# Lycopodium

The science of solving engineering problems

# **Annual General Meeting**

Financial Year 2021

18 November 2021

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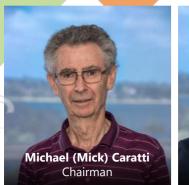
# **About Lycopodium**

Lycopodium is an innovative and value-driven process, engineering and project delivery organisation.

The Company is headquartered in Perth, Western Australia and is listed on the Australian Stock Exchange (ASX: LYL).



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Rodney (Rod) Leonard Non-Executive Director



**Bruno Ruggiero** 

Executive Director





Karl Cicanese

Executive Director





**Corporate Overview** 

#### Market Share Price Shares on Issue Capitalisation (as at 17.11.21) 39.7m \$4.50 ~\$178.6m Shareholder Earnings per **Total Dividend Breakdown** Share per Share Board & Management 41% **35.7 cents** 25 cents





### **People First**

Delivering projects safely for our clients remains a fundamental metric of success and our excellent safety and environmental performance is a credit to our delivery teams on the ground

	FY2021	Current (rolling 12 months)	Target
Hours	1.9 million	1.6 million	
LTIFR	0.0 <sup>1</sup>	0.0 <sup>1</sup>	0.0
TRIFR	2.1	1.8	≤2.80
EIFR	0.0	0.0	≤2.00

<sup>1</sup> Against Construction Industry frequency rate of 7.6 (Safe Work Australia, *Key WHS Statistics Australia 2020*)



### **Core Capabilities**

#### Sectors



#### Resources

- Gold and Precious Metals
- Base Metals
- Battery Metals
- Specialty Metals
- Diamonds and Gemstones
- Bulk Minerals
  - Iron Ore
  - Minerals Sands

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– Bauxite



#### Infrastructure

- Railways
- Roads
- Ports
- Non-Process Resource Infrastructure
- Asset Management



#### **Industrial Processes**

- Pharmaceuticals
- Biotechnology
- Chemical and Energy
- Food and Beverage
- Manufacturing
- Research and Development

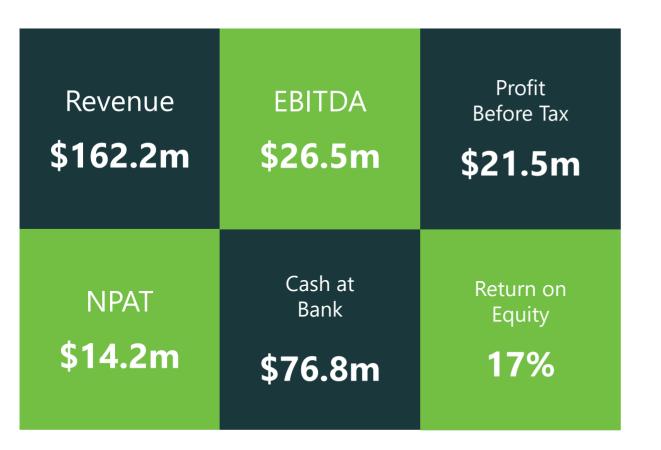
#### Services



- Feasibility Studies
- Process Development and Optimisation
- Engineering and Design
- Project Management and Delivery
- Project Services
- Construction Management
- Commissioning and Operations Support
- Asset Management



### **FY2021 Financial Highlights**



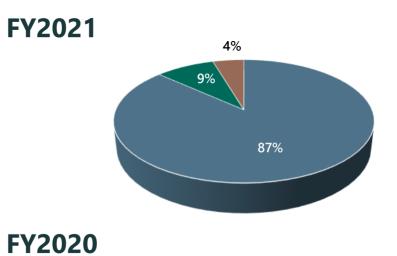
- In spite of the disruptions and uncertainties of FY2021, we continued to win work with existing and new clients across our core operating sectors of Resources, Infrastructure and Industrial Processes
- This saw revenue remain steady, consistent with the guidance provided at 1H FY2021
- Full-year NPAT was stronger than predicted at halfyear (\$14m vs \$12m)

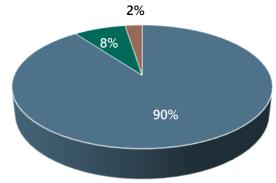
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### **FY2021 Revenue by Sector**

	FY2021	FY2020
Sector	A\$′000	A\$′000
Resources	140.8	189.5
<ul> <li>Infrastructure</li> </ul>	14.0	16.2
<ul> <li>Industrial Processes</li> </ul>	7.4	5.4
	162.2	211.1



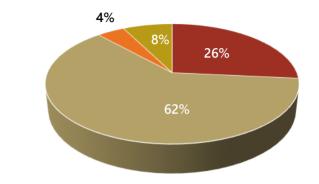


### FY2021 Revenue by Geography

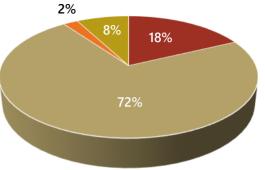
	FY2021	FY2020
Geography*	A\$'000	A\$′000
Australia	42.5	37.8
• Africa	100.9	152.3
• Americas	6.7	4.6
• Other	12.1	16.4
	162.2	211.1

\* By project location

FY2021



FY2020



### **FY2021 Balance Sheet**

	FY2021	FY2020
	A\$′000	A\$′000
Current Assets	128.7	134.3
Total Assets	164.1	155.7
Total Liabilities	76.4	77.8
Equity	87.7	77.8

- Strong Balance Sheet provides capacity for investment
- Minimal debt
- Net Tangible Assets per Share \$2.04



## **FY2021 Operational Highlights**

#### Resources

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- Worked across most major commodities, including iron ore, gold, copper, nickel, lithium, graphite, diamonds, platinum and mineral sands
- Projects spread across the globe predominantly in Africa, Australia, Southeast Asia and North and Central America
- Successfully completed our largest EP(C) contract to-date, Perseus' Yaouré Gold Project in Côte d'Ivoire, ahead of schedule and under budget despite the global pandemic
- Award of a number of significant EPCM contracts Motheo (Botswana); Bomboré (Burkina Faso); Ahafo North (Ghana); Talison MSA (Western Australia); and the design, supply and project delivery for Séguéla (Côte d'Ivoire)
- Ongoing delivery of numerous EP and FEED scopes Boto (Senegal); Cobre (Panama); Sukari (Egypt); Sabodala (Senegal); Los Filos (Mexico); Batu Hijau (Indonesia); Talison CGP3 (Western Australia); Navachab (Namibia); and Lepidico's Phase 1 Integrated Project (Namibia and UAE), with subsequent award of the full EPCM contract for these last three projects during the first half of FY2022
- Mondium continued delivery of the EPC scope for Rio Tinto's Western Turner Syncline Phase 2 iron ore project in the Pilbara, with first ore achieved in October, and the EPC contract for Talison Lithium's Tailings Retreatment Project in the south-west of Western Australia
- Studies pipeline has remained strong and continues to deliver subsequent FEED, EP, EPCM and EPC scope opportunities

# **FY2021 Operational Highlights**

- Continued to work with some of Australia's largest rail operators, in both passenger and freight rail systems
- Servicing greenfield and brownfield rail projects, provided design, engineering, technical advisory and rail infrastructure management (RIM) services to various clients, including Pacific National, Crawford Freightlines, New South Wales' Country Regional Network (CRN) and the Australian Rail Track Corporation's (ARTC) Inland Rail initiative
- Also continued to support Main Roads Western Australia (MRWA) in the provision of Project Management services

#### Infrastructure



### **FY2021 Operational Highlights**

- Delivered projects and engineering services across key areas of expertise, including specialty chemicals, pharmaceutical, food and beverage production and heat/mass transfer
- This included providing specialist services to Boeing in their aerospace component manufacturing facilities, Kawasaki in Hydrogen related facilities, Commonwealth Serum Laboratories for plasma and blood products as well as base vaccine component production facilities, Thales in defence and munitions, Lamb Weston in food and beverage production, and Energy Australia in the replacement of its gaseous ammonia facility to an aqueous ammonia facility

#### **Industrial Processes**



#### **Business Improvement**

- Commitment to improving organisational connectedness to support greater collaboration across the Company:
  - Ongoing embedment of Corporate Shared Services model during FY2021, supporting standardisation across key functions, including Finance, Information Technology and Business Systems, People, Marketing and Communications and Legal
  - Technical Assurance Group (TAG) driving consistency in approach across processes and procedures, enabling effective workshare to fully leverage the specialist expertise of our people, regardless of geographical location
- Attracting, engaging and retaining a high-performing, professional workforce – focus throughout the year on recruitment, talent management, leadership and succession planning and learning and development



### Innovation

Committed to fostering a culture of enquiry and innovation, we introduced an internal innovation award in 2021 to recognise and reward ideas that inspire us and have the potential to positively impact the business

A number of innovative ideas were progressed during the year:

#### **Dry Mining Unit**

- The DMU represents the radical marriage of underwater track crawler technology with high capacity skid-mounted materials handling and sand pumping systems, into a single 400 ton remotely controlled mobile sand processing machine
- The technology will be implemented at the Grande Côte mineral sands operation in Senegal, the largest single dredge mineral sands operation in the world
- Developed by ADP in Cape Town, the DMU was the inaugural winner of our Innovation Award

#### **Digital Twin**

- The connected digital twin approach, whereby the plant is engineered as a static digital twin (digital replica of the asset) using augmented reality and virtual reality technology, enables the static digital twin to be the primary interface for operations and plant maintenance, linked to the connected digital twin running in the background
- The technology, developed collaboratively by ADP and a Tier 1 client, will provide whole-of-life benefits that will lead to better designs and more efficient operations in the future

#### **ATA<sup>™</sup> Technology**

- ADP has designed and constructed a unit to implement ATA<sup>™</sup> technology on a mine site to convert mineral waste slurry into two discrete products – a dewatered solid for landfill, construction and/or reclamation, and a clean water stream that can be immediately reused on site
- The unit is containerised and is currently in test phase at the Orapa diamond mine in Botswana and all process data recorded will be used to generate a design envelope for the full system

#### **Orway IQ**

- OIQ is continuing to roll out its MillROC (Mill Remote Optimisation Consulting and Coaching) platform
- The platform provides customised data analysis and dashboards and is used by OIQ's specialist metallurgists and advanced process control consultants to deliver real-time coaching and implementation of continuous improvement initiatives
- Perseus' Yaouré mine was the first project to be purpose-built 'MillROC ready'

#### **FBICRC**

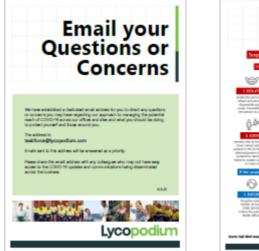
- As a key participant in the
  Future Battery Industries
  Cooperative Research
  Centre, we are collaborating
  with researchers,
  governments and the
  community to support the
  development of Australia's
  battery industries value chain
- We are directly participating in five of the FBICRC's foundation projects
- The first of these to commence is the flagship Cathode Precursor Production Pilot Plant, for which Lycopodium is providing the FEED services

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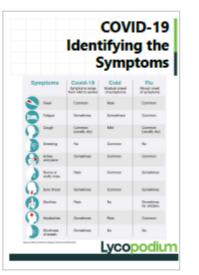
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# **Continuing to Manage COVID-19**

- FY2021 represented the first full year operating under the challenges presented by the global pandemic, with varying degrees of restrictions across our operational jurisdictions
- Impact on operations has continued to be well managed, with open lines of communication vital, both internally with staff and externally with clients and other stakeholders, particularly given new projects mobilising in Africa
- Operating protocols are aligned with the advice provided by the various governments and authorities within our operational locations globally
- Focus remains on the health and wellbeing of our people, clients and partners, and the broader communities in which we operate, working together to maintain business continuity
- The mental health and wellbeing of our people has been a particular area of focus, with ongoing support provided









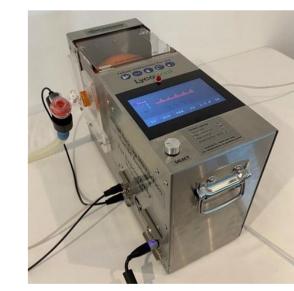


### **Our Community**

Our engagement with the communities within which we live and work is an integral part of how we like to do business and in late FY2021 we established the Lycopodium Foundation, to provide a formal vehicle for the administration of our philanthropic, community engagement and sponsorship activities:

- A key pillar of our engagement strategy is to support social development and education and therefore our established partnerships with the Murlpirrmarra Connection in Australia and BASICS International in Africa remain ongoing
- In response to the hardships being felt as a result of the pandemic, we contributed to the Salvation Army and St Vincent de Paul Society to assist families in need in our community and also supported the Child In Need Institute, an NGO which launched a COVID relief campaign to establish assistance centres in metro cities across India
- Also in response to the pandemic, our electrically operated ventilator, LycoVent, obtained its Export Only Listing for use outside of Australia, and in partnership with Australian Doctors for Africa, we intend to make LycoVent available to African hospitals
- Throughout the year, the Company also continued to support various charitable initiatives championed by our staff, including Jeans for Genes, Breast Cancer Care WA and the Cancer Council





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# FY2021 Major Projects



### **Yaouré Gold Project**

Resources
Perseus Mining Limited
Côte d'Ivoire
Gold
Engineering, Procurement and Construction (EP(C)) services
3.3 Mtpa

Yaouré was delivered ahead of schedule and under budget, despite the pandemic – construction continued throughout 2020 and the stretch target of first gold in December 2020 was achieved



# **Bomboré Gold Project**

Sector	Resources
Client	Orezone
Location	Burkina Faso
Commodity	Gold
Scope	Engineering, Procurement and Construction Management (EPCM) services
Processing Capacity	5.2 Mtpa



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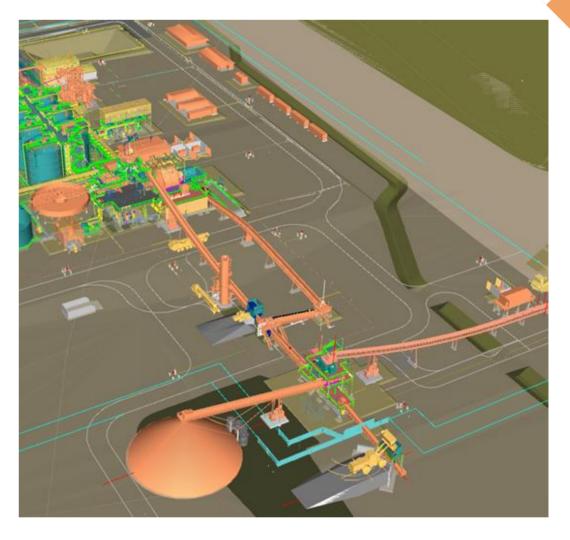
#### **Western Turner Syncline Phase 2**

Sector	Resources
Client	Rio Tinto
Location	Pilbara, Western Australia
Commodity	Iron Ore
Scope	Engineering, design, procurement and construction of the mineral processing facilities and associated non-process infrastructure Awarded and delivered via Mondium



### **Boto Gold Project**

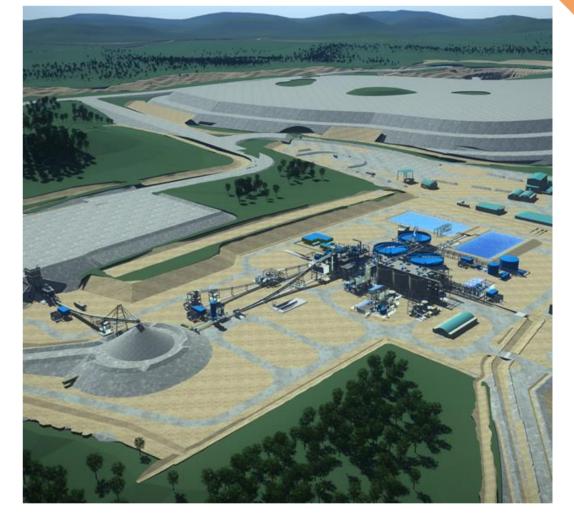
Sector	Resources
Client	IAMGOLD Corporation
Location	Senegal
Commodity	Gold
Scope	Engineering and Procurement (EP) services
Processing Capacity	2.7 Mtpa





# **Ahafo North Project**

Sector	Resources
Client	Newmont Ghana Gold Limited
Location	Ghana
Commodity	Gold
Scope	Engineering, Procurement and Construction Management (EPCM) services
Processing Capacity	3.4 to 3.7 Mtpa

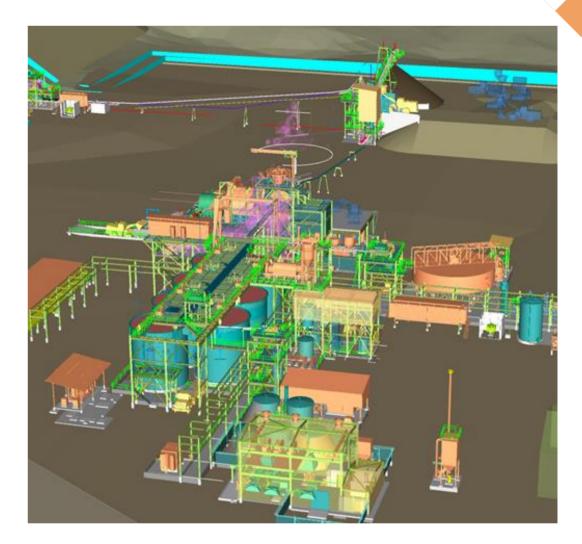


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# Séguéla Gold Project

Sector	Resources
Client	Fortuna Silver Mines Inc
Location	Côte d'Ivoire
Commodity	Gold
Scope	Design, supply and project delivery services
Processing Capacity	1.25 Mtpa



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### **Tailings Retreatment Project**

Sector	Resources
Client	Talison Lithium
Location	Greenbushes, Western Australia
Commodity	Lithium
Scope	Engineering, Procurement and Construction (EPC) services
	Awarded and delivered via Mondium
Processing Capacity	2 Mtpa



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### **Motheo Copper Project**

Sector	Resources
Client	Sandfire Resources Ltd
Location	Botswana
Commodity	Copper, Silver
Scope	Engineering, Procurement and Construction Management (EPCM) services
Processing Capacity	3.2 Mtpa



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# **Cobre Ball Mill 6 Project**

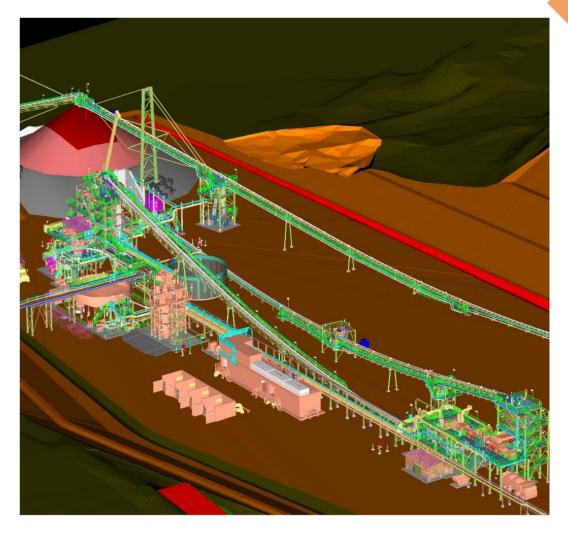
Sector	Resources
Client	First Quantum Minerals
Location	Panama
Commodity	Copper, Gold, Silver, Molybdenum
Scope	Engineering Design, Procurement Support (Ep) and construction/commissioning support services
Processing Capacity	100 Mtpa



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#### **Navachab Gold Mine Expansion**

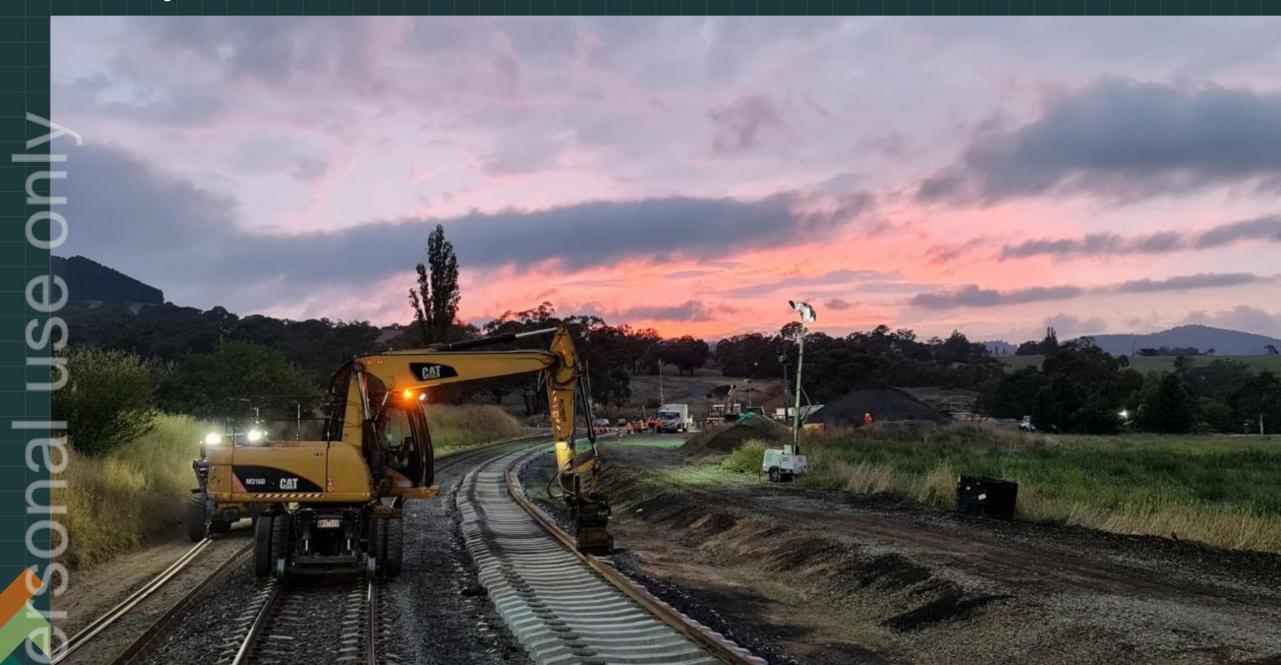
Sector	Resources		
Client	QKR Namibia Navachab Gold Mine Pty Ltd		
Location	Namibia		
Commodity	Gold		
Scope	Engineering and Procurement (EP) services – subsequently awarded CM scope		
Processing Capacity	2.5 Mtpa		



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### **Recently Awarded New Work**



#### **Recent Awards**

#### Resources

Project	Client	Location	Commodity	Scope
Chemical Grade Processing Plant #3 (CGP3)	Talison Lithium	Western Australia	Lithium	Engineering, Procurement and Construction Management (EPCM) services
Phase 1 Integrated Project	Lepidico	Namibia & UAE	Lithium	EPCM services
Navachab	QKR	Namibia	Gold	EPCM services
Lithium Hydroxide Plant 2 (LHP2)	Tianqi Lithium	Western Australia	Lithium	Professional services for the LHP2 Recommencement Project Phase 1, including project strategies and engineering



#### **Recent Awards**

30

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#### Infrastructure

Project	Client	Location	Scope
Country Regional Network (CRN) 25 tonne Axle Load Upgrade Assessments – various lines	John Holland Rail	NSW	Engineering investigation of the current condition of various operational lines across the CRN and development of a capital scope of works to increase the axle loading to 25 tonne/axle
Pacific National Yard Maintenance Delivery	Pacific National Maintenance	NSW	Managing contractor for the delivery of various maintenance works at Port Kembla and Kooragang Island
Reid/Erindale Grade Separation	Main Roads WA	WA	Project Management services
Kwinana Rail Terminal Expansion	Aurizon	WA	Yard upgrade concept master plan
Picton to Colo Vale Line Track Upgrade and Extension	Transport Heritage NSW (THNSW)	NSW	Project Management services





#### **Recent Awards**

#### Industrial Processes

Project	Client	Location	Scope
CSL Seqirus Flu Cell Culture	CSL Seqirus	VIC	Design Consultancy services
Chlor Alkali Facility	Coogee Chemicals	WA	Design Consultancy services
Synchrotron Biosax Beamline	ANSTO Synchrotron	VIC	Site Construction and Safety Management services
Nitrogen Vaporizer	Boeing	VIC	Design and Construct
Through Air Dryer/Dry Ingredients Milling	Thales	NSW	Design Consultancy services
Hydrogen Project	JGC/Rio Tinto	QLD	Documentation Compliance and Consultancy services

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### **Outlook and Strategy**

#### Outlook

- Resource sector activity remains strong, supporting new development and sustaining capital opportunities going forward – value of iron ore reached an all-time high in FY2021 and demand for gold continues
- Surging demand for resources used in new and low emission technologies is driving the development of copper, nickel cobalt, graphite, vanadium and lithium assets
- Ongoing growth in emerging markets, including waste and recycling, water and wastewater and hydrogen
- Full year FY2022 guidance revenue of approximately
   \$250 million and NPAT between \$19 and \$20 million

#### Strategy

- Development of a more formalised footprint in the renewable energy sector with the establishment of Lycopodium Energy
- Focus on achieving broader geographical reach across Asia-Pacific and the Americas
- Balanced project delivery portfolio mix of EPCM and EPC
- Grow recurring revenue streams
- People Plan continue to attract, engage, inspire and retain a high performing, global, professional workforce
- Innovation and emerging technology digital twinning (ADP and Orway IQ) and Future Battery Industries Cooperative Research Centre (FBICRC)
- Improved knowledge management driving increased efficiency and facilitating work sharing across divisions and subsidiaries globally

### Thank You

