

## "Why I want to be a professional engineer"

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For the majority of my high school years I have known that a career in engineering would be ideal for me for a variety of reasons.

Firstly, my skills in a range of subjects made me eager to discover a field of work in which I could involve all these interests. I achieved well in mathematics- taking the top junior maths prize at Hastings Girls' High School as a Year 10- as well as science, indicated by my receipt of a trophy and medal for best oral and visual presentation along with the placing of second in my section at the regional Science Fair held the same year. English and communicating abilities are also strengths of mine, allowing me to have studied this subject a year ahead of my age group for the past three years. So when I was introduced to the possibility of becoming an engineer, I was delighted that each of my gifts and my desire to solve problems of any size could be put to effective use.

The profession of engineering also attracted me because I wish to pursue a career in an area of great significance to the current world situation and future generations alike, in order to ensure their standard of living might be at least as high as ours. With energy crises, global warming and international wastage and mismanagement of resources, attempts at preservation of the environment and of its potential should certainly be welcomed if our children and grandchildren are to exist without fear of exhausting what is offered by an already deteriorating Earth. In short, I want to make a difference that will benefit others globally and futuristically, and have therefore chosen the sector of energy sources and their sustainability as my focus.

Nine out of ten New Zealanders aren't confident that the government has a long-term plan for ensuring constant supply of energy within this country. And like those comprising this majority, I don't want to see New Zealand run out of power because our energy sources have not been carefully managed, so I am keen to work on how to conserve what we have and particularly to maximise the usage of renewable, alternative, natural resources.

Geothermal power, a subject of great interest to me, would be my

specialisation; especially relevant when one considers that New Zealand has the advantage over others in the way of future energy supplication because of the rich yet currently under-utilised source right beneath us at the folding of the tectonic plates. Having put together projects for both English research and physics, I have developed a fascination for the process and strongly desire to study it in depth so that one day I might be qualified enough to evaluate and improve its design to more fully extract from it as a power source of a more well-recognised status. Fortunately, the New Zealand government has recently announced that it intends to focus on developing the potential of our geothermal sources after acknowledging that it is the most accessible and affordable renewable resource at our disposal to support our future energy needs, thus choosing a career in this specialisation would be increasingly pertinent.

My interest also lies in wind powered energy production as an environmentally friendly remedy to greenhouse gas emission, and because of this promising engineering path I am also considering electrical engineering as a means learn how to design the equipment to better the exploitation of this valuable energy source.

Working as a professional engineer also appeals to me because of the diversity of jobs it offers, workplace situations and, especially, the opportunities it opens for travel nationally

and around the world. I would love to explore the fantastical attractions and landmarks found overseas that I- having only travelled twice over a strip of water which was Cook Strait when flying to Christchurch (to visit the university where I am will undertake my Bachelor of Engineering) and back- can currently only dream of visiting. It goes without saying, though, that it is New Zealand I want to be based in and come 'home' to, however I may never fully appreciate its own breathtaking nature and "clean and green" reputation until I have experienced the lack of these precious qualities in other countries.

The diversity of occupations available for professional engineers astounds and allures me: I was first awakened to this through the career of a daughter of a family friend. She had completed her Bachelor of Engineering, achieving extremely well, and had been offered a position with the international engineering corporation Honeywell. Her job description called for her to take on such varying tasks that one week she would be working on an oil rig in Norway, and the next, designing a hip joint in Belgium. For me, this was an amazing and attractive discovery; here was a job that could take me places where I could do my best to impact positively on others- and succeed. Since learning of her accomplishments I have been set on becoming a professional engineer, and have investigated other prospective future employers such as GHD to gain a better understanding of the objectives of my 'dream career'. To attain a greater affinity with the environment that I will be working so hard to protect, I am considering applying for a summer work programme with the BayerBOOST project, during which I would be able to broaden my experiences by working in an area of environmental research, action or restoration of an aspect of current significance to the ecology.

Engineering to me is all about solutions, and with the apparent fallen state of the world we share, we need to solve as much as we can of the disorder befalling us to ascertain our very survival. Therefore to best assist the human race, I feel that a career as a professional engineer is my *ne plus ultra*.