

CURRICULUM VITAE

NAME: Kieren Petty

YEAR OF BIRTH: 1989

ACADEMIC QUALIFICATIONS:

Bachelor of Engineering Science 2015 The University of Queensland

Master of Engineering Science 2020 The University of Queensland

PROFESSIONAL QUALIFICATIONS:

Member, The Institution of Engineers Australia

CAREER APPOINTMENTS:

2025 - Senior Engineer, Gilmore Engineers Pty Ltd|E3k
2023 - 2024 Consulting Engineer, Gilmore Engineers Pty Ltd|E3k
2022 - 2023 Design engineer, Everhard Industries
2020 - 2021 Hydraulic engineer, Storm Water Consulting
2019 Software Engineer, Storm Water Consulting
2017 - 2018 Graduate Electrical Engineer, Wood and Grieve Engineers

AREAS OF EXPERIENCE AND EXPERTISE:

Machinery Failure / Forensic Engineering

Inspection, failure analysis, and root cause analysis of significant machinery failures and cracking.

- SAG and ball mills: bearing failures
- Excavators
- Feeder Breaker Chain failures

Motor Vehicle Accidents

Motor vehicle accident analysis and reconstruction, of incidents involving a single vehicle or multiple vehicles, including passenger cars, prime movers and trailers, trucks, motorcycles, marine vessels, or buses.

- Pre-incident speed analysis
- Tyre tread analysis
- Stopping distances calculation
- Position of vehicle pre-impact
- Oil on road analysis
- Reaction time analysis

- Accident reconstructions
- Taillights on/off analysis
- Motorcycle impacts

Personal Injury

Occupational health & safety, system of work assessments and investigation and analysis of injuries and fatalities from:

- Workplace incidents
- Ergonomics
- Chair failures
- Cumulative trauma disorder
- Lifting, pushing, pulling injuries

Fit For Purpose Assessment

Forensic Engineering reviews and assessments of machinery and products where legal claims have arisen over fitness for purpose.

- Vehicle operation
- Vehicle maintenance
- Vehicle modifications
- Medical chairs

Fire & Explosions

Building, plant, machinery, and motor vehicle fires & explosions. Analysis and ignition source identification.

- Haul truck fire
- Excavator fire
- High voltage electrical equipment explosion

Product Design, Analysis, and Testing

Turning ideas and innovations into successful products through meeting rigorous testing and certification requirements.

- Concept review, generation, and development
- Detailed design and 3D modelling
- Design to Australian or International Standards
- Design for Manufacturability – Injection Moulding and Roto Moulding
- Biodegradable plastics
- Rapid prototyping

BIOGRAPHICAL NOTES

Mr Petty joined Gilmore Engineers Pty Ltd | E3K as a Consulting Engineer in 2023. Mr Petty has contributed significantly to Gilmore Engineers Pty Ltd | E3K by providing expert opinion and writing expert reports on a number of cases before the courts.

Mr Petty received his Bachelor of Engineering with an extended major in Mechatronic Engineering from the University of Queensland in 2015. He completed a Master of Engineering Science in Materials and Manufacturing Engineering in 2020 from the University of Queensland. His undergraduate thesis focused on using computational methods to analyse in situ combustion efficiency using infrared spectroscopy. Mr Petty's postgraduate thesis focused on the biodegradability of biodegradable polymers in an anaerobic environment.

Some career highlights of MR Petty include the following:

Thus far in 2025, Mr Petty has been involved in a range of cases from personal injury to car accidents.

In 2024, Mr Petty investigated an excavator that was leaking flammable liquid that had caught fire after the engine had been turned off. The excavator was determined to have caught fire as a result of flammable vapor igniting off the heat of the recently turned off engine

In 2023, provided support to Dr Hope on a number of cases. Whether a second-hand Austin Martin was fit for purpose after it had been resold without appropriate root cause analysis of defects found in the vehicle. The vehicle was determined not to have been fit for purpose.

In 2022, Mr Petty began working as a design Engineer at Everhard Industries (EI). Throughout his tenure at EI, he was involved in designing, developing, and implementing multiple products. These products were made from precast concrete, injection moulded polymer, and rotomolded polymer products. He developed skills in Finite Element Analysis (FEA), design for manufacturing (DFM), and project management.

In 2019, Mr Petty was engaged by Storm Water Consulting (SWC) to update and develop key software applications for their business. He was able to implement the desired improvements, which significantly reduced SWC's labour costs through a reduction in repetitive menial tasks, future-proofed their business, and provided SWC with a competitive edge against their opposition. Mr Petty later transitioned to a Hydraulic Engineering role at SWC in 2020. In this role, he excelled at creating and analysing flood models. He was able to develop skills in creating formal report documentation and managing client expectations.

In 2017, Mr Petty worked as a Graduate Electrical Engineer at Wood and Grieves Engineers, now a part of Stantec. Here, Mr Petty worked in building services, providing drafting and engineering support to project engineers. This included working on an energy audit and providing energy-saving recommendations for Brisbane City Council pool operators. Through this experience, Mr Petty practiced key skills relating to project management, design principles, and stakeholder engagement.