



Fact Sheet

WHAT IS A SURVEYOR?

Surveyors are experts in measuring the environment to a high level of accuracy and presenting that information in a variety of formats from traditional maps to complex 3D computer models. The technology and computational analysis are underpinned by science and mathematics.

WHAT DO SURVEYORS DO?

Surveyors play a critical role in land development and infrastructure growth. They work above, on, and below the land and sea, in large and small projects related to subdivisions, roads, construction, housing, mining, and energy. They map the land and the features on it so that engineers and architects can design the houses you live in, bridges, roads, and rail you travel on, and even the schools you learn in. And once the design is done, the surveyor will set them out in the right place.

WHO DO THEY WORK WITH?

Surveyors work with land developers, engineers, architects, builders, planners, and lawyers. Surveyors also liaise with land-owners to advise them about their properties, service authorities to map existing above and below ground services and set out new ones, and with Government agencies to create plans and maps so that they can design a range of large infrastructure projects such as road, rail, pipelines, and high rise office and apartment buildings.

WHAT IS A LICENSED SURVEYOR?

A Licensed, or Registered, Surveyor is someone that, in addition to all the other survey skills, also has expertise in the legal aspects of land surveying. This includes the location of existing land boundaries and marking out of new ones for housing and industrial subdivisions. They will draft subdivision Plans and lodge them at the Titles Office so that new property titles can be created and issued to the landowners. Property Surveying is a specialist area, and to become registered by the Licensing Board, Surveyors must demonstrate they are proficient in all aspects of Land Tenure. Only a Licensed Surveyor can perform boundary surveys.

WHAT IS THE DIFFERENCE BETWEEN SPATIAL SCIENCE AND SURVEYING?

Surveying and Spatial Science are very closely connected, in fact, surveyors *are* Spatial Scientists! Surveying is one part of Spatial science, which is the general term we use to describe the measurement of the land, objects and elements, and their location in the world around us. Digital data is collected by electronic instruments such as theodolites and laser scanners on the ground, cameras in the air on drones and planes, under the water with sonar, and remote sensing from satellites in space. This includes the collection and plotting of spatial data, which is presented as plans and maps, or in electronic format that can be read, understood, and used by others. Drafting and Cartography, Geographic Information Systems (GIS), and Geodesy are all considered "Spatial", and make up the profession we know as Spatial Science.

ARE THERE MANY SURVEYING JOBS ON OFFER?

Currently there is a shortage of surveyors in Western Australia and surveying offers great opportunities for young people looking for a secure and varied career. A Surveying Degree is a smart choice because the national demand for Surveyors means that graduates are more likely to secure jobs compared with many other courses.

Graduates can work for private consultants, large companies, or in Government agencies. Throughout Australia, there are several large urban developments and construction projects planned or currently underway, that require skills that only a surveyor can provide. There are plenty of work opportunities for those who prefer the regional or country lifestyle. Many Surveyors progress to management roles, or to running their own business, as their skills and experience develop.

IS THERE AN OPPORTUNITY TO TRAVEL FOR WORK?

A Surveying Degree is very portable, and allows you to travel and work in interesting places. Australian surveyors are very highly regarded, and readily pick up work interstate and overseas. Several major international projects have had Australian lead surveyors, such as the world's tallest building – the Burj Khalifa building in Dubai, Hong Kong Airport, the Libyan water pipeline from the Sahara to Tripoli, the search for Flight MH370, and positioning offshore oil rigs and platforms. Surveyors also travel to projects interstate, especially to mines and large construction projects.

WHAT KIND OF SALARY CAN I EXPECT AS A SURVEYOR?

Salaries are excellent and will continue to grow as the industry seeks to employ new talent. Graduate Surveyors can start on an average of \$65k-\$70k p.a. and the average base salary of a surveyor in Australia is around \$103,000. Mining and offshore surveying can pay more, and experienced surveyors in managerial roles can earn packages around \$150k-\$200k per year.

WHAT TYPES OF STUDENTS WOULD MOST SUIT A CAREER IN SURVEYING?

If you love working outdoors, travel, and are interested in any or all of Maths, Geography, Physics, Engineering, IT and Science, you would be an ideal candidate for a career in Surveying. It's not just working outside either, as calculations & data processing, and preparing maps and plans, can all be done indoors.

ARE THERE OPPORTUNITIES FOR FEMALES IN SURVEYING?

Absolutely. Surveying used to be a "blokes job", but advances in technology over the past decade have changed the state of play. Instruments are a lot sleeker and lighter, and some are even controlled remotely with a tablet or a phone. Women own and manage surveying and spatial science companies, and are prominent in Government agencies. Western Australia and New South Wales both have female Surveyors General.

WHY HAVEN'T I HEARD MUCH ABOUT LICENSED SURVEYING BEFORE?

The Surveying profession is relatively small with only about 200 Licensed Surveyors in WA. And they don't get much media attention; they could be considered as the "quiet achievers" of the property profession. The profession is now aiming to create a greater awareness of surveying to help meet the significant demand for new surveyors in the future.

HOW DO I BECOME A SURVEYOR?

Surveying requires a Tertiary qualification from University or TAFE.

Curtin University offers two courses:

A 4 year Bachelor of Surveying Degree will allow you to work in any field of surveying, and a 3 year Bachelor of Mining Technology (Mine Surveying) will allow you to be a mining and engineering surveyor. An ATAR score of 70 is required for admission to the degree courses.

For entry to **TAFE**, you will need Year 11 maths at OLNA or NAPLAN 9 Band 8 at Certificate III level in the Engineering and Mining Surveying course. After that, you can proceed through Cert IV, Diploma and Advanced Diploma which will lead to a career in engineering and/or mining surveying.

To become a Licensed Surveyor, you will need a Bachelor of Surveying degree, followed by 2 years of experience in cadastral surveys, training, and assessments. You can work as a survey technician on mine sites with a Diploma, but to become an Authorised Mine Surveyor, you will need to have an Advanced Diploma, 1 – 2 years on the job experience, a reference from a supervising surveyor and an interview with the Mines Registration Board.

WHAT CAREER SUPPORT IS AVAILABLE?

The Surveying Taskforce liaises with the Surveying profession to facilitate secondary student work experience placements. The Taskforce also organises volunteer Ambassadors that you might meet at career events and presentations. Students and school Career Advisors and Teachers can register their interest at the website.

WHERE CAN I GET MORE INFORMATION?

Website: www.alifewithoutlimits.com.au

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