



# Senior Traction and Electrical Engineer

## Position Description – Infrastructure

<b>Team:</b>	Electrical Sector Team	<b>Location:</b>	Auckland
<b>Reports to:</b>	Engineering Team Leader Traction and Electrical		
<b>Role Type:</b>	Permanent		

### About Us

#### KiwiRail’s Role in Aotearoa, New Zealand

KiwiRail, a proud State-Owned Enterprise, delivers sustainable and inclusive growth for our customers, communities, and people.

For more than 150 years, rail in New Zealand has connected communities, delivered freight and passengers around the country, and showcased our spectacular scenery to the world. Our purpose—Hononga Whaikaha, Oranga mo Aotearoa (Stronger Connections, Better New Zealand)—speaks to connection with our customers and the future needs of their businesses, connection with the communities we serve and operate in, and connection with each other. KiwiRail is carrying this legacy into the future, delivering connected rail and shipping transport services that create economic, social, and environmental value for New Zealand and New Zealanders.

#### Our Workplace

At KiwiRail, our values define the behaviour we expect from everyone. We have a team of over 4500 people, and every connection we make with each other, our union partners, our customers and all our stakeholders must be of the highest standard.



Safety, health, and well-being are our number one priority, ensuring our people return home safe and healthy every day.

## About the Role

### Purpose of the role

This role is to support Engineering in delivering technical excellence, continuous improvement, and satisfaction to our customers and stakeholders. The Engineering team have the core functions of Engineering Design, Engineering Advice, Codes and Standards, Assurance, and Asset Management.

The Senior Traction & Electrical Engineer will report to the Engineering Team Leader - Traction & Electrical and will be responsible for supporting with engineering aspects of design and maintenance work for railway infrastructure traction and electrical assets.

### Key Accountabilities

Within the area of responsibility, this role is required to:

- Provide expert technical advice for traction and electrical maintenance and upgrades.
- Produce and peer review design solutions for traction and electrical assets
- Support the development of asset management strategies for traction and electrical assets.
- Deliver and support maintenance and renewal projects, managing contracts and liaising with third parties.
- Lead and support traction and electrical engineering inspections.
- Deliver training and supervision of junior engineers, providing technical guidance and mentoring.
- Produce and review technical documentation, specifications, standards and instructions.

### Key challenges

- Manage Traction Layout Drawings as -Built drawings and work in hand schematics
- interpret and update Drawings & designs in line with Electrical regulations and current Standards

<b>Key Relationships</b> Here are the key relationships relevant to this role		Manage /Lead	Deliver to	Collaborate with	Advise or inform
Internal	Engineering Management Team		✓	✓	✓
	Engineering Staff			✓	✓
	Technical Director & Professional Heads		✓	✓	✓
	Operations and Asset Management		✓	✓	✓
	CPAD		✓	✓	✓
External	Consultants		✓	✓	✓
	Contractors		✓	✓	✓
	Suppliers		✓	✓	✓
	Relevant Authorities		✓	✓	✓

## What you will do to contribute

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### Engineering Design and Technical Advice

- Carry out and manage traction and electrical design and peer review.
- Lead and support engineering inspections of traction and electrical assets.
- Provide expert technical advice to customers and stakeholders.
- Assess third party applications that effect railway infrastructure and issue approvals for third party work, consistent with railway codes and policies.
- Attend incidents and provide engineering support to recover from an incident.
- Review and support the development of technical documentation, specifications, standards and instructions.
- Lead and support the scoping of traction and electrical projects, with a focus on innovation and continuous improvement.
- Establish project plans, timelines, and key milestones that support the effective delivery of the projects.
- Prepare contract documents and specifications.
- Liaise with and support the management of engineering consultants.
- Manage assigned projects to ensure completion within budget and timeframe.
- Ensure that all technical standards and requirements are met unless otherwise approved.
- Deliver training and supervision to junior engineers, providing technical guidance and mentoring.

### Asset Management

- Support the development of asset management strategies for traction and electrical assets.
- Collaborate with the business to assist in setting the strategic direction of asset management.
- Develop and recommend strategic asset management options based on scenarios which balance cost vs. risk vs. levels of service.
- Prioritise asset maintenance needs.
- Identify required capital works in conjunction with Operations/project managers.
- Maintain records and asset databases as required as part of maintenance and design processes.
- Participate in the Technical Committee.

### Assurance

- Review and interpret traction and electrical asset reports and make recommendations based on their findings.
- Review, update and develop KiwiRail technical standards.
- Provide quality assurance in line with KiwiRail requirements.
- Undertake and review investigations into asset and process failures.
- Review compliance reports.

### Risk Management

- Lead and support risk assessments and manage relevant asset risk registers.
  - Advise the business in the understanding and management of risks related to hazards.
  - Articulate and escalate risks appropriately.
  - Suggest and contribute to eliminating and/or mitigating risks.
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- Participate in Safety in Design (SiD) workshops and develop SiD registers to manage scheme and site-specific risks.

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**Learning and Development**

- Keep up to date with new engineering technology and techniques.
- Maintain good engagement with technical leaders and colleagues to ensure your technical advice aligns with KiwiRail best practice.
- Undertake on the job training across KiwiRail engineering disciplines and functions as required for personal and professional development and to keep skills up to date and relevant.

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**Health and Safety**

- Ensure safety, health and well-being is the first priority for you and your colleagues.
  - Ensure that engineering safety risks are being identified, managed, mitigated and where possible, eliminated.
  - Ensure compliance with rail safety system standards, procedures and statutory requirements within your area of responsibility.
  - Be responsible for your own safety and for providing a safe work environment for all KiwiRail employees, customers, contractors, suppliers, visitors and the community in your area of responsibility.
  - Be responsible for the reporting and initial control of any safety or environmental hazard or incident identified by you or brought to your attention.
  - Undertake Safe work conversations in the workplace.
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## Decision Making

The position is responsible for decisions regarding all Engineering objectives and for the provision of advice to project team members and relevant stakeholders on day to day Traction & Electrical Engineering decisions.

Key decision-making requirements of the position include:

- Project management and Engineering delivery decisions
- Risk management decisions and Change request
- Design and scope amendments in line with Current standards

<b>Human Resources Delegations</b>	Nil
<b>Direct reports</b>	Nil
<b>Finance Delegations</b>	Nil
<b>Budget (operating and capital)</b>	Nil
<b>Travel Delegations</b>	Nil
<b>Statutory powers</b>	Nil

## Physical demands and the nature of work

This role is administration-based and some site attendance as and when required :

- prolonged sitting and high computer usage
- minimal walking, long standing, twisting, bending (at the waist), crouching (bend knee)
- carrying of laptop and paperwork when alternating between home and office
- limited lifting of up to 7 kg archive boxes

*Your role may include other tasks suited to your level, as your manager directs. This job description shows your current duties. We'll review and update it with you if your responsibilities change.*

## About you

### Knowledge and experience

- 8+ years' experience in a Rail Traction & Electrical Engineering environment.
- Experience with design and asset management
- Experience with Traction & Electrical design software and systems
- Preference with Bentley MicroStation /Power modelling software

### Ways of working / Work-related qualities

- Engaged and motivated to achieve business and group KPIs.
- Collaborative, respectful, engaging, and supportive within the team.
- Strong written and verbal communication skills, including the ability to effectively present information and advice to a range of audiences.
- Innovative, creative, and focused on continuous improvement.
- Customer-focused and driven to exceed service delivery expectations.
- Organised and able to manage conflicting demands in order to achieve deadlines and deliver responsibilities.
- Flexible and responsive to changing priorities as programmed and directed.
- Self-managing and able to work effectively without direct supervision.
- Self-aware and motivated to contribute personal strengths and identify and develop areas for personal improvement.

### Qualifications

You need either:

- Tertiary Qualification in a relevant Engineering Discipline
- Chartered Engineer or working towards becoming chartered desirable
- Relevant post-grad qualification desirable
- Equivalent International Qualifications or demonstrated extensive experience in Traction and Electrical Engineering

**CREATING  
STRONGER  
CONNECTIONS**

The KiwiRail logo is displayed on an orange background, featuring the company name and the stylized kiwi tail feather graphic.