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## NICK PARTRIDGE

### PROFILE

Nick is an experienced and accomplished process engineer and study manager with over 30 years of experience working across multi-disciplinary roles within the resources sector.

Nick has specialised in process design, development and improvement projects in African leach plants, Australasian Aluminium smelting and coal preparation plants (CHPP), and European casting furnaces.

Throughout Nick's career, he has worked on both sides of the operations and project interface.

Nick has consistently demonstrated technical and leadership skills in organisational transformation, managerial competency, continuous operational improvement and health and safety while being agile in adapting to a technologically changing environment.

### SPECIALISED SKILLS

**METALS**  
**COAL**  
**RARE EARTHS**  
**STUDY LEADERSHIP**  
**PROCESS ENGINEER**  
**PROJECT MANAGEMENT**  
**OPERATIONAL LEADERSHIP**  
**PROCESS OPTIMISATION**

### EXPERIENCE

#### **PROJECT ENGINEER - PROCESS / LIBERTY GFG / WHYALLA S.A. / 2022 - 2023**

*LIBERTY GFG – the successor to BHP/OneSteel. Integrated steelworks producing "long products" such as rail track*

Nick was initially engaged as a small team member to guide and assist in restoring process and operational control in Coke Ovens operations following the de-manning of the technical support team following a period in receivership. Liberty has now recruited full-time, experienced engineers from overseas, after which Nick's team was demobilised.

Following his team's demobilisation, Nick was poached by a department-based projects team.

With this projects team, Nick had the twin focus of:

- \* Interfacing between operations and the projects team.
- \* Updating process records and systems (generating Flow Diagrams, isolation schedules and refreshing Piping and Instrumentation Diagrams [P&IDs]).

These updates were in preparation for the planned closure of the site's ironmaking stage.

The closure is part of the transition to green steelmaking due by 2025.

The Coke Ovens department's closure has been bought forward to ~Easter 2023 for financial reasons, and the project team has been laid off.

This was a FIFO role.

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### **ALUMINA PROJECT LEADER / QAL / GLADSTONE/ 2020 - 2021**

*Queensland Alumina Limited is one of the largest alumina refineries in Australia.*

A short-term engagement progressing one project within a portfolio defending QAL's licence to operate.

Nick developed the alumina loadout dust elimination project putting it back on track to achieve delivery within the DES agreed on timeline.

This was a Brisbane-based role with regular site weeks and (COVID) working from home.

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### **PROCESS ENGINEER / SEDGMAN PTY LTD / BRISBANE/ 2019 - 2020**

*Sedgman is a leading provider of mineral processing and associated infrastructure solutions to the global resources industry*

Shift commissioning process engineer for two CHPP (Hunter Valley, NSW) from the tail end of construction to practical completion, working with the completions team to resolve issues and ensure a smooth and timely handover to operations.

Delivering the final stages of detailed design for a Queensland CPP project:

- Developed and documented process operation and maintenance manuals
- Managed project resources (*ISOs, models, etc.*) accuracy of P&IDs and GAs redlining amendments and then went back to confirm the accuracy of the re-work.

Nick led a set of operations improvement and transformational projects for operating plants, including an additional stage of slime removal ahead of flotation and realigning pipework to eliminate blockages.

This was a Brisbane-based role with site work for commissioning.

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### **TECHNICAL SUBJECT MATTER SPECIALIST /CONTRACT ENGINEERING PROJECTS / M-PM LTD/ VARIOUS LOCATIONS/ 2014 - 2019**

Undertook various asset improvement projects for numerous engineering consulting organisations as a subject matter expert SMS, include:

- Various on-demand asset inspections/ diagnostics (via. GHD for a range of asset owners):
  - Asset condition audits and plant-based de-risk assessments
  - Discovered transformational opportunities for asset improvements
  - Plant integrity diagnostics
  - Developed long-term asset replacement schedules
  - Maintenance forecast cost and tactical planning
  - Work independently to perform plant safety audits
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- Demand Assessment (Energy Supply diagnostics) – qualitative and quantitative assessment to determine power substitution options during peak energy demand periods using idle but high operating cost network assets (NZ)
  - Study Management (*Johnson Matthey UK: below*)
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**STUDY MANAGER, INC. PROJECT LEAD & CONSTRUCTION MANAGER/ JOHNSON MATTHEY - PRECIOUS METAL REFINING/ UNITED KINGDOM/ 2014 - 2015**

*JM is a Financial Times Stock Exchange 100 Index-listed producer of catalysts and chemicals.*

Project Manager; led a portfolio of environmental projects; dust extraction upgrades, change facility upgrades and managing asbestos removal.

Developed cost estimates and led design reviews.

Study Leader: coordinating process technology change to increase plant capacity, and develop new process routes and the capabilities required to future-proof JM.

Construction Plant Manager; coordinated plant monitoring and reporting systems for induction, permitting, health, safety and training. Development of new plant elements included into site-wide systems – from equipment numbering to maintenance schedules (*with maintainer training*); operated multiple shifts with operators providing operational support to ensure the low impact incorporation of the new equipment into the process.

**ACHIEVEMENTS IN ROLE**

- Established cross-functional stakeholder groups through which the sponsor was able to develop the project charter.
- Managed process feed system installation, mitigating health and safety risks and optimised feed rate targets.
- Developed and designed functional process control specifications of multiple vendors to align with plant standards to ensure process design safety and operability.
- Operations performed to a high quality with Zero Harm (no health, safety and environment issues [HSE])
- Developed and implemented operational logistics strategies to exceed operational performance benchmarks

This was a London-based site role.

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**GAP YEAR / TRAVEL & GAIN ACCREDITATION/ 2012 – 2014**

*Took some time off work to travel to the UK to assist in settling my parents' estate upon the passing of my mother*

Attained PMP®

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**PRINCIPLE PROCESS ENGINEER / BATEMAN ENGINEERING PTY LTD / BRISBANE / 2008 - 2012**

*Bateman was a South African-based consulting process engineering design house; Nick worked in a process group created to transfer proprietary technologies into the Asia Pacific region through the development of turnkey projects.*

Nick led studies from concept to feasibility for a wide range of products and locations.

Study development included mass and energy balances, options studies,

Nick's experienced analytical skills enabled rapid design optimisation.

Nick approved as RPEQ designs, including PFD's for a range of plants including chemical-metallurgical recovery plants.

Conducted factory inspections, including long-range visits to South African vendors and carried out technical sales visits with progress presentations and scope negotiations with clients in Ukraine and Lithuania.

Nick developed high-level communication skills that enabled him to win ongoing work during visits made without a project manager.

**ACHIEVEMENTS IN ROLE**

- On-site engineer (commissioning & field engineering) during the commissioning and start-up of a significant plant in Southern China, including long periods as the only company representative in-country.
- Identified an internal capability that was used in an innovative and different way than originally intended enabling Bateman to deliver an expected 180-person day of plant measurement campaign within 20-person days — much appreciated by the client, which led to higher-margin work. A measurement technique that is now the industry standard.

**SENIOR ENGINEER / ALCAN ENGINEERING PTY LTD (NOW PART OF RIO TINTO ALCAN) / BRISBANE / 2003 - 2008**

*2IC of the team responsible for delivering specialised materials handling technologies throughout Australasia both within Alcan and to external customers.*

Design Leader responsible for multiple projects at various stages of their life cycle and team member for Lean 6σ [six sigma] black belt equipment study.

Nick also undertook the Area Study/Design Leader role for the alumina handling system upgrade part of the Gove alumina refinery G3 project (*\$3b project, alumina handling \$20m*).

- Directed discipline engineering design from charter and board approval through to the end of the design of the system
  - This sub-project came online before the capacity was required
  - Relocated to the site to carry out field engineering to support plant construction
  - Planned the installation of brownfield components, including several temporary systems, with a minimal number of short shutdowns to maintain plant production
  - Avoided significant plant outages by securing the trial assembly of one of the main plant elements. Thus, permitting its installation at the first attempt at the top of an 80m tower and avoiding significant plant outage
  - Transferred into the owner's commissioning squad, guiding start-up and supporting plant ramp-up.
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#### ACHIEVEMENT IN ROLE

- Nick's first PM role included coordination a set of floundering environmental improvement projects for an aluminium smelter, taking the original projects through to completion and generating an additional 18-month pipeline of work.
  - Internal ISO Auditor
  - HAZOP trained
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#### OPERATIONS EXPERIENCE

##### **ALCAN ROLLED PRODUCTS UK / SOUTH WALES, UNITED KINGDOM**

- Process Specialist
- Multiple self-motivated small asset improvement and optimisation projects within an operations environment.

##### **NEW ZEALAND ALUMINIUM SMELTERS LIMITED / INVERCARGILL, NEW ZEALAND**

- Specialist Process Improvement Engineer
- Leader Dross Project
- Development Engineer – Technical Group

##### **HUNTER PROCESS TECHNOLOGY LIMITED/ UNITED KINGDOM**

- Project Engineer
- Designed, Set up, Managed Pilot Plants

##### **ZAMBIA CONSOLIDATED COPPER MINES LIMITED, NKANA DIVISION, ZAMBIA**

- Assistant Superintendent Technical – Copper Smelter
  - Plant Metallurgist – Acid Plants
  - Plant Metallurgist & Metallurgist – Cobalt Plant
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#### EDUCATION

##### **BACHELOR OF SCIENCE (HONS), METALLURGY**

University of Surrey, Guildford,

##### **DBA [POSTGRADUATE DIPLOMA IN BUSINESS ADMINISTRATION], UNIVERSITY OF WALES COLLEGE**

Newport, South Wales

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#### TRAINING

- Project Management Professional [PMP®] certification from the Project Management Institute, Inc.
  - Registered Professional Engineer of Queensland [RPEQ]
  - Member of the Australasian Institute of Mining and Metallurgy [MAusIMM],
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