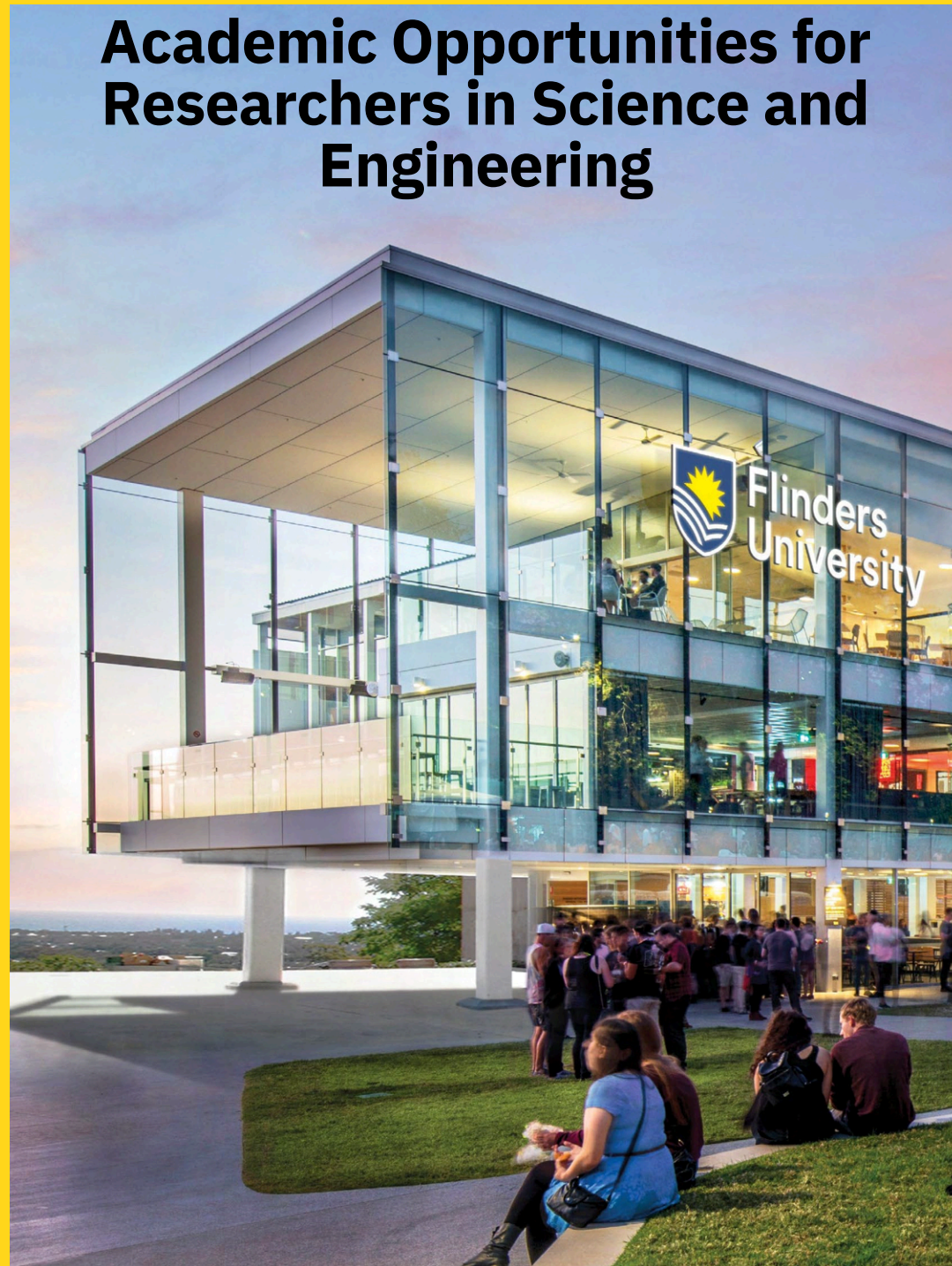


College of Science and Engineering

Academic Opportunities for Researchers in Science and Engineering





We are on
**KAURNA
LAND**

Flinders University acknowledges the Traditional Owners and Custodians of the lands on which its campuses are located, these are the Traditional Lands of the Arrernte, Dagoman, First Nations of the South East, First Peoples of the River Murray & Mallee region, Jawoyn, Kurna, Larrakia, Ngadjuri, Ngarrindjeri, Ramindjeri, Warumungu, Wardaman and Yolngu people. We honour their Elders past, present and emerging.

Today, over **400 ABORIGINAL AND TORRES STRAIT ISLANDER STUDENTS** are enrolled in courses at Flinders University.

College of Science and Engineering



Professor Alistair Rendell
Vice-President and Executive Dean
College of Science and Engineering

At the College of Science and Engineering we believe in the power of science and engineering to solve real world problems and we are committed to nurturing and pursuing excellence.

We strive to advance fundamental science, to create new technologies, and to work across discipline boundaries. We seek not only to understand the past, but also to create the world of the future.

Our teaching and research includes biological, chemical, and physical sciences, computing and information technology, engineering, mathematics and environment.

We work closely with industry to ensure relevance of our education programs, provide work integrated learning opportunities for our students, and collaboratively solve their research challenges.

In alignment with the South Australian Government's desire to drive "economic transformation towards a knowledge-based, resilient and greener economy for the future" the College has identified advanced manufacturing, maritime defence engineering, and sustainable energy systems, as areas for priority investment. This includes investment in both infrastructure and people.

The centre of this investment is the creation of the Flinders Factory of the Future. Located adjacent to the existing Flinders University engineering building in the Tonsley Innovation District, it will deliver a world-class, reconfigurable advanced manufacturing test bed, training, and industry growth facility, the first of its kind in Australia.

With strong support from the University, the College is seeking to make multiple appointments of academics capable of developing and leading significant externally focused research and development activities in the three priority areas. Applications are sought from early career researchers through to established academics who might want to join Flinders University together with their group. Candidates from outside academia but with relevant research and development experience are particularly encouraged to submit an application.

It is envisaged that positions will be offered for an initial period of 3-5 years during which they are research intensive. In exceptional cases continuing appointments may be considered.

If this opportunity sounds of interest, I encourage you to submit an application. If you would like a confidential discussion first, please contact cse.vped@flinders.edu.au to arrange a suitable time.

Alistair Rendell

Flinders University

Flinders University was opened by Her Majesty Queen Elizabeth, the late Queen Mother, on 25 March 1966, as the Bedford Park campus of the University of Adelaide.

Just 18 days earlier, however, the South Australian Parliament had passed legislation to create an independent institution. The state's second university officially came into being on 1 July 1966.

The Kurna people are the traditional owners of the land on which Flinders was established. Its namesake is the British navigator Matthew Flinders, who explored and surveyed the South Australian coast in 1802.

In 1966 the University began with four schools, 90 staff and just over 400 students. Professor Peter Karmel was the inaugural Vice-Chancellor and Sir Mark Mitchell the first Chancellor. Within a decade a significant decision was made to build the Flinders Medical Centre on land adjacent to the campus and locate the University's Medical School within – the first such integration in Australia.

In 1990 the University experienced a growth spurt with the addition of three new buildings – Law and Commerce, Engineering, and Information Science and Technology. The following year Flinders merged with the adjacent Sturt campus of the former South Australian College of Advanced Education, and in 1992 a four-faculty, 14 school structure was adopted.

During the 1990s, Flinders expanded into the Northern Territory. In the 2000s, our footprint extended into rural South Australia and south-west Victoria. In 2002, the Australian Science and Mathematics School was established at the foot of the Bedford Park campus, the first school in Australia to be fully integrated with a university.

New buildings for Education and Health Sciences were completed in 2010. In the same year, the state-of-the-art Science Innovation Learning Centre was opened as a dedicated first-year teaching facility for science and engineering students.

In 2015, the University's vision for a science and technology hub at Tonsley was realised when the \$120 million School of Computer Science, Engineering and Mathematics opened its doors. The site is also home to the Flinders New Venture Institute, the Medical Device Research Institute, Flinders Digital Health Research Centre and the Centre for Defence Engineering Research and Training, all of which are generating alliances and business opportunities with other education providers and national and global companies.

Flinders' commitment to student-centred growth continued in 2016 with the unveiling of a \$63 million Student Hub and Plaza at the heart of the Bedford Park campus. Drawing on the latest research into best educational practice, the Hub's intelligent design encourages collaborative learning and social interaction. In 2017 Flinders implemented a simplified six College model to encourage interdisciplinary research and teaching.

Flinders University became even easier to get to with the opening of the Flinders Railway Line and Flinders Station in late 2020, offering students and other commuters a faster, smoother journey from the CBD, in just 22 minutes.

In 2024, the University opened a \$280 million purpose-built Health and Medical Research facility and established a new City Campus located adjacent to the Adelaide Railway Station, in the heart of the CBD.



Matthew Flinders maquette

Research at Flinders

Complex problems require fearless thinking.

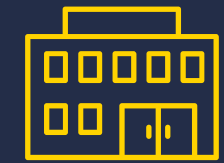
At Flinders University, we approach research differently. Partnering with industry and community, we identify and tackle society's most pressing issues. Bringing together diverse groups from various disciplines, industry experts, and individuals with lived experience to address these challenges to tackle the problem from different contexts. We focus on both the big picture and the finer details, using evidence and knowledge to drive real-world impact effectively. Together, we change lives and make a difference.



Research income soars 140% in five years**



Flinders have over 100 researchers in the World's Top 2% Scientists list by Stanford Elsevier*



In 2024, Flinders opened our \$280m purpose-built research facility, the Health and Medical Research Building (HMRB), dedicated to driving new knowledge through clinical trials and research.



\$6.9m in Australian Research Council (ARC) Industry Fellowships for 2024, one of the highest success rates in Australia*.



Flinders Researchers are highly acclaimed. SA Scientist of the Year* - Prof. Jamie Craig SA Young Tall Poppy of the Year* - Assoc Prof Amy Reynolds



8th in Australia for Medical Research Future Fund (MRFF) and National Health Medical Research Council (NHMRC) awards amongst Australian Universities*

* As at 4 December 2024

** HERDC data 2017-2022 (rounded up from 138.02%)

Our College

The College of Science and Engineering comprises approximately 180 academic (continuing and fixed term) staff, supported by approximately 70 professional staff. There are approximately 3900 students associated with the College of which roughly 270 are higher degree research students. In 2023 the College reported over \$24M in research income. Organisationally the College is broken down into the four teaching programs and four companion research sections.

Our Teaching Programs

Engineering

With fully accredited Bachelor of Engineering degrees across Biomedical, Civil, Electrical and Electronic, Environmental, Maritime, Mechanical, Nuclear, Robotics and Software specialisations, we will prepare students to solve problems and build solutions.

Natural Sciences

We are enhancing understanding of the natural world and providing a range of in-depth study choices to support graduates as advocates for our planet. Study options includes specialisations in animal behaviour, marine biology, water conservation, palaeontology and more. Stepping out of the classroom through lab work, fieldwork and placements are integral to our natural science courses.

Physics and Molecular Sciences

We offer fascinating and rapidly evolving theories of physical and molecular science while tackling previously unsolved real-world problems. Under the guidance of expert staff, our students learn about the world around us and the world beyond us.

Computing and Mathematics Sciences

We offer fully accredited Bachelor degrees in Computer Science and Information Technology, with specialisations in artificial intelligence, mathematics, data analytics, game development, cybersecurity and more.

Our Research Sections

Engineered Systems

By combining fundamental research with the application of state-of-the-art engineering principles, we are developing new technologies and making new breakthroughs in Biomedical, Civil & Environmental, Electrical & Electronic, Control, Mechatronics & Robotics, Materials, Mechanical & Manufacturing Engineering. Based at Tonsley, Australia's first Innovation District, our research incorporates strong collaborations with industry, across Australia and internationally.

Ecology, Evolution and Environment

We do world-leading research in several areas of biodiversity and environmental sciences, including palaeontology, evolutionary biology, global ecology, molecular ecology, animal behaviour, groundwater and coastal geomorphology. Our research section consists of around 180 academics, postdocs and research students housed in the leafy surrounds of the Flinders University Bedford Park campus.

Molecular Science and Technology

Our research in physics, chemistry, molecular biology, and plant science is world-leading. Our chemistry and physics discoveries have led to new nanotechnology for environmental remediation, energy production and storage, and advanced materials. Our biochemical research has made an impact on how we view and treat disease. Our forensic science research has provided innovative solutions for fighting crime. Our plant science research has made advances to support the future of food production.

Data and Information Science

We focus on the integration of cybersecurity, machine learning and advanced data analytics to solving important and wide-reaching industry, government, and defence problems. We are conducting world-leading research in artificial Intelligence, knowledge discovery, medical image processing, neuroscience, and cybersecurity. Our experts in digital health are making significant contribution to healthcare service delivery worldwide, creating new systems for data security, virtual care and digital infrastructure.

College Vision

Engagement and Impact

We will be internationally recognised for our collaboration with industry, government, and community to seek global solutions for a sustainable, secure, and healthy future.

Education

We will provide internationally recognised science and engineering education programs that are accessible, student centred, innovative and impactful.

Research

We will be globally recognised for our work to advance fundamental and applied science and for creating new technologies that make our world more connected, secure, healthy, and sustainable.

People and Resources

We will foster a collaborative environment that is inspiring, respectful, fulfilling, and productive, underpinned by clear and open communication

College Purpose

Engagement and Impact

To engage in partnerships that impact education, industry, environment and community.

Education

To inspire our students and equip them with the knowledge, skills and experience relevant to their future challenges.

Research

To undertake quality, high impact and collaborative research in science and engineering that advances knowledge and addresses real world challenges for the betterment of humanity.

People and Resources

To create an environment that enables staff and students to excel in education, research, and community engagement.



Institutes and Centres



Institute for Nanoscale Science and Technology

The Institute for Nanoscale Science & Technology is a hub of nanotechnology research and education. We work across energy, health and other biological processes, environment, and security. Our team works with business and industry, connecting real-world problems with research-driven solutions.



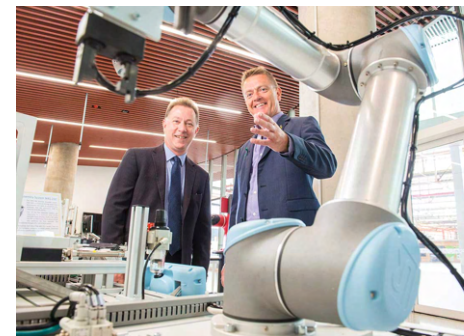
Medical Device Research Institute

Working closely with industry, we are developing personalised models and new medical devices to improve surgery successes. We are using big data to better understand Australian health. To achieve this, we are bringing great minds together to collaborate on creative solutions to address global healthcare challenges.



Flinders Digital Health Research Centre

The Centre provides expertise, innovation and leadership to ensure that Flinders University achieves national and international recognition as a premier institution for digital health systems and technologies research. It fosters digital health university-industry alliance relationships benefiting South Australia and the nation.



Centre for Defence Engineering Research and Training

Our research objective is to work with our partners to find innovative practical solutions to real-world defence problems. Our training programs are designed to meet the rapidly growing demand from our partners, to build a highly-skilled workforce supporting the uptake of advanced technologies driving industrial transformation.



Factory of the Future

The Factory of the Future will deliver a world-class, reconfigurable advanced manufacturing test bed, training and industry growth facility – the first of its kind in Australia. The Factory of the Future will connect businesses and sectors which are of growing importance to the national economy, including the \$90 billion defence shipbuilding industry.



National Centre for Groundwater Research and Training

The National Centre for Groundwater Research and Training is a partnership between 14 University and 19 Government and Industry organisations to advance knowledge and management of groundwater resources. It is headquartered at Flinders University Adelaide, South Australia.

2024 Success Stories

Recent research successes include two Australian Research Council (ARC) Discovery Early Career Research Awards (DECRA)s, two ARC Future Fellowships, an ARC Industry Mid-career Fellowship, an ARC Industry Early-Career fellowship. Our excellence in research collaboration has also been recognised externally with College led groups listed as finalists in the 2024 South Australian Science awards for Excellence in Science and Industry Collaboration (Sustainable Shark Tourism and Forensic Science), as well as in the Eureka Prize for Innovation in Citizen Science (Passport to Recovery). Additionally, five College researchers were recruited to the ARC College of Experts.

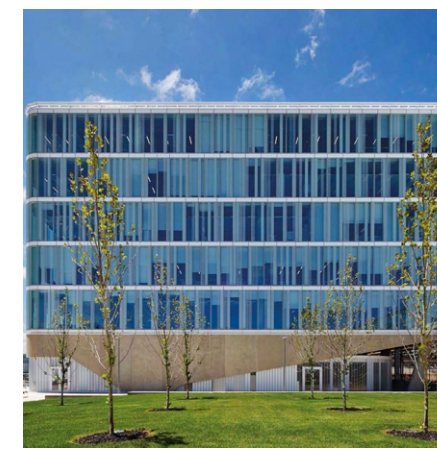
In education, Flinders won the Best Future Skills Provider at the 2024 Defence and National Security Workforce Awards for our track record of working with industry. Our undergraduate courses rank #1 in South Australia from Good Universities Guide 2023 in most categories across all of our programs (engineering, computing and science) including for overall student experience, teaching quality, student support, learner resources, learner engagement and skill development.

Flinders Adelaide Campuses



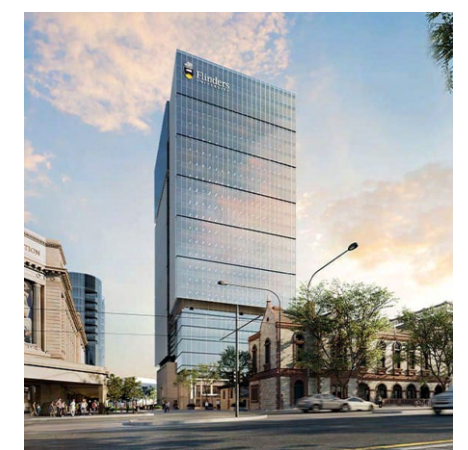
Bedford Park

Flinders University's Bedford Park campus, located south of the city of Adelaide, is our main teaching and research campus. The Student Hub offers 24/7 study spaces and access to all student services in one convenient location.



Tonsley

Flinders at Tonsley is an innovation hub for teaching, research and businesses in computer science, IT, engineering and mathematics. Tonsley also hosts the Flinders New Venture Institute start-up incubator.



Flinders City Campus

Flinders University has created a cutting edge, vertical campus that offers a new way of learning in the heart of Adelaide's CBD. Collaborative, state-of-the-art learning areas and open-plan event spaces deliver the optimal learning experience.

The Positions

Priority Areas

We are seeking experts across academic levels B through E in **Advanced Manufacturing, Maritime Defence Engineering and Sustainable Energy Systems**. The appointees will build and lead research, education and external engagement programs advancing the College's reputation for excellence both nationally and internationally in their chosen area.

Advanced Manufacturing: The appointee/s will work closely with industry, government and community partners alongside researchers in the Flinders Factory of the Future (FFF) and Engineered Systems Research Section. A testbed for new technologies, the Factory of the Future focuses on manufacturing innovation, industry 4.0 and 5.0, human resource management and is supported by cutting edge manufacturing equipment including collaborative robots, 3D printing facilities, laser cutting and engraving, etc. The appointee/s will have experience in one or more of the following FFF focus areas: collaborative robots, additive manufacturing, industrial design, saving energy and minimising manufacturing waste, and/or data collection and analytics.

Maritime Defence Engineering: The appointee/s will work within the Flinders Centre for Defence Engineering Research and Training together with our partners in the defence industry, to find innovative solutions to real-world defence engineering problems. They will have research expertise in one or more of the following areas: trusted autonomous systems, navigation and control systems, intelligent decision making, signal processing, ship building, marine corrosion and biofouling.

Sustainable Energy Systems: The appointee/s will have a passion for sustainable energy systems and work alongside academics in electrical and electronic engineering, materials science and nanotechnology to build our programs in renewable energy production, energy storage, power systems management and optimisation, and will have experience in one or more of these areas. Their research will be innovative, translational and industry/end-user focused, and they will be supported by cutting edge research infrastructure in support of energy system modelling and simulation, as well materials and structural analysis.

Level and Nature

Appointments will be made across the spectrum of academic levels, from Level B through to Level E according to the alignment of the applicants' achievements with the academic profiles available at: <https://staff.flinders.edu.au/content/dam/staff/pc/academic-profiles-levels-a-to-e.pdf>

Appointments are expected to be research intensive with an initial duration of 3 years for Level B and C, and 5 years for Level D and E. Current academic salary scales are available at: <https://staff.flinders.edu.au/employee-resources/benefits-pay/salary-rates>

The level of appointment is broadly dependent on the following five selection criteria:

1. Research and development experience relevant to the three priority areas with evidence of significant impact.
2. Track record of setting compelling research visions, assembling teams to execute that vision, and raising the required funding (depending on career stage).
3. Successful supervision of staff and students with the ability to take on broad leadership roles as required and especially at higher appointment levels.
4. Evidence of successful engagement with industry.
5. The extent to which the appointee would add new complementary research and development skills not already covered by existing groups within Flinders University.

These positions are open to international candidates and relocation and visa support is available.

Appropriate to the level of appointment, appointees will be expected to build research groups that include both staff and students, who are addressing problems of significant international interest with the potential for high impact. It is expected over time that the groups become largely self-funded through competitive grants and research contracts.

Application Submission

The College is seeking to appoint roughly 15 new outstanding academics and their groups over the next 1-2 years with the exact numbers depending on the level of appointment.

Multiple recruitment rounds are expected. You are required to submit a CV and a two-page Suitability Statement addressing the following key position capabilities:

- Research and development experience relevant to Manufacturing Engineering, including securing competitive grants.
- Your short-, medium-, and long-term research vision.
- Co-supervision or supervision of staff and students (depending on career stage).
- Research collaboration with diverse stakeholders and industry partners.

Applications to be submitted via Jobs@Flinders website. Please review the full advertisement and familiarise yourself with the prescribed conditions of employment at flinders.edu.au/employment

LIVING IN ADELAIDE

Adelaide is the capital of South Australia and has a population of 1.3 million people.

Adelaide's Mediterranean climate guarantees plenty of interest from people seeking to build a new life in Australia.

Combine Adelaide's superb climate with the lowest house prices of any Australian major state capital and you discover a proposition that is increasingly attractive to migrants seeking to improve their lifestyles. Adelaide is Australia's most affordable big city.

Adelaide needs the skills of around 5,000 new people from overseas each year to further develop its economy. Recently, South Australia's economy ranked 2nd in the nation.

World-class wine, gourmet food and natural attractions are all close at hand and the city offers entertainment and arts festivals that attract performers and visitors from across the globe. With a climate that is conducive to exploring the natural environment and enjoying the finest foods and wines, Adelaide and South Australia offer unrivalled opportunities to achieve a highly satisfying work-life balance.

Bursting with culture, flavours, events, entertainment, pristine beaches, wildlife sanctuaries and more. Flinders University's main campus is merely five kilometres from some of Adelaide's best beaches and only a stone's throw from the southern foothills so you can choose a lifestyle that suits you while remaining close to work.

There are many levels of accommodation available in Adelaide, all relatively affordable compared with other Australian capital cities.

No longer a secret, Adelaide is a highly attractive city in which to live life to the fullest.

To live and work in Australia, you and any dependants will require an Australian Government Visa.

Once you have accepted an offer of employment, Flinders University will, where appropriate, nominate you for either temporary or permanent residency with the Australian Department of Home Affairs. The kind of visa applicable is determined by the type of offer received.

Flinders University provides relocation assistance to eligible Academic and Professional staff. An additional contribution will be made for appointees relocating with dependents.

For more information, visit
<https://www.flinders.edu.au/employment/why-work-at-flinders/living-in-adelaide>



Riverbank Precinct, Adelaide

