Surveying…a life without limits

NARRATOR: Surveying has been around since before Egyptians were building pyramids, setting order to property, roads and the physical world around us.

Did you know that for being one of the world’s oldest professions, there are many people who don’t know what surveying is?

And no it isn’t a study with clipboards in a supermarket.

Surveying is the science of measuring and mapping. And while the scope and disciplines of surveying are quite vast, it is basically determining where things are and where boundaries belong.

Surveyors measure just about anything on the land, in the sky or on the ocean bed. They even measure polar ice-caps. They describe where a certain area is, what it looks like, and how much is there. They then put all these facts in titles, leases, and other legal documents.

Surveyors also play a major role in land development, from the planning and design of land subdivisions through to the final construction of roads, utilities and landscaping. They are essential to the construction industry, and their work is important to other professions like engineers, architects, geologists and planners.

To understand it a little better it might help if we look at the varied disciplines of Surveying one at a time:

_Cadastral Surveyors_ define legal boundaries between public and private land when land is developed, bought or sold. This can include anything from where your neighbour’s fence should be, to major urban developments or the exact positioning of a new freeway.

_Engineering Surveyors_ are involved in building. From bridges and airports to tunnels and highways, they provide boundaries for the design, and ensure the size and placement of the structure is accurate. A good example of this is the East Link tunnel where surveyors were vital in almost every stage of planning, development and construction to make sure the tunnels actually met in the middle.

_Geodetic surveyors_ measure large areas of the earth’s surface to study continental drift earthquakes and even volcanoes.

_Marine or hydrographic surveyors_ study harbours, rivers, shipping channels and map the ocean floor.

_Mining surveyors_ work with mining companies on exploration, design and measurement of mines as well as tunnels and surface works.

Surveyors working in Remote Sensing capture information from satellites and airborne imaging to monitor global change.
Geographic Information System or GIS specialists then use the change in global data to create electronic mapping systems like google earth and in-car GPS navigation devices.

Surveying is even used in archeology. How else do they find where to dig if we don’t locate and map out the site first? Just recently Frank Leahy from Melbourne University located artifacts belonging to Burke and Wills almost 150 years after they were abandoned in the bush. He did this by re-calculating Wills’ own coordinates and survey results.

DAMIEN RIVALLAND: An exciting aspect of surveying is the varied working environment. Some days are spent in the office and others out in the field which is pretty cool when the good weather kicks in. How much time you spend indoors or outside really depends on the field you choose and the projects you are working on. From suits to boots, I really like the mix because the work is interesting and varied and I don't get bored. There are not many professional jobs out there that get you out and about like surveying does. Surveyors can work for themselves, in private firms or in government departments that rely on surveying to evaluate decisions and projects.

This is a typical surveying firm. It's not actually where I work so let's see how far we can get before somebody stops me. Looks like it's got all the usual things. Nice view, nice people, and if you have a look here, looks like these guys are discussing a planned subdivision. Keep going down I wonder what else we're going to see. Looks like this guy here is doing some computations for a re-establishment and if we have a look here looks like these guys are discussing a feature plan.

DAMIEN RIVALLAND: 'How you going?'

SURVEYOR 2: 'Who are you?'

DAMIEN RIVALLAND: 'ahhh' The truth is there are lots of firms and government departments that constantly need new surveyors. From big firms to small, there are not enough surveyors to go around which makes for some pretty tidy job security. This is my mate Tom. He recently graduated and works for a big firm that sends him travelling all around the world. Tell them what the pay's like, Tom.

TOM: Well I think it's actually really good but do you think my boss is going to be watching this.

DAMIEN RIVALLAND: Yeah, I'd probably say it would be.

TOM: Well I'd say that it's barely sufficient. So in all seriousness though, I'd say that a graduate from a university would probably be on around $45,000 to $50,000 as soon as they came out and once they got their cadastral licence they'd be on around $75,000 to $80,000 and I've even heard of packages of up to $150,000 too so I think that's pretty good.
DAMIEN RIVALLAND: If you think a government job's for you then you need to meet the Surveyor General. Every state has one. Now this is John Tulloch. He is the Surveyor General of Victoria.

JOHN TULLOCH: Government Surveying provides a male or female graduate surveyor with a wide exposure to surveying disciplines including GD, engineering and cadastral surveying utilising the latest electronic equipment and computing facilities.

NIKI HENDRIKSEN: The spatial industry is constantly evolving. Today's clients now realise the potential and flair that female surveyors can bring to their projects. This provides opportunities in a wide range of roles which are no longer limited to males or females.

RACHAEL MUSGRAVE-EVANS: Being a licensed surveyor has afforded me the opportunity to run my own business. This gives me the control to have a good balance between work and lifestyle commitments whilst doing something I find very interesting as well as challenging at times. I particularly love rural surveying and working in regional Victoria is fantastic.

Surveying really does offer a life without limits with thousands of different work opportunities here at home and around the globe. Take Nick Brown for instance; he trips off to Antarctica to measure polar caps and continental drift in one of the most spectacular landscapes you will ever encounter.

NICK BROWN: The work I do for Geoscience Australia is aimed at improving and maintaining Australia's GPS stations, to monitor any changes in the shape of Antarctica and measure how fast Australia is moving away from it.

NARRATOR: If Antarctica seems a bit cold for you then how about Dubai? Australian surveyors have been involved with many of the key projects including the construction of the world's first seven star hotel, the Burj Al Arab. Building on a man made island in extreme temperatures posed a number of unique challenges, but as you can see the result is magnificent.

Want to see more? Well Australian surveyors have been integral in the creation of just about everything from the new Hong Kong airport to the Petronas Towers in Malaysia; the MCG redevelopment in Melbourne; eco studies of the Great Barrier Reef; oil exploration in Bass Strait; Military airfields and bases in combat zones; open cut mining in Western Australia; housing developments; freeways; protection of aboriginal heritage sites; measurement of volcanoes and water management. Impressive huh?

DAMIEN RIVALLAND: Well, I reckon we might have sparked your interest with all that, so you maybe wondering where to start. To become a surveyor you need to complete a university degree. These are usually 4-5 years depending on where you attend. There are shorter Tafe Courses for survey assistants and technicians. But a degree in Surveying or Geomatics will allow you to gain professional accreditation and unlock a life without limits.
STUDENT 1: I didn't really know what I wanted to get into at first but I knew I loved being both indoors and outdoors. You know, not chained to a desk and I really enjoy surveying and its variety.

STUDENT 2: I wanted to do architecture or engineering but I didn't want to go down this direct path so surveying seemed like the perfect choice. You can't do anything without us coming in before, during and after the project.

STUDENT 1: The skills that we learnt can be used all over the world which is a much better way to travel than pulling beers as a backpacker.

DAMIEN RIVALLAND: So there you have it. You can find out a lot more detail on universities, projects and what surveying does on the website at www.alifewithoutlimits.com.au.

When you think about it, what’s not to love about surveying? You get a professional career that allows you to work inside and out; the money’s great and everyone needs us. Surveying really does offer you a life without limits.