

Position Description



Position Title	Principal Hydraulic Engineer
Position No	00090466
Delegation Level	007
Job Designation	Civil Engineer (Qld Rail Generic PT3)
Organisational Unit	Structural and Civil Engineering SEQ Assets
Work Centre	Brisbane
Position Type	Permanent
Rail Safety Worker	Yes
Medical Fitness Standard	NHS Cat 3 ATTP
Performance Plan Type	
Shiftworker	No
Classification (Range)	PT5 .1 - PT5 .4
Pay Scale Type	ASPT
Reports to Position	Manager Structural & Civil Engineering

QUEENSLAND RAIL VALUES:

1 Queensland Rail - We do better together
Treat others with respect - We appreciate everyone's contributions and differences
Empower our people - We have confidence in our people
Act Safely - We work safe, to go home safe
Make a positive difference - We learn from today, to improve tomorrow

Position Purpose

Provide specialist flood modelling, hydrologic and hydraulic engineering expertise, technical leadership and assurance to support Queensland Rail in managing flood risk, informing asset planning and investment, and delivering safe, reliable and resilient rail infrastructure outcomes.
Provide civil engineering services to support Queensland Rail in delivering quality, commercially focused civil engineering solutions across Network and other Queensland Rail Lines of Business.

Position Responsibilities

1. Lead the development, application and continual improvement of flood modelling, hydrologic and hydraulic assessment methodologies to support planning, design, maintenance and operation of Queensland Rail assets.
2. Provide expert advice and technical assurance on flood risk, drainage, waterway behaviour, climate resilience and asset vulnerability for complex and high-risk rail infrastructure issues and projects.
3. Plan, manage and review flood modelling investigations, studies and technical deliverables to ensure they are completed safely and to scope, programme, budget, quality and governance requirements.
4. Review, maintain and apply fit-for-purpose modelling standards, procedures, tools and quality assurance practices aligned with Queensland Rail requirements and relevant Australian and industry guidance.
5. Interpret and communicate complex modelling outcomes to internal stakeholders, project teams, operators and external parties, and support risk-based decision-making for flood preparedness, response, renewal and resilience initiatives.
6. Provide technical review and assurance of flood modelling inputs,



assumptions, methodologies, results and reports prepared by consultants and internal practitioners, and endorse recommendations where delegated.

7. Contribute to asset management, standards development, incident investigations, business cases and capital works planning through the provision of specialist flood and hydraulic engineering expertise.
8. Build organisational capability by mentoring engineers and modellers, promoting good practice, and supporting the development and adoption of improved modelling techniques, data use and digital tools.
1. Provide civil engineering design and documentation services as part of commercially valuable and effective civil engineering solutions to Queensland Rail businesses.
2. Provide design and documentation for railway civil engineering infrastructure projects.
3. Maximise commercial outcomes by initiating, developing and reinforcing strong stakeholder relationships and by applying high quality influencing, advocacy, resolution and communication (verbal and written) skills.
4. Take a central role as a specialist in a team of engineering professionals, including multi-disciplinary project-based teams to ensure delivery of effective and commercially valuable civil engineering solutions.
5. Propose, develop and implement business improvements, technology development and innovation to generate commercial advantage and outcomes.
6. Meet the requirements of professional practice and/or the Quality Management System to provide consistent output of civil engineering services and advice, ensure compliance with safety, operational and environmental Legislation, regulations and practices.

Additional Factors

The appointee will be required to :-

- Comply with Queensland Rail's Code of Conduct;
- Observe all legal and safety obligations of the organisation;
- Attend further training as required;
- Travel interstate and intrastate as required;
- Work outside normal working hours;
- Undergo annual performance appraisal.

What is the key selection criteria

1. Extensive knowledge in flood modelling, hydrologic and hydraulic engineering within a civil engineering environment, including the provision of high-quality specialist advice and technical solutions.
2. High level of skill in the planning, management, design, assessment and documentation of hydrologic and hydraulic engineering projects, including experience with hydraulic modelling, civil design and geographic information system applications.
3. High level communication and influencing skills, with the ability to provide mentoring, coaching and knowledge sharing to support the development of engineering capability and promote good practice.
4. High level of interpersonal and negotiating skills, with the ability to build effective stakeholder relationships and work autonomously to achieve business outcomes.
5. Extensive knowledge of relevant statutory, regulatory, safety, environmental and governance requirements to ensure compliance in the

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delivery of engineering services.

6. Knowledge of and willingness to commit to and work within Queensland Rail's Values and Behaviours.
1. Substantial level of skill in delivering civil engineering solutions in several of the following fields to meet operational requirements and deliver commercial value to Queensland Rail through design, analysis and evaluation, asset management, infrastructure maintenance, construction and supervision, inspection/assessment/auditing, commissioning, and research and development.
2. Substantial skill in project and resource management, budgets and meeting deadlines to deliver business focused engineering solutions.
3. Substantial skills in relationship management and problem solving with multiple, diverse and often complex stakeholders.
4. Substantial skills in co-ordinating small teams in a project based environment that achieves commercial outcomes through continual improvement and innovation.
5. Substantial level of civil engineering skill in the context of a major infrastructure environment in several of the following fields: design, analysis and evaluation, asset management, infrastructure maintenance, construction and supervision, inspection/assessment/auditing, commissioning, and research and development.
6. Substantial knowledge of the legal and regulatory environment applying to railway infrastructure projects.
7. Knowledge of and willingness to commit to and work within Queensland Rail's Values and Behaviours.

Pre-employment Checks:

Not Applicable

Pre-employment Qualifications:

What qualifications do I need to hold prior to applying for the position?:

20100195 Bach Eng - Civil

Health, Safety and Environment Responsibilities

Comply with the overarching document called Health, Safety and Environment Responsibilities MD-11-6843 located in the Safety and Environment Management System.

Personal Protective Equipment needs:

Head and Face protection
Eye Protection
High Visibility Clothing
Safety Footwear
Miscellaneous

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Safety Publications

Civil Engineering Publications Safepol 5
QR Weekly Notice
QR SMS - Specifications (Complete Set)
Annual Safety Plan
C.E.O.'s Safety Statement
Alcohol and Drug Policy Card
C.E.O.'s General Safety Rules
Professional Engineers Act
QR SMS Policy (Complete Set)
QR SMS Standards (Complete Set)

Please Note:

Queensland Rail has a random alcohol and other drug testing program.
Testing can occur anywhere, at any time, on any day.