

Engineer Your Career

Information from Industry for Student Engineers

Issue 4, Semester 2 2008

Wanted - Civil and Environmental Engineers

Civil Engineering was the first engineering discipline for everything non-military. For our modern age it is increasingly in demand as huge numbers of civil and environmental engineers are needed to meet the international infrastructure development and environmental protection needs. China, India, Brazil and other countries with rapidly growing economies have major civil projects in development including dams, roads, bridges, railways, harbours, water supplies and sewage reticulation and treatment systems - these require many civil engineers.

In the western world many of these infrastructure systems were developed around the time of world war two and now are in need of replacement and upgrading. Engineering these solutions cost effectively, while minimising environmental impacts, requires new technological approaches and provides an exciting career challenge.

New Zealand construction and consulting engineering companies are constantly asking the department to provide more graduates to work in planning, analysis, design, supervision and management of large buildings, major transport developments, water supply and waste treatment upgrades.

The BE in Civil Engineering is an extremely portable qualification and our graduates have an excellent reputation internationally. New Zealand consultants and construction companies employ graduates to work here, across Asia, and around the world. Graduates also work in environmental policy and enforcement in local and national government as well as diversifying into a range of management roles.

Many graduates are very prominent in the engineering profession and have leading roles in New Zealand industry. Some prominent examples of graduates from the department of civil and environmental engineering who have used their analytical, practical and problem solving training in management and other endeavours are Dr John Hood - Vice Chancellor

of Oxford University, Chris Liddell - Chief Financial Officer of Microsoft USA, Andrew Grant - Director of McKinsey & Company's Shanghai Office (global management consultants) and Russell Coutts is one of the best known skippers and managers in the America's cup.

Hugh Morris, Dept Civil & Environmental Engineering, The University of Auckland
Tel 3737599 xtn 88186



Geotechnical engineer Peter Quilter - is a surfer and was looking for a degree that would put him in high demand and allow him to get out of the office. He did his BE(Civil) and is now an engineer for one of New Zealand's largest Geotechnical Engineering Consultants



Life at Tonkin & Taylor!

After graduating with a Bachelor of Civil Engineering in 2006 I have been employed by Tonkin & Taylor (T&T) in their Auckland office. Over the past 18 months I've come to understand that hands-on experience and working with senior engineers can really build your skills and knowledge base.

About Tonkin & Taylor

T&T is an environmental and engineering consultancy. Traditionally they have been known for their high quality, specialist geotechnical work but now encompass structural, civil, planning and water

engineering disciplines as well, all to the same high standards. T&T's head office is based in Auckland but offices are also located at Whangarei, Tauranga, Hamilton, Wellington, Nelson, Christchurch, Dunedin and Queenstown. T&T also has offices in Australia, Malaysia and the Philippines.

Life as a Geotechnical Engineer

As a graduate engineer in the Geotechnical Group my work consists of a wide range of activities and problems involving site investigation, drilling, design, analysis, and construction supervision work. A lot of responsibility is given to you early on as a graduate engineer at T&T in terms of management of your own smaller jobs including invoicing, meeting with clients, budgeting and many other management tasks. It's really great to see your own project progress from start to finish and be able to take ownership of your work.

I chose geotechnical engineering for a whole range of reasons. The main one was that I didn't see myself stuck in an office for the rest of my life but didn't quite fancy being out in the rain all winter either. Geotechnical engineering is the perfect mix! One day you can be out in the 4-wheel drive running around looking at landslides and the next day be using sophisticated computer software to analyse what you saw.

Geotechnical engineering encompasses slope stability, foundation design, retaining wall and basement design, ground improvement design, earthworks and site investigations. There is such a variety in my job that I can't really explain what a typical day consists of - it really does vary so much.

Recent Projects

Since working at T&T I have had the opportunity to work on some very interesting projects, including:



Tonkin & Taylor

Tauranga Harbour Link – this is the new bridge across the Tauranga Harbour. I was involved in this project looking at the likely settlements under the proposed embankment structures. This project made use of state of the art research on earthquake drains for liquefaction.

Newmarket Viaduct – this is an alliance project to replace the existing viaduct between Gillies Avenue and St Marks on-ramp in Newmarket. It was great working directly with the constructors, structural engineers, transport engineers and bridge designers from a number of other companies. I also found out how a large project fits together and the complexity of the design involved in a large project.

Earthquake Commission (EQC) work – this is a really unique opportunity for a geotechnical engineer to be able to inspect a lot of landslides and earthquake damage. It's good for your understanding of failure mechanisms and (hopefully!) what aspects to consider in your own design work. It's a fantastic job because it takes you out of the office a lot and involves working directly with loss adjusters, claimants, estimators and other engineers and geologists.



Rebekah McAteer

Training Opportunities

T&T is committed to providing high standards of training at all stages of your engineering career, whether you've been working for a year or a few decades. Engineering relies on keeping up to date with all the new technologies and research so training is a really vital part of the job. T&T also run informal in-house training sessions regularly throughout the year and also encourage staff to attend external courses and conferences.

A lot of the learning at T&T is done "on the job". I have found this to be the best way to learn new skills as it is easier to fully understand something when you have to use it in practice. All the senior staff at T&T are extremely friendly, approachable, always willing to share their experiences and help point you in the right direction.

Geotechnical engineering is a really dynamic and complex job. But the reason why I really like my work?...I love to go out and get my hands dirty every once in a while.

Rebekah McAteer
www.tonkin.co.nz



Schoolyard Challenge 2007



TRAFFIC DESIGN GROUP



Brett Young



OnTrack work



Drop off and Pickup Area

Brett Young graduated in 2007 with a Bachelor of Forest Engineering (Canterbury University), He has been employed with Traffic Design Group Limited for 12 months as a Transportation Engineer.

The Company

Traffic Design Group Limited is New Zealand's largest specialist traffic and transportation engineering consultancy, involved in the full range of traffic and transportation engineering services. Working for both the public and private sector we provide traffic engineering, traffic management and transportation planning, including environmental traffic management, road safety, transportation audits and design.

My path to Traffic Engineering – Brett Young

If you asked me where I thought I was going with my Forest Engineering degree when I started it back in 2003, I doubt Traffic Engineering would have come up. An interesting talk during the one of the engineering career days introduced me to Traffic Design Group and the transportation engineering field. That's the great thing about an engineering degree, you head down this specialised area of study only to find that you can apply the learning to just about anything you want once you leave the confines of the campus.

A trait we all share as engineers is an innate ability and liking to solving problems. Problems encountered during our studies generally involve application of some recipe, with one defined answer as a result - simple. What I've encountered and what I like about

the transportation engineering field is there are often many ways to go about solving a problem, with the solution not always being obvious. I draw a lot of my guidance for projects from the experienced staff around the office. Whether it be an intersection design problem or a traffic safety issue, a chat with one of the experts in that particular field is a great way to avoid headaches. There is definitely a team feeling about Traffic Design Group, an atmosphere I think is essential for a young engineer learning the ropes.

Some of the work areas I've been part of since joining Traffic Design Group include:

- Intersection Design
- Traffic modelling (including macro and micro simulation models)
- Safety analysis
- Site inspections
- Meetings with council / client / planners / architects
- Transportation assessment reports
- Car park layout design
- Sustainable travel plans

Projects we work on often involve a project team made up of architects, planners and clients, as well as staff from our other offices around the country. You really need to communicate well with these people. Traditionally, communication skills are not focused on at engineering school, though it is a skill promptly required and continually honed as you embark on your engineering career. I find working alongside the other professionals both interesting and rewarding as you can see your solution integrate with theirs.

Being able to confidently stand behind your contribution to the project as it goes through

the planning, design and approval process is most satisfying. Senior engineers at Traffic Design Group are literally required to stand behind and present our work should the project require assessment at the council planning hearing or Environment Court.

There is a strong emphasis on continued training at Traffic Design Group. I have been on a number of courses since I've started, including a week-long course in Christchurch.

The Social Side

I reckon you should be having fun whatever you are doing, with work being no exception. A highlight of the working year is the Traffic Design Group Weekend. The entire staff (partners and families included) from around the country are invited with an emphasis on it being a social gathering without too much talk of work. Our social calendar highlights include the annual fishing trip on a massive launch, an indoor cricket team, the Lake Taupo Cycle Challenge, corporate triathlons and heaps more. Every month we'll decide on something to do as an office as a change from our usual Friday evening wind-down in the office.

Overall I find the projects and work I'm involved in at Traffic Design Group challenging and rewarding. Mixed with that, the great team environment, support and the all-important social aspects, I know the move into Traffic Engineering has been the right one.

www.tdg.co.nz



Profile 1

Hi, I'm Paul, a civil engineer working in the Water Networks team. I specialise in water supply modelling, pipeline and pumping station design.

I began work at Harrison Grierson five years ago as a graduate right out of University. When I think back over the past five years I'm amazed at the rapid expansion of my technical skills since I left university. I think this is due to the opportunities I've had here. The Company has really invested in my career and helped me develop my skills.

The variety of work, right from my first day, has been amazing - the more interesting projects you get to work on, the more you learn and the more you can do. I use a wide variety of different technical skills on any given day.

I've worked on some great projects! One I really enjoyed was the Fisher Parade Wastewater Project; it's involved a large amount of site works and construction observation. The works took place in an environmentally sensitive area. It's satisfying to be minimising the impact of the works on the surrounding environment and to see things you

design progress from concept stage to being constructed.

What does the future hold for me at Harrison Grierson? I see myself furthering my professional development, expanding my skill set, and sneaking off to go skiing every so often (thanks to the work-life balance provisions offered by Harrison Grierson).

To describe the work environment, I would say there's a vibe about the place; it's really positive and social. I get inspiration from the people I work with everyday - on a professional, technical and personal level. People are always willing to get behind a good cause. Last year during November you couldn't go ten feet in the office without coming across someone with a tarantula on their top lip.

HG is a great place to work. There are always social sports teams or other activities to get involved in and a good crowd to have an "after-work-beer" with on Friday evenings. As well as a high standard of professionalism the people at HG have not forgotten how to have fun.



Profile 2

Hi, my name is Irina. I am a process engineer in the water treatment area. This involves a variety of work such as carrying out options studies into new water supplies, designing and upgrading water treatment plants and evaluating compliance with the relevant standards.

Like Paul, I've found one of the best things about working at HG (as those of us who work here fondly call it) has been the wide variety of work and learning how to apply the knowledge I gained at university on-the-job as well as learning a whole new set of skills. I've only been here a year, but I've already been involved in some great projects.

One project is the Chlorine Gas Disinfection System upgrade at Huia, the second largest water treatment plant supplying the Auckland area. I enjoyed working on this project because it had an interesting combination of constraints with respect to the process design. Also, I participated in a HAZOP (Hazard and Operability Study). I've always been

interested in how they're carried out after learning about them at university - it was really cool to be involved in one.

I've also undertaken compliance audits of three Hauraki water treatment plants to evaluate if they comply with the drinking water standards. This project familiarised me with the drinking water standards for NZ and how compliance of water treatment plants are evaluated against these standards. This topic has now become critical with the introduction of the Health (Drinking Water) Amendment Act 2007 to enforce them, so getting this knowledge has been really timely.

The company goes out of its way to celebrate events. There are many social events from team and division level to the entire company. When I started, the water team were all taken out to lunch to welcome me and another graduate, who also started at the same time. It was a great way to get to know the team better in a non-professional setting. You make friends at Harrison Grierson.

www.hgcl.co.nz



Manukau Police Station, South Auckland

Opus was commissioned to provide a full range of design services for the new policing centre in Manukau City. This included architectural, mechanical, civil and structural engineering, landscaping and urban design services.

The project won for the New Zealand Police, a New Zealand Govt3 Award for Sustainable Buildings development in recognition of the 'user friendly' design.

Sustainability was a major consideration in the design, interior fit-out and building services. ESD (environmentally sustainable design) principals were applied during the design including a 'grey water' toilet flushing system using rain water collected and stored on site, thermal insulation, solar control soffits, natural ventilation in the café, energy efficient lighting and BMS controls for heating, cooling and ventilation.

Sustainable design features arising indirectly from the planning of the project include the reduction in carbon emissions through the use of a tunnel linking the Police station with the adjacent Manukau courthouse. Prisoners are "walked to court" instead of being driven in an escort van. Cells are constructed from a proprietary/pre-finished material reducing the need for ongoing maintenance. Procedures for handling prisoners in general have been designed in such a way that damage to the facility, and in turn maintenance, is expected to be significantly reduced.

One requirement of the building design was to

mitigate the effects of a natural disaster. The station has been designed to IL4 seismic design parameters (the building should remain operational in the event of a 1 in 2500 year earthquake). As the ground beneath the building would be prone to liquefaction and instability in the event of a significant earthquake, the designers have enhanced the structure by extending the foundation piles through the liquefaction level to the hard bedrock below and have used pre-cast concrete slabs tied into columns for the external envelope of the building. The external pre-cast concrete walls have an undulating fern-like pattern which changes in effect throughout the day as the natural light and shadows change.

In order to provide an innovative solution within the budget and time requirements, Opus worked closely with the Counties Manukau Police Operations Manager, Dave Simpson and his staff. "The design process was a very collaborative one," says Mike. "We spent considerable time discussing the facilities they needed and worked with the staff to develop the critical operational work areas. It is a 'public' building so it needed to convey a certain amount of warmth and be less intimidating, while at the same time be fully functional."

Another focus for Opus was landscaping for the building and the brief was to provide a landscape and urban design solution that:

- Complemented the architecture of the building
- Responded to the cultural identity of the area



- Provided a strong identity and entrance statement from the street that is hardwearing and low maintenance
- Takes into account the security requirements dictated by the buildings function.

While the building has a significant custodial function, it also plays an important role as a significant civic building and public place. The robust plaza frontage provides clearly defined approaches and defensible spaces but is still non-threatening and non-authoritarian. Opus also worked with the Manukau City Council to ensure both the hard and soft landscape fits with future revitalisation plans for the area.

The project demonstrates that through intelligent planning and clever design the Opus designers have delivered a design that is aesthetic, reflects the environment and meets the needs of a busy police station.



Why McConnell Dowell?

I joined McConnell Dowell because I was impressed by them always taking on high risk and challenging civil projects. As an engineer that enjoys challenges, McConnell Dowell has not failed me in providing opportunities for challenges time after time.

Designing for Contractor?

I initially started off based in Head Office as a Design Engineer doing temporary works design and providing engineering solutions for McConnell Dowell projects across New Zealand and the Pacific, as well as projects during tendering phase. Most people would think design work is done by consultants and not contractors, which might be true in most cases, but to be able to sink 1.8m diameter pipelines 2 km out into the ocean or to construct a tunnel in remote areas with no road access or infrastructures, takes some serious engineering and McConnell Dowell does this in-house.

Being 30 metres underground?

I was lucky enough to experience two very different positions within the company. After spending 9 months in the Engineering Department, I was transferred onto Project Hobson to be a site engineer to aid the construction of a 3 kilometre long tunnel running 30 metres under ground from Orakei to Parnell. This was a mind-blowing experience that gave me opportunities to acquire new

Peter Lai in the office



skills in surveying, design, procurement, dealing with clients or sub contractors etc. and of course, some hands on experience in construction. I was actively involved in the commissioning of a huge Lovat TBM (Tunnel boring machine).

Here is a list of projects I have worked on to date.

- Northshore Busway
- Christchurch Outfall
- Timaru Pipe jacking
- Bua Integrated Port
- Project Hobson
- Kupe Pipe Spooling
- Rosedale Outfall
- Tahuna Outfall

My advice for Graduates seeking employment

This might sound all too typical, but look for an employer that can offer you opportunities to see, do and learn new things. The first few years of experience could alter your career path significantly and therefore it is better to have a broad experience in the early years than just experience in a single field. Also, apart from the development of your early career, it is very important to find an employer that can provide you with work that interests you. With the right company engineering can be an exciting, challenging career; you never stop learning.





Saurabh Rajvanshi, Graduate Transmission & Distribution Engineer



Real learning happens when you get the chance to get your hands (or the company Hilux) dirty.

Create your career

Your first job out of University lays the foundation blocks for your future career.

Join the right company and you're on the fast track to international experience, industry recognition and world leading resources. Get it wrong and your career could be on the back foot from day one.

Maunsell AECOM forms part of the largest pure design firm in the world. As part of an international network of more than 41,000 employees operating in over 100 countries, we are a truly global company.

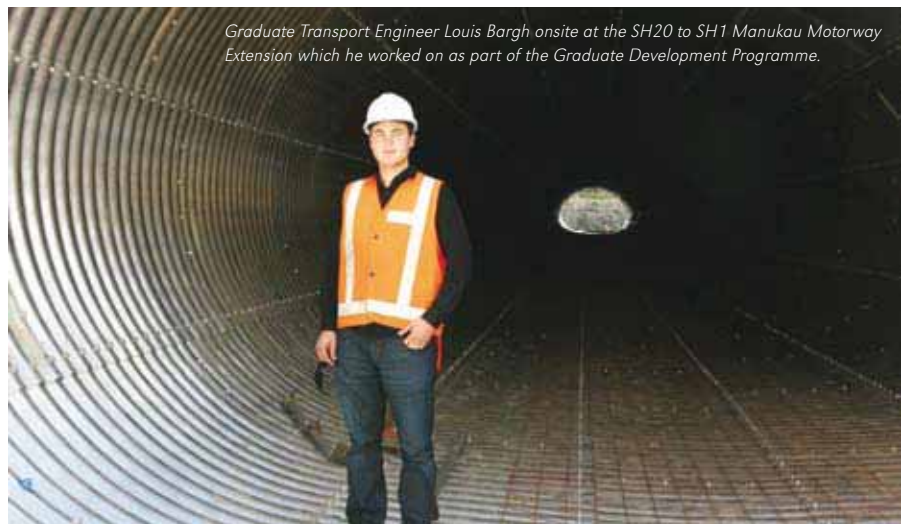
As a Graduate at Maunsell AECOM, your personal and professional development is yours to create. We open the door to a world of benefits and opportunities that help you to create your own experience and ultimately, your own career.

Create a name for yourself

The lead design firm for many of the region's mega projects, like Brisbane's \$2 billion North-South Bypass tunnel, Sydney's \$1.76 billion Desalination Plant or Auckland's multi-award winning Biogas Cogeneration Plant; Maunsell AECOM graduates get hands-on experience and their talents recognised.

Maunsell AECOM place huge emphasis on professional development. We provide our graduates with unique opportunities to work on iconic projects, whilst learning from industry leaders in New Zealand, Australia and around the world.

Graduate Transmission & Distribution Engineer, Saurabh Rajvanshi, is just one of our many Graduates who have taken up the opportunity to spend time working overseas.



Graduate Transport Engineer Louis Bargh onsite at the SH20 to SH1 Manukau Motorway Extension which he worked on as part of the Graduate Development Programme.

"Through the Graduate Development Programme I was able to spend three months working in Perth. I was working on a project at a diamond mine, gaining experience that I couldn't get in New Zealand, and I was also dealing directly with the client. It was a steep learning curve both technically and professionally so soon after graduating from University, but it was a hugely beneficial experience both personally and career wise."

Saurabh feels that working at Maunsell AECOM has given him the chance to work alongside experts who have encouraged him to 'get his hands dirty.'

"I have always been encouraged to ask questions and take ownership of my work, which is great when you're learning the ropes. The real learning happens when you get the chance put theory into practice," he says.

Create your direction

When you join Maunsell AECOM, you join an industry leader whose reputation for

professional expertise and design will open doors no matter where your career takes you. Our Graduate Development Programme provides everything from site visits to project management experience, professional networking, technical skill development and mentoring across all our markets - Buildings, Environment, Water & Civil Infrastructure, Transport and Power & Energy. The programme is fully endorsed by the Institute of Professional Engineers New Zealand, helping you to achieve professional accreditation (CPEng).

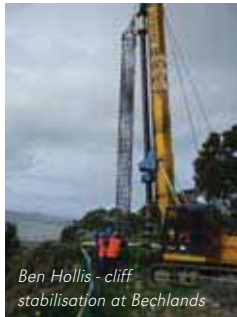
Create your opportunity

Competition for positions has seen the majority of our 2009 Graduate and Summer Internship positions filled. However, we will still consider applications in the Civil and Electrical fields.

If you'd like specific details about these opportunities or general information about our future Graduate programmes, please contact: nzcareers@maunsell.com



Why Engineers are needed in Cambodia



Ben Hollis - cliff stabilisation at Bechlands



Why Engineers are needed in Cambodia



Tristan Bellingham on Environmental Survey

Fraser Thomas Profile

As well as providing first class service to our extensive range of clients, Fraser Thomas puts great emphasis on the training of new graduates to ensure that they receive as broad an experience as possible, either within their chosen discipline or over a range of disciplines, and that their Continuing Professional Development requirements are satisfied. We are IPENZ accredited for the mentoring of staff through their professional development.

Fraser Thomas is multidisciplinary, with some 55 technical and graduate staff encompassing the engineering fields of geotechnical, environmental, civil and structural as well as land surveying, spread through our three offices. Support staff include an IT specialist to service all offices, CAD operators and secretaries attached to each department.

Fraser Thomas has three offices in New Zealand, our head office is in Papatōetoe; an associated company, Barry Satchell Consultants Ltd is in Dominion Road, Balmoral; and we have a branch office in Paihia, Bay of Islands. We also have a specialist overseas section operating out of Papatōetoe. The bulk of our work is in the upper half of the North Island but does extend elsewhere in NZ and overseas.

Currently we are working on projects in countries as diverse as Tajikistan, Cambodia and the Cook Islands and, over the past two years, have completed projects in Vietnam, Lao PDR and Sri Lanka amongst others.

Fraser Thomas competes successfully, both in NZ and overseas, with Consulting Engineering firms many times its size. In addition we combine resources with larger firms for some overseas projects, with Fraser Thomas often taking the Lead Consultant role.

Profile - Ben Holliss

Ben graduated BE(Civil) from Auckland University in 2007.

During his degree he gained work experience with NZ Steel (Glenbrook) and with Stevensons Civil Laboratory (Drury). At the end of Ben's third year of the degree, Fraser Thomas offered him a fee subsidy for his last year of study and a job starting as soon as exams finished.

He spent the university holidays of his final year working for Fraser Thomas, and started full time in November 2007 as a Structural Engineer. Ben says that the holiday work enabled him to work in the differing disciplines at FTL.

"As a result, I concentrated my final year of the degree on structural engineering" he says.

"I have, since working for Fraser Thomas found that the variety and number of projects keeps the job really interesting and me really busy.

"One of the great things about working for Fraser Thomas is that with so many different specialisations in the one building, it seems that any question can be sorted out easily by a quick walk down the hallway.

"The support from Directors and senior engineers is excellent. This means that I'm constantly being pushed to learn new things, and to expand my knowledge and skills, as well as being given an often scary amount of responsibility.

"My biggest surprise so far is that, despite the four years of learning the basics of engineering at university, just a few months of work at Fraser Thomas has shown me that there is so much more to learn, it looks like it'll go on for ever."

Profile – Tristan Bellingham

Tristan, after completing his BE in Chemical and Materials Engineering at the University of Auckland, started his engineering career at New Zealand Steel's Glenbrook site. He says that heavy industry is unique and the experiences and knowledge gained at the steel mill have been invaluable. After an OE, and a PhD, he started work in the Environmental Engineering team at Fraser Thomas Ltd.

"My background in contaminated land has been developed and expanded through a wide range of projects. FTL has, since starting with them, also enabled me to provide consultancy services to Environmental Decontamination Ltd (EDL) who sponsored the PhD research. The senior engineers in the environmental team have not let me get too comfortable though.

"I have been actively encouraged and supported to gain experience and understanding in stormwater and wastewater areas. Many projects have been multi-disciplinary and there is ample opportunity to engage with and gain an understanding of other engineering disciplines, in addition to seeing projects through from design to construction. This broader knowledge is useful now and will become invaluable for project management in the years to come.

"What Fraser Thomas may lack in size, it makes up for in other ways, most importantly the skill and knowledge of the senior staff who have enormous experience in a wide range of fields. I am effectively being mentored on a daily basis, while also being supported in more official ways such as working towards full IPENZ membership.

"I have been on a steep learning curve at Fraser Thomas where I am regularly pushed into new areas, but am also given time to consolidate and gain confidence in the core environmental engineering areas. Fraser Thomas also works in a number of developing countries, mainly in the Pacific and Southeast Asia, and there are regular opportunities for involvement in these projects.

"Fraser Thomas has been very encouraging in this regard, recognising that supporting the interests and utilising the unique skills of staff is critical to happy and productive employees."

www.fraserthomas.co.nz



Veeral Patel at work in the Auckland Office



Connell Wagner were the structural engineers of Eureka Tower in Melbourne, Australia, one of the world's tallest residential buildings

the SH18/SH16 Hobsonville Deviation Transportation Project.

Connell Wagner

Innovate, create and make a difference to the world you live in. This is the approach to career development – and career enjoyment – that Connell Wagner encourages.

Connell Wagner's graduate programme will have you where you want to be - at the heart of things, getting hands-on with real projects, learning new skills and building experiences that will prepare you for the challenges and opportunities ahead. As one of over 150 Graduates Connell Wagner selects each year, you'll attend an overseas conference held in Australia. Their Professional Development Programme will have you working with some of the most experienced minds in the industry. Their mission? To help develop your skills and knowledge to ensure your career continues to move forward.

Connell Wagner is looking for talented engineering graduates from the following disciplines:

- Civil
- Mechanical
- Structural
- Electrical
- Environmental
- Chemical
- Process

To find out more about Connell Wagner's Graduate Programme visit [HYPERLINK "http://www.conwag.com/gradspace"](http://www.conwag.com/gradspace) www.conwag.com/gradspace

Graduate Profile

Name: Veeral Patel

Position: Geotechnical Engineer, Urban Development

Why did you join Connell Wagner?

I had the opportunity to do my sub-professional hours with Connell Wagner. This exposed me to a very good work environment which comprised of staff which made me feel right at home. It can be a difficult transition from university to working life however I found that at Connell Wagner, the people were very friendly and always willing to help.

Describe the types of opportunities you have at Connell Wagner:

You have the opportunity to expand yourself in the sense that you can learn a lot from others around you that have the experience while at the same time working on a variety of projects which also provides a chance to develop and enhance your skill set.

Can you share some project experiences?

I have been exposed to a wide range of projects. This includes the design of various types of retaining walls for small scale residential/land development projects to involvement in more large scale projects such as analysis of multi-level basements in Vietnam. Currently, I am involved in the detailed design of large retaining structures in

How supportive is Connell Wagner of your professional advancement?

You get the chance to attend training courses which may aid you in your professional development as an engineer. I have also been assigned a mentor who has more than anything given me the direction and guidance in achieving my goals as an individual and as an employee. Have found this to be very helpful.

Describe a typical day

With Engineering there is no such thing as a typical day and that is the beauty of what you get to do. There is so much variety in the work that you do that there is nothing too monotonous. The approach and the design problems are always different for each project you work on and therefore each day is a new day.

What's the social life like?

Great. We have a social club which organises social events and gatherings which usually occur every month. Activities include ski trips, golf outings and inter-departmental touch rugby tournaments which are great.

In three words, describe what it has been like working for Connell Wagner.

Fun Learning Curve

Part II Specialisation selection

To assist the Part 1 students to select a specialisation:

(i) The Faculty is currently organising departmental presentations which will be held on 15th October. The venue will be the 4th floor atrium in the engineering building. Each department will have booth and a display between 11-3 pm.

(ii) The Faculty is also organising a panel of academic staff members from each specialisation to enable the students to ask questions. Students can email their questions in advance to soe-undergraduate-dean@auckland.ac.nz. The venue for this event will be emailed to Part 1 students.

Please remember that all Part 1 students will have to fill up an online Part II specialisation form and submit it by 15 of November. The link to the form will be emailed to the all Part 1 students, to their university email address.

For any queries please contact Ujawala Autade on 3737599 extn 86495 or email at u.autade@auckland.ac.nz

Scholarships - money and summer work!

The Faculty of Engineering has set up numerous scholarships sponsored by companies. Not only do they represent prestige for the awarded students but they are also an excellent way for students to establish a relationship with the sponsor company, get to know the company and the type of work they are involved in and maybe even arrange summer work.

Overall, scholarships offered through the Faculty reward merits of students; academic achievement but also merit for a strong community involvement or the merit of students managing financial struggles while studying. So, every student is being given a chance and the Faculty highly encourages all students to apply for scholarships.

Scholarship application forms may require attachments like a curriculum vitae, a written page on a specified topic and/or financial details. Students should give themselves enough time to prepare their attachments to be handed in with their application form by the specified closing date.

There are currently on offer approximately 40

English Language Competency

All undergraduate engineering students (BE(Hons), Conjoint and Accelerated Pathway) are required to have completed the ENGGEN 199 requirement before enrolling in any PART II courses. To meet the requirements for ENGGEN 199 completion you must first sit a short (20mins) online assessment to be completed in the Faculty of Engineering Computer Labs. The process for this follows:

Students choose a suitable time and register on-line at the DELNA website with a total time commitment of half an hour.

<http://www.delna.auckland.ac.nz/booking/> then click on Engineering 08 - Screening .

The DELNA handbook contains examples of the task in the 20-minute assessment. It's available on www.delna.auckland.ac.nz

Students who have already done a DELNA assessment in the last two years do not book but e-mail delna@auckland.ac.nz with their name, ID and the course that requires them to do DELNA i.e. ENGGEN 199

named scholarships run through the Faculty of Engineering. Many of these scholarships have application closing dates on the 31st of March and the 31st of July while some have closing dates at other times throughout the year.

You can begin your scholarship search by visiting the University's scholarship webpage at www.auckland.ac.nz/scholarships. From here you can search for specific University scholarships for their level of study, download regulations and application forms for any scholarship offered through the University, as well as link to external scholarship information. The Scholarships Office also updates this webpage with news on any new scholarships that may be added throughout the year and any closing date extensions and provides valuable information on how to apply for scholarship.

For more information on scholarships for engineering students contact:

Mireille Denninger
Scholarships Adviser
Faculty of Engineering
Phone: +64 9 373 7599 Ext. 85347
E-Mail: m.denninger@auckland.ac.nz

Any student registered with the Disability Office with a learning difficulty which will impair their ability to sit the test, will not do the test. If you are in this category and you are not already registered with them, you should do so immediately.

If you are require to do further assessments instructions will be provided by DELNA.



For any queries please contact Ujawala Autade on 3737599 extn 86495 or email at u.autade@auckland.ac.nz



Note

- In the regulations for each scholarship it should mention whether you can expect the scholarship to be awarded in that year or the next year. Please be aware that some scholarships which close around July or later may not be awarded (paid) until the following year.
- If you are shortlisted for any scholarships, you may be required attend an interview.
- It helps to know some information about the sponsor of the scholarship so always research the company before attending interview.
- Book in and attend an interview workshop with the Careers Centre in the Clocktower before going to a scholarship interview

SPIES - South Pacific Indigenous Engineering Students

What is SPIES?

So you probably have seen us around in your lectures or hanging around in a group talking and laughing loudly. You can probably tell who we are by our branded tee-shirts and hoodies. But who are we really?

SPIES, or the South Pacific Indigenous Engineering Students association, was formed in 1993 as a support group for Maori and Pacific Island students studying engineering at the University of Auckland. The main reason for its formation was that Maori and Pacific Islanders were severely under-represented in all fields and disciplines of Engineering. Engineering is a challenging field and a group like SPIES was needed to promote and encourage new Maori and Pacific Island engineers and ensure that they graduate.

What does SPIES do??

SPIES provides peer help, extra tutorials and advice from our past members who are out in the workforce. Our group meets fortnightly on Friday afternoons with free pizza or a BBQ. The meetings give everyone a chance to get to know one another and discuss the various activities that we either organize or get involved in throughout the year.

Who can be a member?

Membership of SPIES is open to any Maori or Pasifika student studying engineering at the University of Auckland. The SPIES Constitution also allows for other students or friends to become members. Regardless of membership, SPIES is a very open group, and are happy for non-members to participate in their activities. Membership is free. All you have to do is turn up and get involved e hoa!

SPIES: inspirational role models in Samoa 2007

While most students were relaxing and taking a much deserved inter-semester break, 22 dedicated South Pacific Indigenous Engineering Students (SPIES) spent their holidays visiting schools, communities and villages in Samoa in an attempt to motivate, inspire and encourage Pacific Islanders to pursue a career in Engineering.

Samoan University and secondary school students listened to inspirational talks about the different types of Engineering and about educational opportunities available to Pasifika students. Promotional videos and kapa haka performances helped to get the message across. 10 schools were visited and over 3,500 students listened to the message that SPIES were delivering.

Engineering site visits to the Vaillima Factory and the Water Treatment Plant in Savaii enabled SPIES students to have first-hand experience of Engineering work in Samoa. Institute of Professional Engineers in Samoa (IPES)

The trip would not have been possible without the support of GHD, the Dean of Engineering, Nga Tauri Maori, Equal Educational Opportunities Office etc.





SCHOLARSHIPS FOR STUDENT ENGINEERS

\$130,000

of Scholarship money for all specialisations
and Part 1 students will be available next year.

Applications must be in by March 31st 09.
Don't miss out. Make sure your
application is in time.

Follow the scholarship link on the Faculty website home
page to find out which scholarships you can apply for -
or contact
Mireille Denninger
m.denninger@auckland.ac.nz

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- CV, Cover Letter & Application Form checks
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- Career Direction & Career Options
- Alumni Industry Contacts
- Employer Presentations
- Careers Fairs

Come in and see us!
Where? Clock Tower Room 001



FOCUS
on your future!