





EIC Activities is CIMIC Group's specialist engineering and technical services business, providing a competitive advantage for profitable projects that generate value for clients.







Passionate about technical excellence  
and the power of innovation.

## A unique in-house engineering consultancy

EIC Activities' engineering and risk mitigation expertise is key to CIMIC Group's seamless delivery of integrated solutions across every life-cycle phase of asset, infrastructure and resources projects.

Working globally across the Group, EIC Activities provides dedicated engineering expertise to create value, accelerate innovation and continuously build the Group's technical capability.

EIC Activities collaborates with the Group's construction businesses CPB Contractors, including Broad and Leighton Asia, our mining and mineral processing companies Thiess (joint control) and Sedgman, our services specialist UGL and our public private partnerships arm Pacific Partnerships.

Our services optimise technical solutions and equip tender and project teams with more levers to innovate, mitigate risk, improve efficiency and drive performance.

We provide in-depth sector and specialist engineering services, including design, technical solutions, expertise in lean practices and innovation, and lead knowledge management and technical training for the Group.

Consistently we see the results delivering improved safety and productivity, significant cost and program savings and client valued outcomes which secure new and repeat business.

EIC Activities is a vibrant hub, pushing the boundaries of engineering and enabling CIMIC Group to embed improvements and technical advances at scale.

integrity  
accountability  
innovation  
delivery

**SAFETY**

### Our Principles

Our powerful collaboration across CIMIC Group is founded in our shared principles — Integrity, Accountability, Innovation and Delivery. Safety is more than a Principle, it underpins everything we do. Together, these Principles ensure a shared sense of purpose and alignment across our global team.





**EIC**  
ACTIVITIES



A MEMBER OF THE CIMIC GROUP  
**CIMIC**

# Trusted experience. Integrated solutions.

EIC Activities is proudly a member of CIMIC Group.

The CIMIC Group family of industry leaders is proven across diverse disciplines, sectors and environments. What sets us apart is the way we integrate our world of experience and expertise, across our group and wider network, to develop future-ready solutions and deliver enduring, whole-of-life value. We apply our collective skills to each client's objectives, driving greater insight to achieve the best outcomes.

Our end-to-end capability and financial strength ensure technical and operational certainty across each project's lifecycle. We give assets a performance advantage and provide better end-user experiences; create infrastructure with future generations in mind; and unlock resources for maximum productivity and output.

At the core of our commitment to client success and sustainable communities is being a trusted partner – responsive, collaborative and disciplined. We connect that ethos with the skills and experience of our clients, partners, suppliers and wider stakeholders, because we believe we realise the greatest results together



## Enduring, whole-of-life value

EIC Activities champions engineering and technical excellence, collaborating with CIMIC Group's operating companies and major projects across multiple sectors and capabilities.

CIMIC Group's collective experience spans sectors such as aviation, building, defence and security, education, health, resources, ports, power and energy, transport, tunnelling and water. Within these, our capabilities deliver the full spectrum of services, from feasibility, design, planning and investment; to manufacturing and construction; to operations, maintenance, upgrades and asset management; to rehabilitation and decommissioning.


We thrive on achieving excellence in the moment while pursuing long-term evolution to stay at the forefront of changing needs globally. Our mission is to generate sustainable shareholder returns by delivering innovative and competitive solutions for clients and safe, rewarding and fulfilling careers for our people.

With a history since 1899, and around 29,000 people we're delivering projects in around 20 countries across Australia and the Pacific, Asia, Africa, and North and South America.

Optimising a full spectrum of services







Creating value and a competitive advantage

EIC Activities supports CIMIC Group's delivery of engineering-led, integrated, lifecycle solutions for assets, infrastructure and resources projects.

#### **Connecting projects with unmatched engineering solutions**

Our sector and specialist engineering, technical services and digital engineering capabilities amplify the Group's ability to solve complex challenges, design, innovate and optimise solutions.

Leaders in their fields, EIC Activities specialists bring new insights and options, and certainty of technical and operational performance. They partner with project teams and external consultants to enhance efficiency and productivity, mitigate risk, increase self-performance and augment outcomes for clients and communities.

#### **Working together**

EIC Activities specialists create dynamic environments, collaborating with teams – from pre-bid, tender, and project establishment phases, where opportunities to add value are strongest, through to delivery and long-term asset management.

We tailor our services to meet team requirements, providing technical analysis, advice and reviews, right through to comprehensive design services where we challenge assumptions, designs and methods, develop solutions and deliver innovations.

## ENGINEERING-LED

- **Specialist engineering**
- **Technical and digital engineering services**



## Sector engineering

EIC Activities works across asset, infrastructure and resources projects to achieve safety, cost, time and productivity gains and enhance sustainable whole-of-life outcomes. We drive solutions based on sector expertise and a comprehensive mix of practical site experience, technical knowledge, engineering and design management know-how, and project leadership experience.

### Assets

Across our sectors, we ensure critical assets, including water, power, transport, social and industrial infrastructure and facilities, perform at the highest levels of reliability, productivity and sustainability.

We bring advanced expertise in design, construction, commissioning, manufacturing, upgrades and overhauls, asset management and maintenance.

### Infrastructure

Our specialists ensure social and economic infrastructure, from state-of-the-art buildings to cutting-edge industrial operations and transport systems, embed value, optimise performance and meet end-user requirements.

We develop leading solutions with new technologies and the latest industry advances in engineering, construction, commissioning and operations, so clients, customers and communities benefit from world class, safe, and efficient assets and services. Key capabilities include:

#### Building

Commercial, residential, industrial developments and social infrastructure – including healthcare, defence, education and recreation facilities expertise.

- Construction methodologies advice

#### Transport

##### Roads

New and upgraded motorways, highways, metropolitan and site access roads expertise.

- Alignment solutions and advice
- Drainage design solutions
- Pavement design solutions
- Construction methodologies
- Utilities and services management
  - Investigation techniques and conflict assessments
  - Relocation design and construction advice

##### Rail

Freight, high speed, metro and light rail expertise

- Alignment solutions and advice
- Track advice
- Rail systems design and commissioning advice
- Signalling and communications design and advice
- Operations analysis and modelling

Case study - Working with Leighton Asia on Hong Kong-Zhuhai-Macao Bridge Passenger Clearance Building

From assessment and advice to total engineering and design solutions



Mark Chapman  
Principal - Planning

**“We are collaborating with colleagues across the globe on major projects that cross sectors and require multiple capabilities. Sharing our expertise and experience fast-tracks our ability to challenge, innovate and add value with technical solutions that optimise project outcomes.”**

EIC Activities is supporting Leighton Asia's delivery of transformational infrastructure projects across India and Southeast Asia.

Collaboration, drawing on both businesses' transport and building sector expertise and Building Information Management (BIM) capability, is delivering value-add solutions for the region's landmark projects, including international gateways linking Hong Kong and mainland China.

The Hong Kong-Zhuhai-Macao Bridge Passenger Clearance Building opened in 2018 with a total floor area of over 90,000 square metres. The delivery solutions have safely reduced construction time and cost, equipped the 30-metre high structure to withstand the area's typhoons and marine environment, and facilitated efficient operations and facility maintenance to meet sustainability targets.

EIC Activities played a key role in the project's successful construction of the undulating steel roof comprised of 45 prefabricated modules – each 60 metres long, 25 metres wide, and weighing more than 670 tonnes.

EIC Activities specialists also contributed to the project's BIM strategy, commissioning strategy and completion program, providing engineering and technical support which helped streamline workflows, and optimise efficiency, quality and whole-of-life outcomes.



# Specialist engineering

Our strength in specialist engineering facilitates CIMIC Group’s international delivery of technically demanding greenfield and brownfield projects, in extreme terrains and the world’s densest cities, to the highest performance requirements.

We work from first principles developing and applying cutting edge technology, methods and materials.

Integrated design solutions, combining our ground engineering, tunnelling, contamination, structures and materials technology services, ensure civil works incorporate world leading geotechnical, geological and structures solutions.

The result is seen in remarkable project safety and efficiency gains, and the effective settlement, stability, strength and serviceability of the roads, railways, airports, and energy and water supplies, CIMIC Group delivers to serve industry and communities.

## Ground engineering

- Geotechnical assessment and interpretation
- Slope assessment and remediation
- Soft ground, foundation and retaining structures engineering
- Earthworks, soil-structure interaction and numerical modelling

## Tunnelling

- Geotechnical and geological assessment
- Structures – underground, temporary, caverns and tunnel linings
- Methodologies – tunnel mining techniques and Tunnel Boring Machine selection
- Tunnel scheme development

## Structures

- Bridges
- Civil structures including precast
- Building structures and facades
- Critical temporary works
- Heavy lifts

## Materials technology

- Concrete
- Quarry materials

## Mechanical, electrical and control systems engineering

- Infrastructure mechanical and electrical, including fire and life safety
- Building services
- Water and waste water treatment and pipelines
- Power generation including renewable, thermal and embedded cogen / trigon
- Power transmission and distribution



Case study - Working with CPB Contractors on WestConnex, New South Wales, Australia

## Mitigating risks and identifying opportunities



**Idy Li**  
Associate Principal – Geotechnics

**“CPB Contractors and EIC Activities’ combined construction, tunnelling and engineering expertise brings rigorous technical analysis and breakthrough solutions to major road and rail transport projects in Australia and the Asia Pacific. It’s exciting to fuse leading-edge engineering and technology with practical on-site methods, and deliver assets that exceed expectation.”**

Australia’s largest road infrastructure project, WestConnex, is a 33 kilometre road network that will link Sydney’s west and south-west with the city, airport and port – easing congestion, creating jobs and connecting communities.

EIC Activities is supporting CPB Contractors, and its joint venture partners, to deliver four major WestConnex projects. The M4 Widening and New M4 Tunnels are operational and have opened to traffic, and works continue on the New M5 and Rozelle Interchange. EIC Activities’ specialist engineering team supported a de-centralised ventilation design for the Rozelle Interchange, focused on whole-of-life outcomes.

The solution located fans in ventilation tunnels and electrical substations below ground, and included wide maintenance access corridors for heavy vehicles. EIC Activities’ services provided layout and space-proofing, design calculations, inter-discipline design coordination and procurement support.

The solution significantly reduced the size of the surface structure, delivered open space for the community and enhanced maintenance safety and efficiency, supporting sustainable long-term operations.





Case study - Working with CPB Contractors on Coffs Harbour Hospital expansion, New South Wales, Australia

CIMIC Group first Australasian company to achieve BSI Kitemark certification

for BIM excellence to the new international ISO 19650 standards series

Technical services and digital engineering

EIC Activities’ technical services and digital engineering specialists work at the forefront of digital applications and systems integration – embedding accurate, faster and more efficient ways of working across CIMIC Group’s projects.

Our digital solutions ensure information is more easily shared between the office and the field. With seamless data flow, CIMIC Group project teams manage greater complexity and more interfaces and can optimise safety, innovate, increase productivity and deliver valued sustainable projects.

Technical services

We are continually expanding the Group’s use of collaborative, integrated, metadata rich and visually dynamic platforms.

Our technical services and digital engineering specialists provide expert analysis, advice and solutions to give projects greater control over cost, schedule and value – further equipping projects to operate safely and efficiently, deliver on time and maximise outcomes. Key capabilities include:

Planning and controls

- Project tender program review
- Project program optimisation and recovery advice
- Independent program review
- Schedule risk analysis
- Extension of time support
- Active 4D planning

Methods

- Method studies
- Lean practices advice
- Process improvement and system integration advice

Survey

- Survey systems and solutions
- Machine guidance systems and related technologies
- Production monitoring and mass haul solutions
- Geotechnical monitoring systems and solutions
- System integration

Digital engineering

- Building Information Modelling (BIM) solutions
- Geographic Information Systems (GIS) solutions
- Virtual Design & Construction solutions

Digital engineering

An internationally recognised digital leader

EIC Activities has embedded a leading digital engineering capability throughout CIMIC Group, making us more efficient, data driven and nimble.

We fully integrate Information Management, Building Information Modelling, Geographic Information Systems, Virtual Design and Construction solutions, Quality Assurance and Asset Management across the project lifecycle.

Driving technical and operational certainty

Our digital technologies, workflows and information transfer add value, support engineers on site, simplify how we work, optimise solutions, accelerate innovation and extend our competitive advantage.

They give us the ability to build digitally first, integrating data and technologies to measure, map, visualise and control project delivery and outcomes. We utilise:

- Visualisation and coordination of the project scope (3D)
- Improved schedule integrity through simulation (4D)
- Quantification of project scope elements (5D)
- Accessible asset data for operations and maintenance (6D)
- Analysis and improved data access and linkages (XD)



Colin Edmonds  
Technical Principal - Structures


“Digitisation embeds accurate, faster and more efficient ways of working. Integrated data and technologies enable us to measure, map, visualise and control project delivery, and support powerful information transfer that opens up collaboration and innovation.”

Specialists in social infrastructure, CPB Contractors and EIC Activities have a proven track record for setting new standards when delivering critical hospital facilities in Australia, New Zealand and Papua New Guinea. The teams bring the best in engineering and Building Information Modelling technology together to deliver health facilities that are fit-for-purpose, future-proofed, and improve outcomes for medical and ancillary staff, as well as patients and their families.

The Coffs Harbour Hospital expansion project includes the construction of a new five-storey clinical services building with a rooftop helicopter landing site, Intensive Care Unit and surgical, maternity and paediatric inpatient units.

EIC Activities specialists optimised technical and digital engineering solutions to support the project’s integrated approach to Information Management, BIM, Quality Assurance and Asset Management. This underpins the project’s safe, efficient delivery, and continual management of cost, schedule and value.





As a family of industry leaders, CIMIC Group sets the pace, turning experience, knowledge and technical break-throughs into better solutions.

EIC Activities' expertise in sustainability and innovation extends CIMIC Group's delivery of competitive solutions that enhance built, natural and social environments.

### **Challenge - innovate - evolve**

At CIMIC Group we constantly challenge how we deliver and invest in innovation to create value. This means we are continually pushing our performance forward and evolving our offer to the market. Our investment in innovation ensures we stay at the forefront of our industries and deliver clients the best solutions for sustainable outcomes.

### **Operating sustainably**

We are committed to operating sustainably. Leveraging our world of experience and expertise, we integrate environmental, social and governance (ESG) factors into decision-making.

This ensures we are positioned to deliver enduring, whole-of-life value to communities and ecosystems across the lifecycle of assets, infrastructure and resources projects. Through engaging and supporting our people, and collaborating with clients and other project stakeholders, we deliver future-ready solutions.

### **Our commitments**

- Support safe communities and provide safe, supportive workplaces
- Act with integrity, operate honestly and respectfully
- Promote a culture that builds capability, sustainability, diversity and inclusion
- Target innovation through knowledge sharing and collaboration
- Promote environmentally responsible outcomes

## **FUTURE READY AND SUSTAINABLE SOLUTIONS**

- **Embedding sustainability**
- **Sharing knowledge**
- **Realising greater results together**





Case study - Working with UGL on Taillem Bend Solar Farm, South Australia

## Making our businesses safer, smarter and more sustainable



**Ken Panitz**  
Principal – Methods, Lean and Innovation

**“We’re delivering better assets more efficiently by bringing people, process and technology together to add value to the construction and commissioning of solar farms. There is a lot of satisfaction in using our combined engineering capabilities to contribute to Australia’s growing renewable energy sector and, ultimately, the environment for future generations.”**

EIC Activities’ sustainability focus extends to working with CIMC Group’s services company UGL, a leader in the Australian renewables and solar energy sector.

EIC Activities’ specialist engineering and technical services, including power generation and transmission expertise, complement UGL’s capabilities in solar and battery installation and high voltage power management.

In South Australia, at the Taillem Bend Solar Farm project that UGL is delivering for Vena Energy, foundations for 400,000 photovoltaic solar panels required approximately 50,000 micropiles across the 200-hectare site.

EIC Activities’ geotechnical engineering specialists’ collaboration and accurate identification of local geological conditions contributed to a pile foundation solution which saved the project significant time and cost.

More broadly, EIC Activities is working with UGL on process improvements using Lean and robotic solutions to improve solar field assembly processes, manage process variation and improve resource management. Current innovation initiatives include using robotic field automation to increase the safety, efficiency and reliability of solar farm execution.

## Embedding sustainability

EIC Activities’ engineering and technical solutions build sustainability into CIMIC Group projects and operations and deliver an enduring positive legacy.

We collaborate with project teams to innovate, improve safety and efficiency, mitigate risk, utilise sustainable materials and technologies, lower costs and reduce waste throughout the asset life-cycle.

As a result, CIMIC Group is recognised as an industry leader with a track record for generating value, delivering on client’s sustainability targets and achieving the highest sustainability ratings from peak bodies including the Infrastructure Sustainability Council of Australia (ISCA), Greenstar and the FTSE4Good Index.

### Part of something bigger

EIC Activities is delivering advances in areas such as materials and energy efficiency, including energy storage and recycled materials, and the application of digital engineering and virtual construction to reduce waste.

We work closely with suppliers, project teams, clients and academics, as well as industry and peak bodies to innovate, and develop and share best practices. We are focused on ensuring CIMIC Group projects safely deliver better assets and services for our clients and optimal benefits for our communities.

### Accelerating innovation

EIC Activities leads CIMIC Group’s innovation program using coordinated campaigns and a network of innovation champions across the Group.

The innovation program’s campaigns and interactive platform, with social media features, give us an exciting way to connect, share ideas and develop innovations which win tenders, solve technical challenges, make our work safer and improve project delivery.

### Repeatable, scalable innovation is a competitive advantage

Powerfully, the innovation program enables us to capture an innovation from one project, develop it for our businesses and create significant positive outcomes for the Group.





Case study - Working across CIMIC Group

## Equipping teams to repeat successes



**Martin Goldberg**  
Principal - Mechanical and Electrical

## Sharing knowledge. Building capability.

EIC Activities fosters an exciting global network of the world's best engineers.

We make sure that, across CIMIC Group, our people and projects share the same access to world class technologies, engineering solutions, knowledge resources, communities of practice, and outstanding technical training and development.

### Always moving forward

EIC Activities uses a range of channels to connect practitioners and facilitate career-long learning.

Our diverse CoPs connect our people and these dynamic networks transfer technical insights, share experience and advance best practices and innovations across the Group.

### Sharing IP

We developed and maintain CIMIC Group's Interactive Project Knowledge Library (iPKL) to manage and share intellectual property.

iPKL is a user focused digital library. It captures innovations, lessons learned, key documents and technical and operational knowledge from tenders and projects.

This accessible knowledge resource powers efficiency and evolution, equipping teams to repeat successes, fast track learnings, undertake benchmarking and continue to innovate.

### Technical training and development

We also continually develop the Group's capabilities through training and mentoring programs, webinars and on-line material.

Our webinars are an ongoing series of live web-based technical presentations from leading specialists. These provide a dynamic forum for continual professional learning, and contribute significant value keeping CIMIC Group's engineers up-to-date with technical advances.

Training is tailored for graduates, site engineers and project engineers - enabling our people to build exciting and rewarding careers.

### Connecting our people

We moderate Communities of Practice (CoP) to share learnings about technical areas.

**"We focus on building engineering and technical strength. EIC Activities works directly with projects, provides technical training and shares knowledge through interactive channels such as our Communities of Practice."**

**It's a combination that connects people with expertise across the Group, helps projects to innovate, and expands CIMIC's end-to-end capability."**

Across CIMIC Group, our safety and risk management systems methodically identify, assess and eliminate or control risks in the design, planning and implementation of our projects.

The Group's continuous improvement of high-risk controls, supported by EIC Activities, includes leveraging data and organisational experience to reduce the frequency and severity of injuries and keep our people safe.

Hazardous energy sources, including electrical, mechanical, hydraulic, pneumatic and gravitational energy, present a significant risk for asset, infrastructure and resources projects.

To reduce this risk, EIC Activities led a benchmarking assessment of Group-wide hazardous energy isolation procedures, first establishing best practice criteria for the assessment, based on a review of industry codes of practice, guidance notes and procedures.

Taking an approach which focused on raising awareness and driving change, EIC Activities engaged multiple teams in the assessment and leveraged centres of excellence from across the Group to share incident experiences and learnings.

EIC Activities supported each company to undertake self-assessment, identify improvement opportunities and adopt best practices - embedding effective, consistent management of isolations across the Group.



We realise  
the greatest  
results  
together

At CIMIC Group we work with clients generating competitive, sustainable infrastructure solutions that enhance productivity and better serve customers and the community.

A world of experience

Our major shareholder HOCHTIEF, and its major shareholder, ACS Group, are both leaders in their fields, renowned for innovation. As we continually develop our ability to deliver pioneering solutions for clients, we draw on the world-wide network of HOCHTIEF and the ACS Group, to the benefit of our clients.

Financial strength

CIMIC Group's financial strength supports our delivery of a broad range of projects - including some of the largest and most complex projects in our markets - and allows us to take equity positions in our public private partnerships and build own operate transfer projects.

CIMIC Group is currently delivering projects in around 20 countries



Case study - Working with Pacific Partnerships and CPB Contractors on Waikeria Prison Development, New Zealand

Renowned for  
innovation



Dean Walker  
Principal - Civil

**“EIC Activities is working across assets, infrastructure and resources projects, from the world’s largest cities to remote areas in New Zealand and Mongolia – providing sites with access to world class technologies and engineering solutions.”**

As part of the New Zealand Government's program to deliver a more effective and humane justice system, the new facility will provide accommodation for 500 people, along with a secure 100 bed mental health unit.

The remote semi-rural location, in the upper North Island, requires a high reliance on prefabricated materials to construct 29 buildings.

Building Information Modelling enabled the team to effectively brief fabricators on scope, design and delivery, and use the digital model for coordination and clash detection.

The integrated team's digital engineering expertise is driving construction safety and efficiencies, cost management, program reliability and an end product that meets all of the client's specifications.





Trusted experience.  
Integrated solutions.

CIMIC GROUP INCLUDES







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