

Auckland Council Engineering Graduate Programme

What will be the key activities of this position?

Engineering & Technical Services – Auckland Council’s Engineering and Technical Services Unit is a group of engineering and technical specialists, working with the Chief Engineer to provide engineering and technical expertise and advice, including the management of council’s high-risk assets. Key engineering fields / specialist practice areas are: Civil and Environmental engineering, Engineering Design, Geotechnical, Coastal engineering, Contracts, Risk management, Landfills and contaminated land engineering, H&S and Quality Control.

Healthy Waters – The four core areas are Operations, Planning, Strategy and Delivery. Operations involves managing the existing network including issuing maintenance instructions to our contractor, investigating flooding issues and dealing with residents. Planning involves preparing project briefs on options to alleviate flooding issues, renew aged assets and allow for growth, asset management as well as maintaining and preparing flood hazard models. Strategy involves high level issues such as setting our levels of service, preparing our Asset Management Plan, and other initiatives such as how Auckland will fit into the National Policy Statement for Freshwater Management. Delivery involves undertaking detailed design (either in house or through consultants) of Stormwater projects and managing the contractors who undertake the physical works.

Regulatory Engineering – When undertaking a land development or building project you are like to need to apply for a subdivision, land use, or building consent. When you do, the engineering aspects will need to be assessed against good local codes and standards. This assessment will be undertaken by the regulatory engineering team. You may also need to construct infrastructure assets such as drains or roads which ultimately will be owned and operated by Auckland Council. The Regulatory Engineering team will assess the design, provide engineering input, carry out site inspections and accept the assets into council ownership. Throughout the process, the team will liaise closely with the future asset owners, and work closely with the applicants to ensure that the assets created are fit for purpose and in accordance with council’s standards and the requirements of the asset group.

What are the day-to-day duties?

Engineering & Technical Services – Scoping and project managing the development of design and technical guidance, professional standards, technical specifications, practice notes, engineering codes of practice for the Infrastructure and Environmental Services Department (I&ES) and industry, to ensure all infrastructure meets council standards and requirements. Co- coordinate new products & materials approval process, assist with internal and external stakeholders engagements, liaise with development engineers and healthy waters key engineering staff and assist senior engineers with design reviews.

Healthy Waters – Investigating flooding issues, liaising with customers over Stormwater matters (including flooded properties), auditing and supervising contractors on site, undertaking water quality studies, undertaking catchment analyses, preparing options reports for small jobs, undertaking design, reviewing design of large jobs, project management of small physical works jobs, etc.

Regulatory Engineering – Assessment of applicants’ proposed designs and technical reports, and provide engineering input to the case managers (e.g. Building Control officers and Resource Consents planners), carry out site inspections, sign off assets to come into council ownership and provide confirmation that all engineering aspects have been satisfactorily undertaken prior to issuing building and subdivision completion certificates.

What exciting projects could I potentially be involved in?

Engineering & Technical Services – Review and development of the Stormwater Code of Practice, CoP- Network Utilities, development of Soakage Design Manual, Stormwater technical specification, Water Sensitive Design Guideline, revision of the TP10, TP58, TP108, etc. and development of new guidance documents, involvement in project management of selected academic research projects, costal assets – condition assessments, closed landfill and contaminated land capital projects, design reviews – e.g. Ports of Auckland \$25M project; Artillery Drive tunnel \$22M.

Healthy Waters – Graduates will have the opportunity to get involved in the projects that make up the Healthy Waters capital expenditure programme. This will range from multimillion-dollar tunnelling projects as part of Auckland Councils commitment to improving water quality in our inner harbour, to working on our programmes of work to: improve our stormwater treatment pond assets; and undertake ecological enhancement of Auckland’s streams and watercourses.

Regulatory Engineering – Projects that typically involve Regulatory engineers include Hobsonville, Long Bay, Flatbush, Millwater which provide housing for Aucklanders. Input to the Central Rail link, America’s Cup Village, Puhoi to Warkworth motorway extension. An intern will be able to contribute to other key projects and be part of enabling considerable regional growth for Auckland.

What skills will I develop in this programme?

Engineering & Technical Services – Engineering design review, technical report writing, technical editing and publications, contract management including project and budget management, risk management, communication, presentation, workshop facilitations, industry consultations, specialist engineering competency in landfill engineering and contaminated land management, as well as coastal engineering/management. Also, H&S and Quality Control /Audits, Risk management, etc.

Healthy Waters – Project management, options report writing, customer services, design experience, options analysis, time management and prioritisation, operation and maintenance of stormwater assets, asset management, hydraulic modelling.

Regulatory Engineering – Engineering regulatory requirements, communicating at the front line with customers such as developers and consulting engineers, review and assess the three waters, roading and networking with the major stakeholders like Auckland Transport, Watercare and Stormwater Unit.

What is some of the cool stuff I'll get to do?

Engineering & Technical Services – interviewing subject matter experts to establish the need for development or revision of design and technical guidance documents and/or standards assisting decision makers with design reviews and hands on application of their knowledge and work from first principals, assisting in gap analysis and developing scopes for development of new technical standards, participate in authoring specific technical publications for council and industry.

Healthy Waters – Seeing a project through its lifecycle, from identifying an issue, preparing an options report on it, recommending a preferred solution, preparing a concept and detailed design, procuring a contractor to construct the solution, and managing the physical works. In the private sector most grads would only be involved in one of two of the elements listed above for a given issue and they would be working to a client's expectation of a solution not having the opportunity to influence the nature of that solution.

Regulatory Engineering – Exposure to the different views of leading experts in the engineering fields on the three waters, and the opportunity to interact and learn from them. Be involved in creating the future of Auckland.

What's one thing you could tell me about these departments?

Engineering & Technical Services – opportunity for a graduate engineer to influence the engineering standards and consistency and be part of a team who (can) make a difference in the industry. Working alongside/together with a team of highly specialised engineers and scientists within ETS and across Council, with strong interface with our Council Controlled Organisations (CCOs), suppliers and industry bodies, provides for and it is a unique opportunity for young engineers to articulate strategic outcomes in improving infrastructure in Auckland.

Healthy Waters – Effective stormwater management is critical to both the health of our citizens and our local environment. Being part of the Healthy Waters department will allow you to have a chance to get involved with making a difference to our residents who experience flooding, improving the water quality of our streams and beaches and developing your skills as an engineer by seeing projects from issue identification through to design of a solution and managing the delivery of a physical resolution.

Regulatory Engineering – There is a huge demand for land development engineers in the industry especially for those who have a good understanding of Council's processes and position. If you're interested in a career in Engineering, there is no better place to get involved than the Council.