

JOSH WALL

Mechanical Design Drafter | Inventor · AutoCAD · Fusion

Warabrook NSW | 0488 160 610 | josh.wall97@gmail.com

joshwall.io | [LinkedIn](#)

PROFESSIONAL PROFILE

Recently qualified Mechanical Design Drafter (Diploma of Engineering), currently completing the Advanced Diploma. Produces AS 1100 detail, assembly and fabrication drawings in Inventor and AutoCAD.

Mechanical design lead for the University of Newcastle team that placed fourth in the Warman Design & Build International Final, supported by 24 courses of undergraduate Mechatronics and Software Engineering study.

Experience in the workshop of an industrial wastewater-equipment manufacturer, fabricating parts and kitting builds from drawings and BOMs; meaning drawings are produced with manufacture in mind.

Seeking a junior mechanical drafting or design role.

TECHNICAL SKILLS

CAD: Inventor (parts, assemblies, drawings, surface modelling, rendering); AutoCAD (2D detailing); Fusion (parametric modelling, 3D-print prototyping).

Drafting to AS 1100: Detail, assembly and fabrication drawings; third-angle projection; section views; exploded isometrics; parts lists and BOMs; limits and fits; surface finishes and rendered models; GD&T fundamentals (flatness, parallelism, datums); weld symbols; title blocks, revisions and drawing registers.

Design & analysis: Concept development; design for manufacture and assembly; statics, beam and stress calculations; materials selection; fit and clearance calculations; 3D printing; Excel calculation models.

Workshop & quality control: Parts manufacture and assembly; work from fabrication drawings and BOMs; picking and kitting; drawing and BOM discrepancy reports; fabrication and functional-test support; inspection and calibration.

Also: Proactive maintenance strategy (RCM, TPM, FMECA); project coordination (WBS, Gantt); WHS risk assessment; MATLAB, C, C++.

SELECTED DRAFTING & DESIGN PROJECTS

Available for review online at joshwall.io

TAFE NSW Drafting Coursework

2025 – 2026

- AS 1100 assembly and fabrication drawing sets in Inventor and AutoCAD.

Warman Design & Build Competition – University of Newcastle

2023

Mechanical Design & Prototyping Lead | Fourth Place, International Final

- Led the mechanical design of a four-person team's autonomous vessel-handling machine within size and mass limits, modelling components and assemblies in Fusion.
- Designed and iteratively prototyped 3D-printed and machined parts.
- Assembled and tested the machine against the competition scoring criteria.

EDUCATION & ACADEMIC ACHIEVEMENTS

TAFE NSW – Tighes Hill, NSW

Feb 2025 – Present

MEM60122 Advanced Diploma of Engineering (Mechanical)

Expected 2027

MEM50222 Diploma of Engineering – Technical (Mechanical)

2026

AVI30419 Certificate III in Aviation (Remote Pilot)

2026

University of Newcastle – Callaghan, NSW

2016 – 2023

Diploma in Engineering (Exit Award)

Study completed, pending award

Undergraduate studies in Mechatronics and Software Engineering: 24 courses.

Relevant results: Sustainable Engineering Practice (HD, 97); Engineering Complexity (HD, 92); Engineering Fluid Mechanics (D, 82); Engineering Risk & Uncertainty (D, 82); Mechanical Engineering Design 1 (D, 81).

Award

Hunter Water Undergraduate Scholarship

2016

PROFESSIONAL EXPERIENCE

MAK Industrial Water Solutions – Cardiff, NSW

Sep 2026 – Present

Water Treatment Consultant

Industrial water and wastewater treatment group that Baldwin Industrial Systems merged with.

Baldwin Industrial Systems – Cardiff, NSW

Sep 2025 – Sep 2026

Workshop Assistant / Stores Person

Manufacturer of oil-water separators, dissolved air flotation units and oil skimmers for industrial wastewater treatment.

- Worked from fabrication drawings and bills of materials to identify, manufacture, pick and kit components for each build; flagged drawing and BOM discrepancies.
- Replaced rough Inventor models of gearboxes and motors with manufacturer-configured models so drawings matched the parts on the build.
- Assisted tradespeople with the fabrication, assembly and functional testing of oil-water separators, dissolved air flotation (DAF) units and oil skimmers.
- Received, checked, stored, issued and replenished parts, materials and consumables; kept stock locations orderly to support workshop schedules.
- Operated a forklift (LF) and gantry crane for materials handling; packed and dispatched completed systems, spare parts and consumables in line with WHS procedures.

Newcastle & Gladstone Safety Servicing – Cameron Park, NSW

Jun 2021 – Aug 2022

Service Assistant

Servicing and certification provider for gas detection, breathing apparatus, confined-space and working-at-heights equipment.

- Serviced, calibrated, inspected and repaired customer equipment in the workshop and on client sites; worked to manufacturers' instructions, Australian Standards and statutory requirements.
- Managed service jobs in ServiceM8 from receipt and assessment through completion and dispatch, attaching certificates and reports to each job.
- Maintained the calibration, service and inspection status of workshop equipment; restocked service vehicles and consumables before field runs.

Other: Hospitality roles, 2017–2020 (Calais Estate Winery; Sprout Catering; The Verandah Restaurant).

LICENCES & CERTIFICATIONS

High Risk Work Licence – Forklift (LF) · CASA Remote Pilot Licence (RePL) · Work Safely at Heights (RIIWH204D) · Construction Induction (White Card) · Full NSW Driver Licence (C)

REFERENCES

References available on request.