



Our Water Research Laboratory (WRL)

Solving industry problems is all in a day's work

Q: What does the Water Research Laboratory do?

WRL is one of the world's leading water research laboratories. Our staff are recognised experts at addressing water problems across various water engineering disciplines and environments. Alongside our academic researchers, we have a team of professional engineers who solve problems for industry and government in a range of different ways through applied research. We have physical laboratories where we can test engineering designs and simulate real-world problems; we have desktop and computer based solutions we've developed in-house; and we also have a wide variety of equipment we can use to take measurements in the field.

Grantley Smith **Manager and Principal Engineer of the Water Research Laboratory**

Q: How many industry or government partners have you collaborated with at the Centre?

Over the years there would be hundreds! We have worked in a huge range of areas from giving policy advice and expert review to government, to working with engineering companies and contractors on large projects. Types of projects range from providing expert witness at the recent Grantham Flood Commission of Inquiry into the 2011 Queensland floods, to wetland restoration, beach erosion protection, improving the design of storm water systems, to assessing groundwater issues around coal seam gas and coal mine developments.

Q: How do you connect with your government and industry partners?

We get out of the laboratory! Our staff are continuously circulating with industry professionals at events and conferences. And we have a considerable network of industry contacts that we've successfully collaborated with over the years who are happy to recommend us to others. We have a lot of industry connections who are UNSW alumni and so know of WRL through their time studying at University. Our researchers are active on industry and government panels and boards, and we're also very active in providing continuing education to practitioners through training courses.

Q: How do your projects generally roll out?

Often we are approached directly to solve a specific problem. We research the problem, come up with a method and a solution, and then apply it in a practical way. We're probably one of the few groups in Australia that actually have both the research knowledge and the practical ability to apply it. Often, we'll be involved throughout the whole lifecycle of a project. For example we were heavily involved with the design of Sydney's desalination plant. We built scale models of specific parts of the plant to optimise how it would work. Now, because we have that knowledge they come back to us when they need expert advice or to adjust the way the plant is operating.

Q: What are the benefits for industry connecting with academia?

When there isn't an off-the-shelf solution there are significant gains to be made through associating with the University. We specialise in coming up with innovative ways of dealing with unique problems. We don't work out of manuals very often! Our industry and government partners get more cost-effective, efficient and innovative solutions to the problems they face. Our independence is also very important.

Q: Why do you think WRL has been so successful?

A large part of it has been this close link with industry, but the main reason is our staff. Cutting edge researchers who like working collaboratively to solve problems is actually very unique. Our main deliverable on our projects is not typically a journal paper, it's a solution to a problem. I think the other thing, on a really basic level, is that we're good listeners. We're good at collaborating with and helping people out.