



## Role Description

<b>Title</b>	Base Engineer (Water)	<b>Incumbent</b>	
<b>Manager's Title</b>	Engineering Supervisor	<b>Date of Last Review</b>	January 2023
<b>Team</b>	Engineering	<b>Location</b>	Scott Base
<b>Work Environment</b>	This role will require the incumbent to travel to Antarctica for an extended period which requires a medical clearance.		

### Organisational Context

Antarctica New Zealand is a Crown Entity established on 1 July 1996 under the New Zealand Antarctic Institute Act to develop, manage and execute New Zealand's activities in respect of Antarctica and the Southern Ocean.

Our key activities include facilitating scientific research in Antarctica, protection of the environment and raising public awareness of the global significance of the continent and surrounding Southern Ocean.

Antarctica New Zealand operates in a hazardous environment. The management of safety and risk are critical to achieving the New Zealand Antarctic programme objectives. The highest standards of environmental care and responsibility are required in all tasks.

This role is responsible for ensuring that the facilities at Scott Base are well maintained and operated to contribute to ongoing availability of a base for New Zealand's activities in Antarctica.

### Our Goal for New Zealanders

New Zealand continues to play an influential role in the kaitiakitanga (guardianship) of Antarctica and the Southern Ocean as a natural resource devoted to peace and science.

### Role Purpose

To safely operate and maintain the facilities and engineering equipment at Scott Base, with a focus on water production, water reticulation and wastewater treatment.

### Work of Role

- Fulfil accountabilities as documented in the Health, Safety and Environmental Management Systems including proactive management of risks and resources to prevent harm.
- Fulfil accountabilities as described in the Information and Records Management Policy for creating and centrally storing accurate and complete records.
- Use our asset management software (Smart Asset) to plan, execute and record all routine and non-routine maintenance or improvement work undertaken.
- Perform daily operational tasks and data collection for the water production (Reverse Osmosis plant) and waste water treatment plant facilities, including documentation of readings and observations.
- Observe all necessary hygiene procedures when working with wastewater treatment or wastewater reticulation equipment.



- Protect the potable water supply from contamination by using correct hygiene and disinfection processes, regularly inspecting water production assets and participating in risk identification and mitigation tasks.
- Conduct routine health and environmental testing of water and wastewater at Scott Base; facilitate independent testing and report on test results.
- Act as Duty Engineer on a rostered basis (usually one week in three).
- Routine servicing of water and wastewater pumps and tanks and kitchen equipment
- Maintain a clean and safe work environment.
- Update and maintain records of spares and materials used/held and assist with procurement of replacement items.
- Assist other engineering team members as required (including but not limited to completing the Power Engineer's daily rounds) and work as a team to maintain and improve plant.
- Support visiting contractors with asset maintenance and servicing work.
- Identify opportunities for process or system improvement and communicate these to the Engineering Supervisor.
- Proactively contributes to the overall base community.
- Rostered duties on the Scott Base Fire Crew and other base tasks as required.
- Any other tasks assigned by the Engineering Supervisor or SBLT.

### Key Challenges

- Continually maintaining hygiene standards around water production and waste water treatment to ensure personal safety and the safety of the community.
- Maintenance of engineering facilities which operate in a harsh environment.
- Working in challenging climatic conditions while continually considering environmental impacts.
- Participation in an on-call Duty Engineer roster and being able to respond to emerging issues at any time.
- Ability to maintain a positive outlook while under pressure and responding to rapidly changing priorities.
- Maintaining motivation and work quality (including repetitive tasks) 6 days a week for up to 13 months.
- Resilience to living in a small communal environment for up to 13 months (e.g. shared rooms, communal bathrooms etc).
- The location and role may place pressure on the physical and mental well-being of the incumbent (e.g. at times long work hours, 24-hour daylight/darkness); the incumbent's family and other close relationships.

### Key Functional Relationships

<b>Internal</b>	<ul style="list-style-type: none"> <li>• Engineering Supervisor</li> <li>• Scott Base Leadership Team</li> <li>• Engineering Maintenance Manager</li> <li>• Asset Management Engineers</li> <li>• Operations Solutions Manager</li> <li>• Planning and Delivery Manager</li> </ul>
<b>External</b>	<ul style="list-style-type: none"> <li>• United States Antarctic Programme personnel</li> </ul>



## Minimum Capability Necessary to Work to Role

Capability Area	Description
<b>Qualifications, Certificates and Memberships</b>	<ul style="list-style-type: none"> <li>• A New Zealand Trade Certificate (or recognised equivalent) in a relevant engineering discipline.</li> <li>• Hold a current First Aid qualification (Unit Standard 6401, 6402).</li> <li>• Hold a current Working at Heights qualification (Unit Standards 17600, 15757, 23229).</li> <li>• Hold a current confined space and gas detection qualification (Unit Standards 17599, 18426).</li> <li>• Be certified as 'medically fit' by Antarctica New Zealand's Medical Assessor.</li> <li>• Hold a current Full New Zealand Driver's Licence (Class 1) and be experienced in operation of vehicles with manual gearbox</li> </ul> <p>Preferable (but not essential) to hold:</p> <ul style="list-style-type: none"> <li>• A current Forklift Operator's certificate (Unit Standard 10851).</li> <li>• Water treatment/waste water treatment qualifications.</li> </ul>
<b>Knowledge, Skills and Experience</b>	<ul style="list-style-type: none"> <li>• At least 5 years post-qualification experience</li> <li>• General engineering maintenance and fabrication</li> <li>• Proficiency in computer use, particularly for record keeping.</li> <li>• Preferably some experience in: <ul style="list-style-type: none"> <li>• Water reticulation systems and plumbing</li> <li>• Waste water treatment</li> <li>• Water treatment</li> <li>• Building Management Systems</li> <li>• Pump maintenance</li> </ul> </li> <li>• Understanding of and commitment to tikanga and Treaty of Waitangi principles.</li> </ul>
<b>Judgement, Temperament and Influence</b>	<ul style="list-style-type: none"> <li>• Demonstrates the personal qualities required to fit in socially and professionally with a diverse range of people in a potentially stressful environment.</li> <li>• Able to work without direct supervision</li> <li>• Excellent communication skills</li> <li>• Ability to accept/provide feedback</li> </ul>

## Antarctica New Zealand Values

To honour our obligation to Antarctica:

- **Ka ngākau whiwhita tātou ki ā tātou mahi katoa**  
We are passionate about what we do
- **Ka tiaki tātou i a tātou anō, ka tiaki hoki i te taiao**  
We care for each other and the environment
- **Ka mahi tahi tātou**  
We work together
- **He ngākau pono ō tātou**  
We act with integrity
- **Ka whai tātou i ngā taumata tiketike**



We aspire to the highest standards

### **Role Authorisations**

I confirm that this Role Description accurately describes the work of the Base Engineer (Water) :

\_\_\_\_\_

GM Antarctic Operations

\_\_\_\_\_

Date

I accept this Role Description accurately describes the work of the role for which I am accountable:

\_\_\_\_\_

Base Engineer (Water)

\_\_\_\_\_

Date

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