 50,000 tonnes.

### Approach and Innovation

Extensive geotechnical reviews were conducted on both the East and Western (historical workings) sections of the mine to ensure compliance with the mine's high standards for design and safety. Daily underground site visits were also carried out to maintain ongoing coverage. JDK provided the mine site with geotechnical and geological staff throughout 2021 to 2023 to ensure that all technical department requirements are met during the remaining production years of the project.

# NOTABLE PROJECTS

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## GRASSTREE COAL MINE / AQUILA COAL MINE



<b>Client</b>	Anglo American Metallurgical Coal Pty Ltd
<b>Expertise</b>	Geotechnical engineering, sub-IC
<b>Sectors</b>	Mining
<b>Location</b>	Bowen Basin, QLD

### Project Description

Anglo American's Grasstree Coal mine is an underground coal mine located in Queensland's Bowen Basin.

### Approach and Innovation

JDK was engaged to undertake ongoing Critical Area Audits (CAA) within the CapCoal Complex. Extensive geotechnical review of the risk assessment system and methodology. The mines CAA represents an ongoing safety measure that Anglo American conducts as part of the Operations Management System. In addition to the CAA's, JDK provides ongoing geotechnical and geological recommendations and site coverage to ensure the daily requirements of the technical services department are met throughout the project's remaining production years.

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## OAKY NORTH COAL MINE / OAKY 1 COAL MINE



<b>Client</b>	Glencore Pty Ltd
<b>Expertise</b>	Geotechnical engineering, sub-IC
<b>Sectors</b>	Mining
<b>Location</b>	Bowen Basin, QLD

### Project Description

Oaky Creek Coal mine is an underground coal mine located in Queensland's Bowen Basin, 46km south west of middle mount. Oaky No.1 was developed from the highwall of a worked-out opencut pit and began producing in 1990. The larger scale Oaky North was developed in 1995 and boasts thicker seams, wider longwall blocks and more powerful mining equipment. In 2006 a second longwall was installed at Oaky No.1 using recycled equipment from the Xstrata-owned Cumnock mine in the N.S.W. Hunter Valley.

### Approach and Innovation

JDK was engaged to undertake ad-hoc underground geotechnical coverage as required by the client (Glencore). Under the supervision of site management, JDK was responsible for providing extensive geotechnical expertise to interpret the practices used to manage and control underground coal mining risk. JDK's vast geotechnical knowledge coupled with stakeholder communication enabled the efficient capability of our deliverables to the Glencore team. JDK was able to utilise industry best practice to ensure geotechnical risk was identified, captured and communicated.

# NOTABLE PROJECTS

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## DENDROBIUM MINES



<b>Client</b>	South32 - IMC
<b>Expertise</b>	Geotechnical engineering
<b>Sectors</b>	Mining
<b>Location</b>	Wollongong, NSW

### Project Description

Dendrobium mine is an existing underground coal mine owned and operated by Illawarra Coal, a subsidiary of South32. The mine is located in Kembla Heights in New South Wales, Australia. The mine extracts coal from the Wongawilli Seam of the Southern Coalfields. Longwall mining is currently being undertaken, and they are primarily producing coking coal for steelmaking.

### Approach and Innovation

JDK was engaged by South32 for the provision of underground geotechnical shift coverage. The duties assigned to JDK's Geotechnical mining team included:

- Mapping of development panels
- LW mapping
- Compilation of geotechnical information & hazards for environmental reports
- Reporting on mining hazards and autonomously included and reported into the mine hazard plan

JDK was able to undertake the scope of work effectively under the management of Illawarra Metallurgical Coal (IMC).

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## GAHCHO KUÉ DIAMOND MINE



<b>Client</b>	De Beers Group, Tetra Tech EBA
<b>Value</b>	\$0.90 Million (Engineering fees)
<b>Expertise</b>	Geotechnical engineering, mine design
<b>Sectors</b>	Mining
<b>Location</b>	Northwest Territories, Canada

### Project Description

The project is the largest diamond mine globally, producing roughly 5.4 Million carats annually within the Gahcho Kué kimberlite pipes. The Gahcho Kue Diamond Mine is a 49%–51% joint-venture between Mountain Province Diamonds and De Beers Group Canada.

### Approach and Innovation

JDK was engaged for the pre-feasibility mine design, geotechnical support and kinematic stability analysis of mine. JDK's professional interaction with relevant stakeholders, extensive geotechnical expertise and interpretation of the methodology used to manage and control geotechnical risk proved highly successful. JDK completed all work safely, within budget and on time while meeting the requirements of the contract's design.

# NOTABLE PROJECTS

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## GROSVENOR COAL MINE



<b>Client</b>	Anglo American
<b>Expertise</b>	Geotechnical engineering
<b>Sectors</b>	Mining
<b>Location</b>	Bowen Basin, QLD

### Project Description

Anglo American's Grosvenor Coal mine is an underground metallurgical coal mine located in Queensland's Bowen Basin. The mine utilises the longwall method to extract coal from the Goonyella Middle coal seam. The project has an expected mine life in excess of 30 years. Geotechnical Engineering site coverage was provided to ensure adequate strata control management and compliance to the mine's Strata Control Principal Hazard Management Plan (PHMP).

### Approach and Innovation

JDK was able to systematically capture geotechnical data for the effective delivery of:

- Collaboration between technical and operational personnel to ensure key project milestones achieved safely, on time and as per the mine's requirements/expectations.
- Pursual of process improvement opportunities where possible. E.g. review of existing site geological/geotechnical processes/procedures to improve process flow/efficiency/practicality.





# WHY CHOOSE US

Our knowledge and experience will drive your project forward with confidence.

- ✓ Value delivered through expertise
- ✓ Proven track record across industry sectors
- ✓ Complete high-quality project solutions
- ✓ Commitment to health and safety
- ✓ Access to industry-leading executives and teams





## CONTACT US

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