

# MINERALS INDUSTRY CAREERS. RICH IN DISCOVERY.

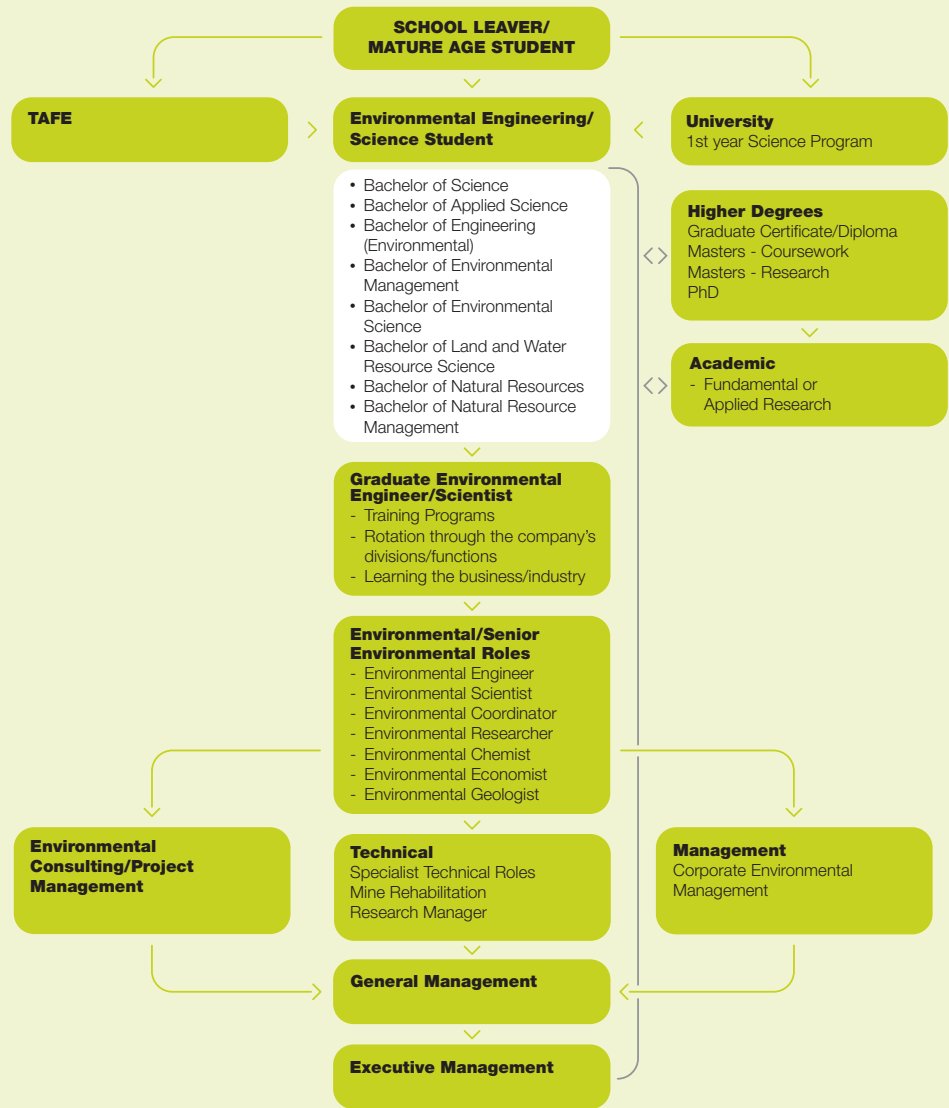
## Environment

### WHAT DOES AN ENVIRONMENTAL PROFESSIONAL DO?

Environmental engineers are concerned with assessing and managing the effects of human and other activity on the natural and built environment. They apply their engineering knowledge and skills to such things as environmental impact assessment, natural resources management and pollution control. Environmental scientists measure and record features of the environment, study, assess and develop methods of controlling or minimising the harmful effects of human activity on the environment, and develop conservation plans.

Environmental professionals can be involved in many different tasks:

- Developing ways of minimising the impact of processes on the environment, based on the study and assessment of these processes, environmental legislation and physical, biological, social and cultural environments
- Undertaking laboratory work; analysing pollutants, identifying their sources and assessing their effects
- Monitoring and evaluating the environmental and social impacts of engineering projects and development activities
- Rehabilitating land, water and air affected by mining, etc, conducting research and preparing proposals to lessen the impact of developments on the environment
- Researching matters of immediate and long-term importance to governments and the communities such as the impact of land clearing on native animals and the impact of waste products on waterways
- Negotiating with and assisting in the development of policies, strategies and codes of practice on environmental management and conducting environmental audits with industry, government departments and the public
- Researching and developing new technologies and techniques to improve the environmental acceptability of engineering projects
- Designing and operating processes to treat wastes to a standard acceptable for discharge and/or recycling, e.g. waste water treatment or waste solidification
- Working with occupational health experts to ensure a hazard-free working environment
- Preparing reports and studies on the best approach to environmental management in new and existing engineering projects, taking into account environmentally sustainable economic activity and legal, environmental and industrial factors
- Effectively communicating relevant issues to other technical staff, managers, regulatory authorities, public interest groups and the public. →



**ENVIRONMENT CAREERS**

- Environmental Engineer
- Environmental Scientist
- Environmental Consultant
- Environmental Chemist
- Environmental Economist
- Environmental Research
- Environmental Geologist

**→ WHAT ARE THE CAREER OPPORTUNITIES?**

Just as safety and health are becoming more and more important in the minerals industry so are the environmental professions. There are very good career opportunities in the environmental professions and many occupations now combine environmental work with another technical discipline.

**BRONWYN SMART**

BSc (Conservation Biology and Environmental Restoration) Murdoch University.  
Environmental Scientist - Newcrest Mining Limited, Telfer Gold Mine.

**Why did you choose your career?**

I grew up in a country town, close to a bauxite mine which provided numerous jobs for those living there. After completing some work experience there during year 12, and spending time with people from various professions, I decided that getting into the environmental field was something that appealed to me. I have always been passionate about the environment, and loved biology, geography and science in general, so choosing to be an Environmental Scientist seemed only natural.

**What have you enjoyed most about your profession?**

I have most enjoyed working away out in the bush – most people in Australia never even visit a place as remote as Telfer, let alone live and work out here!

There are some beautiful landscapes, plants, animals and weather to experience in the desert, which I probably would never have had the opportunity to experience had I not been working here. I have also had the opportunity to meet a lot of great people in the mining industry too.

**For someone considering a career in your profession, are there any words of wisdom to pass on to them?**

If you choose to enter the environmental field, try to get as much hands on experience whilst you are completing your degree as you can. Volunteer work, work experience and vacation work are good ways to do this, and will aid you in getting employment later on. Graduate positions in mining companies are a great way to start out.

PROFILE