

igion



RobotX in Australia

2022



robotx
CHALLENGE





robotx
SYDNEY, AUSTRALIA
NOVEMBER 11-17, 2022

Foreword

This document is to welcome all international visitors to Australia and all domestic visitors to New South Wales. There may be information in here that you already know, an update on information since your last visit or perhaps it is all brand new – some of it is highly relevant to RobotX and for your time in Australia; and other bits are for fun and enjoyment. Whatever the case, we hope you find the information in here useful and amusing.

2022 ROBOTX ORGANIZERS



The 2022 Maritime RobotX Challenge is hosted by RoboNation, in collaboration with the United States Office of Naval Research (ONR), the Australian Defence Science and Technology Group (DSTG), and the Next Generation Technologies Fund (NGTF).

Getting Around

Sydney Domestic and International Airport

Sydney Airport is approximately 60km from Penrith, which equates to approximately a 1 hour 15 minute drive time (in good traffic).

Transport Options

- [Taxi/Rideshare](#)
- Train
 - [Airport Link Train](#)
 - [Opal Card/Train Tickets](#)

Opal is the smartcard ticketing system used to pay for travel on public transport in Sydney. Using the [app](#), you can avoid purchasing a physical Opal Card, and link your debit/credit card to an Opal account and tap on and off public transport using the linked bank card (your card must be chip enabled).
 - [Trip Planner | transportnsw.info](#)

Trip Planner website and [app](#) are the NSW Transport schedules. This will also give you travel options, and travel disruptions. You can search by location, using the name of the place or use the map function.



*Opal SmartCard
App Logo*



*NSW Transport Trip
Planner App Logo*

Getting the Train from Sydney Airport to Penrith example:

- Shuttle

There are many shuttle services available from Sydney International Terminal, a quick Google will give you all the information you need.
But here are some options:

 - [Western Mini Buses](#)
 - [Compass Tours](#)
 - [JayRide](#)
- [Car Rental](#)

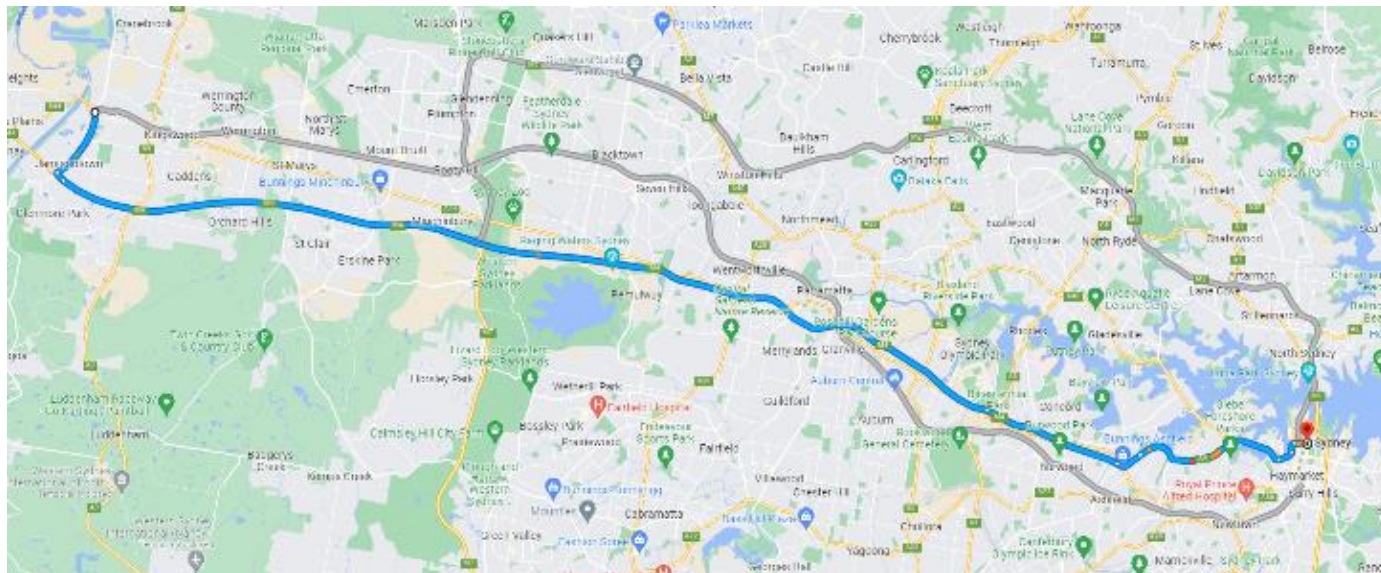
Getting from Penrith to Sydney

Drive & Taxi/Ride Share

The most direct driving route from Penrith to Sydney is via the M4; however, this is a tolled road. There are other non-tolled routes to Sydney from Penrith, just remember to set a route that doesn't have tolls.

See in this document: [‘Driving in Australia’](#) → ‘Do I need an e-tag for tolls?’

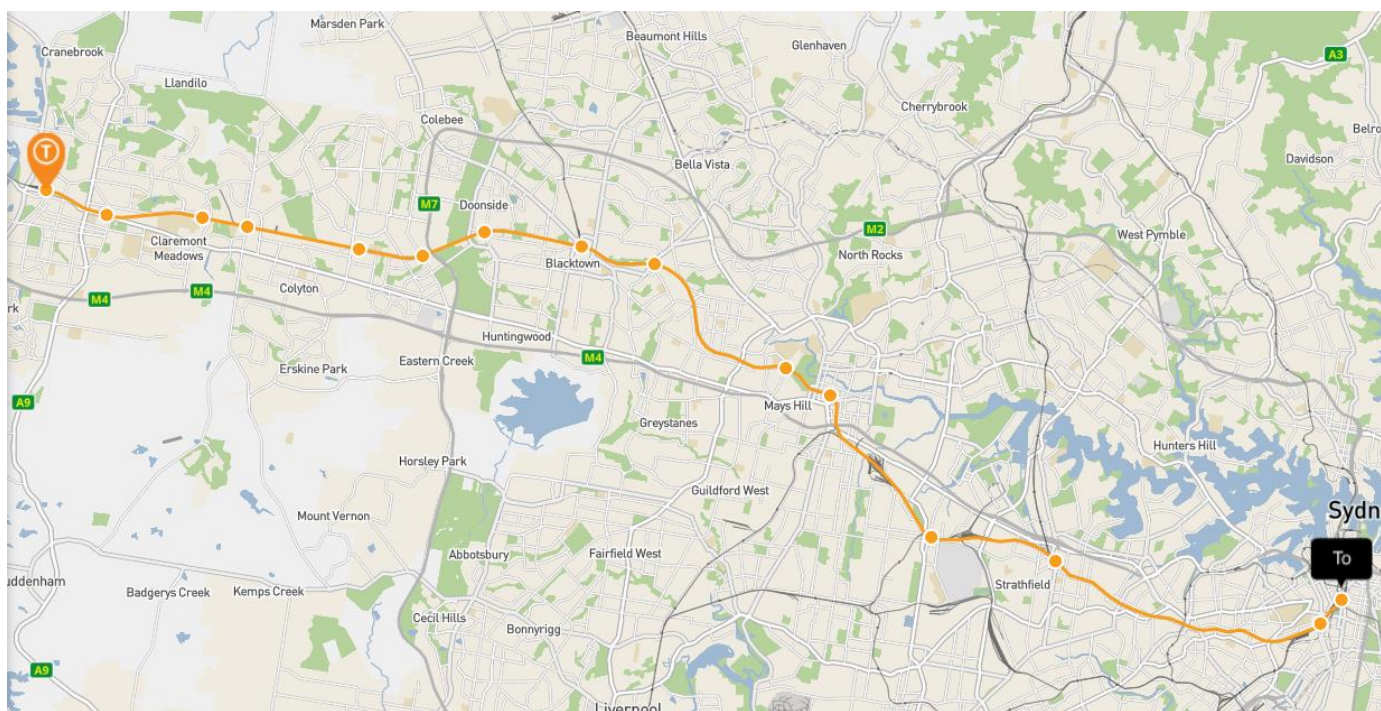
The drive typically takes 1 hour and 15 minutes, in good traffic conditions.



M4 Driving Route

Train

There is a train line directly between Penrith and Central Station (Sydney), where you will not be required to change trains before you get to the City – though it will make stops along the way – and take about an hour. You will need an [Opal Account](#) to travel on this service, and it's recommended that you use the Trip Planner [website](#) or [app](#) for the train schedule.



T1 (Sydney to Penrith) Train Line

Driving in Australia

Want to drive while you are in Australia?

The laws about driving in Australia with an overseas license are different in each State. Generally, you're allowed to drive in Australia with an overseas driver's license if you're a temporary visitor. If your license is not written in English, you'll need to carry a formal English translation or an [International Driving Permit](#).

In New South Wales, as a temporary visitor, you can drive on your overseas license as long as:

- It remains current;
- You aren't disqualified from driving while you're in Australia;
- Your license isn't suspended or cancelled; and
- You remain a temporary visitor.

Keep to the left-hand side of the Road

Australian's drive on the left side of two-way roads. As a pedestrian, use pedestrian crossings where possible and remember to look right, then left and then right again when you are walking across the street.

Speed Limits

Speed limits are strictly enforced in Australia. The speed limit is the maximum speed permitted on that road and you must not drive above the speed limit at any time. Some roads do not have visible speed limit signs, but speed limits still apply. You should be especially careful in residential areas and in school zones.

Drinking Alcohol and Driving

Driving under the influence of drugs or alcohol is dangerous and Australia has very serious penalties if you are caught doing so. In Australia, you are not permitted to drive a car if your blood alcohol level is 0.05 per cent or higher. If you hold a probationary or provisional driver's licence, your blood alcohol level must be zero when driving. Driving after taking drugs that affect your ability to drive is illegal and penalties are severe.

Using a Mobile (Cell) Phone while Driving

No, you are not permitted to use a handheld mobile phone when driving. This includes making or receiving calls, texting, playing games or browsing the web.

Do I need an e-tag for tolls?

Many of the motorways around major cities in Australia are toll roads, meaning you have to pay a toll to use them. Some are also fully electronic, so you will need to pay with an electronic tag or pass. You can buy a visitor's pass in advance or pay up to three days after you use the road. E-tags can often be used on motorways throughout Australia, but it is best to check with the local state roads and traffic authority to avoid fines.

Do I need to wear a helmet when riding a motorcycle and bicycle?

If you are riding a motorcycle, moped, motor scooter or bicycle, you are required to wear a helmet. If you are riding on a road, you must obey all road signs and traffic signals, including speed limits. You should always pay careful attention to road conditions and always allow plenty of room. Use your indicator if you are changing lanes or overtaking. Ride with headlights on and wear protective clothing.



New South Wales Road Rules

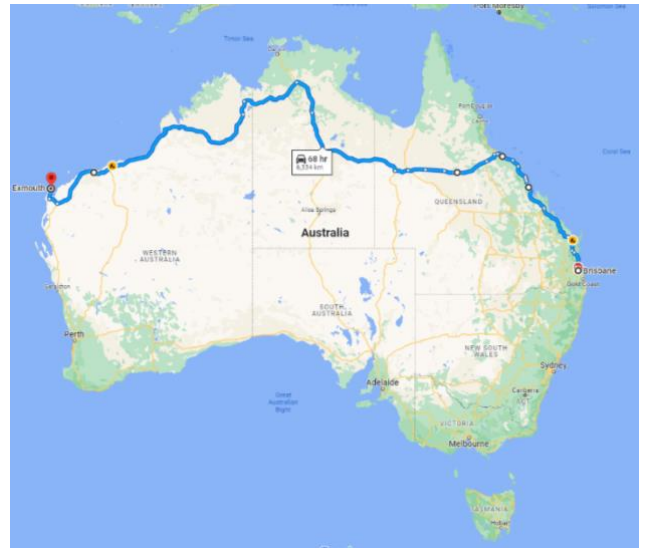
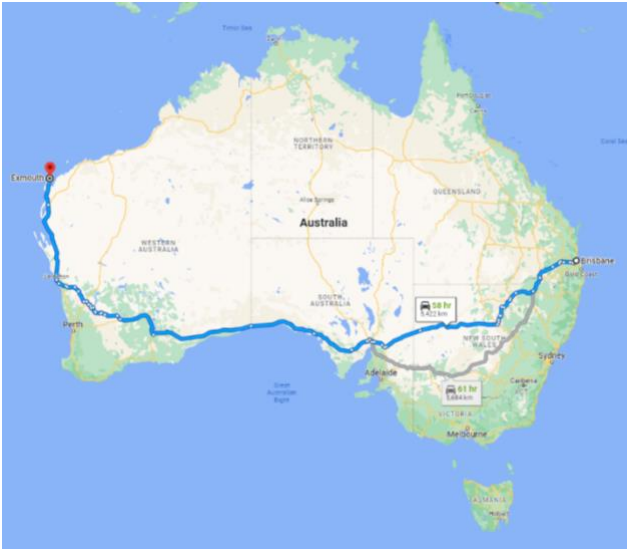
[NSW Road Rules](#)

[How Road Rules differ around Australia](#)

Compare driving across the USA to driving across Australia:

- If you drive from New York City, New York (USA) to San Francisco, California (USA) it is 2902 miles, would take you 43 hours; and you would pass through 11 states.
- If you drive from Brisbane, Queensland (Aus) to Exmouth, Western Australia (Aus) it is 3379 miles, would take you 58 hours; and you would pass through 4 states.

Difference: there is no direct route through the center of Australia, other than to go from North to South. To get from one side to another (East/West) you have to go via the bottom or top of Australia.



Accommodation

RoboNation has expertly negotiated accommodation for RobotX at the Mercure Hotel in Penrith.

Booking Information

[Book Now](#)

Company Name: ROBONATION

Company Code: SCP4134652

Access Code: RO348US424

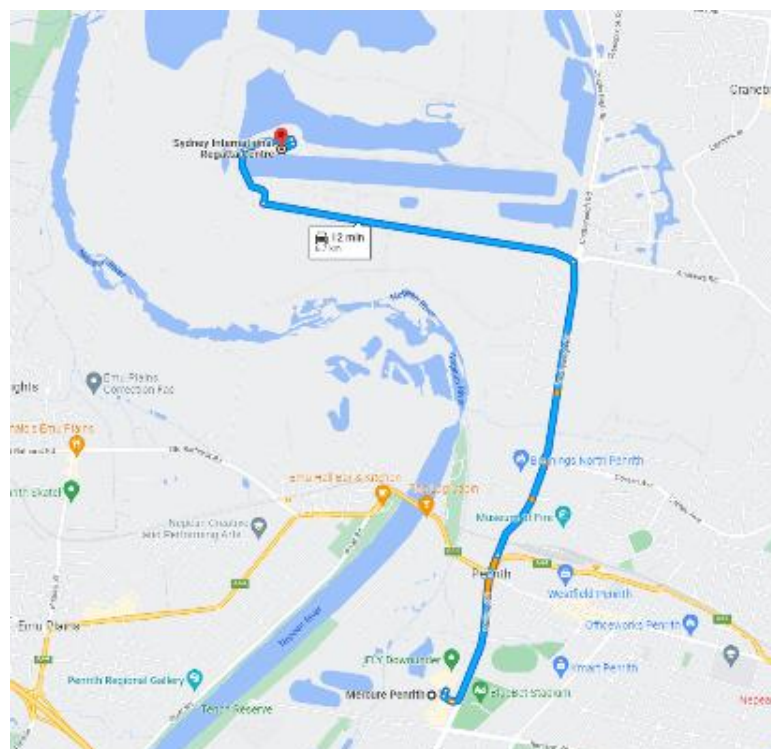
The link will take you directly to the website businesstravel.accor.com where bookings can be made.

The Company code and Access code will need to be entered as shown:



Mercure Hotel Penrith

BUSINESS IDENTIFICATION	<input type="text" value="SCP4134652"/>	<input type="text" value="RO348US424"/>
LOYALTY OR MEMBERSHIP CARD NUMBER		
<input type="text" value="Enter your 16-digit card number"/>		
DESTINATION*	<input type="text" value="Penrith NSW, Australia"/>	



Mercure Hotel to the Sydney International Regatta Centre

Health & Wellbeing

Australian Healthcare

- If you are an overseas visitor and need healthcare while you are in Australia, it is important to know how the health system works and what you will have to pay for.
- The Australian Government has [Reciprocal Health Care Agreements](#) (RHCA) with many countries. Overseas visitors from these countries can access medical treatment in a public hospital. However, there are some services that are not covered, and so it is a good idea to have health insurance for your stay.
- If you are not from one of the countries covered by an RHCA and you receive treatment in a public hospital, you will have to pay for the full cost of your care. If you have private health insurance, the insurance company may cover some of this cost.
- Most visas require overseas visitors to hold private health insurance during their stay in Australia.

COVID-19

RobotX will have a COVID-Safe Plan, and each Team is required to have their own COVID plan.

Entering Australia

- People entering Australia do not need to provide evidence of vaccination status.
- People entering Australia do not need to complete the Digital Passenger Declaration or Maritime Travel Declaration.
- Unvaccinated visa holders do not need a travel exemption to travel to Australia.

Leaving Australia

- People leaving Australia will not be asked to provide evidence of their vaccination status.
- People leaving Australia must ensure they comply with their destination's COVID requirements.

When do you need to wear a face mask?

- On public transport and public transport waiting areas (e.g. train platform and station);
- At hospitals and medical centers;
- If you are over 12 years of age and are a household or close contact of a person who has tested positive to COVID-19; and
- If you are experiencing cold/flu-like symptoms but have tested negative to COVID-19 (this isn't a rule, just courteous).

For further information about the COVID Requirements: [Australia](#), [New South Wales](#).

About Australia

Brief Australian History

This is a brief history of Australia and its people. Many important aspects and complex issues are left out, but we encourage you to discover more of Australia's history for yourselves.

Indigenous Origins

Aboriginal Australians have lived in the nation for at least 50,000 years. This means they have the oldest living cultural history in the world. When the British arrived in 1788, as many as 250 different languages were spoken across the nation. The Australian Institute of Aboriginal and Torres Strait Islander Studies has produced maps and many other resources on the history of Australia's Indigenous peoples. 'Barani', an Aboriginal word of the Sydney language that means 'yesterday', is a project detailing the Aboriginal history of the Sydney area.

Discovery

- The first documented landing on Australia by a Europeans was in 1606 by Dutch explorer Willem Janszoon. He landed on the western side of the Cape York Peninsula, and charted around 300km of coastline – and named the land 'Terra Australia Incognita, meaning 'Unknown Southern Land'.
- The English, led by James Cook were the first to land on the eastern coast of Australia, in 1770; charting the eastern coast of Australia, New Zealand and many Pacific Islands.
- The French arrived in 1788, six days after the First Fleet arrived.

[Unique take on the discovery of Australia.](#)

First Fleet

The First Fleet, made up of 11 prison ships, arrived in Botany Bay (NSW) in 1788 to establish a penal colony, which received convicts until 1848. Convicts were later sent to other states, except South Australia, and eventually established a free colony in 1836.

Image: 'The First Fleet in Botany Bay, 1788', by Bob Booth, 1986



First Fleet Arrival in Botany Bay

Gold Rush

The discovery of gold in Australia – first in Bathurst, NSW; then in Ballarat, Victoria – kick-started the economy and created the idea of Australia as a desirable location. In 1854, the Eureka Stockade, in Ballarat, a rebellion against taxation that some see as a crucial event in the evolution of Australian democracy. This is also the first period of Chinese immigration, with 50,000 Chinese people arriving and the establishment of many 'Chinatowns'.

Federation

The Commonwealth of Australia was created in 1901 with the Federation of all the States. It was agreed that the capital could be in NSW but no closer to Sydney than 100km. This led to the creation of Canberra, with a temporary parliament set up in Melbourne for 27 years.

World War I

Australia joined the First World War, as soon as war was declared; but in April 1915 the Australian and New Zealand Army Corps (ANZACs) took part in the Gallipoli Campaign – which was fought mainly by the ANZACs. Despite the defeat, this battle has great relevance in defining the characteristics of Australians. April 25, the date of the first landing at Gallipoli, is ANZAC Day – the date Australian's commemorate and pay respect for the sacrifice of our Armed Forces, both past and present, in conflicts around the world.

Image: The iconic Australian Army Slouch Hat, still worn by the Army today. The intention of turning up the right side of the hat, was to ensure it would not be caught during the drill movement 'shoulder arms' from 'order arms'.



Slouch Hat

You Should Know

Borders

Australian's are laid-back people, which is true; however, if you try to bring certain things into the country, or from state to state, are prohibited. Forbidden things include fruits, vegetables, meat, eggs, plants, seeds, feathers, skins, drugs – if it is medication, it must be declared by your doctor in writing – as well as obvious things like weapons, protected wildlife and firearms.

Currency

Australian money is colourful and plastic, and the size of the notes (\$5, \$10, \$20, \$50 and \$100) increases as the value increases. Also, everything is rounded to the nearest five cents [no pennies here] so the smallest change provided is five cents. But don't stress too much – you can pay for 99% of things with electronic payment methods (e.g Apple Pay, etc.)

Gold coins are dollars (larger = \$1, smaller \$2);

Silver coins are cents (dodecagon = 50c, largest circle = 20c, second smallest = 10c, smallest = 5c)

It is the fifth most traded currency in the world. The Australian bank notes are one of the hardest to counterfeit in the world because of how they are produced and their security features.



Australian Currency

Emergency

For the emergency services in Australia, call triple zero (000). You will then be asked which emergency service you need (police, fire, ambulance). They will guide you through the process and help you via the phone if necessary. Hopefully you won't need them.

If you can't remember the emergency number, some mobiles phones will recognize 911 and/or 999, as you trying to get hold of emergency services and automatically re-direct the call.

The Sun

[Be sun smart!](#) Whilst the Australian climate is variable, sunblock (sunscreen) is a constant, and needed everywhere. Even if you like to get a sun tan, don't do it without smothering yourself in sunblock, because Australia's sun is harsh. With a thinner ozone layer, not only does Australia heat up very quickly, but the rays are also especially harmful to your skin, sometimes to a point that you can even feel your skin sizzling. The sunburn will last weeks and blister. If you have pale skin, it may be best to wear a hat and cover up with clothing as much as possible.

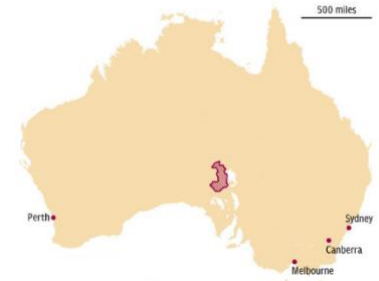


Tipping

Although it is common place in many countries, in Australia the minimum working wage is a lot higher, meaning tipping isn't necessary. All service charges are included in your bill (GST – Goods and Services Tax), so you will never have to worry about adding extra. If you are feeling particularly grateful and do choose to tip, base it on whatever you feel their services should be tipped, but there are no expectations here.

Facts about Australia

- Australia's indigenous peoples are a part of one of the world's oldest continuous cultures and religions.
- Australians identify with more than 270 ancestries.
- 1 in 4 (26%) were born overseas.
- 1 in 2 (46%) have a parent who was born overseas.
- Nearly 20% of Australians speak a language other than English at home. Collectively Australia is home to more than 200 languages.
- Top migrants in Australia: United Kingdom – 5.3%, New Zealand – 2.6%, China – 1.8%, India – 1.6%, and Vietnam – 0.9%
- The biggest metropolises in Australia are Sydney, Melbourne, Perth, Brisbane and Adelaide (in descending order). These cities are all located right on the coast or close to the coast and are the only cities in Australia with more than one million inhabitants.
- Australia has a cattle ranch which is bigger than Belgium – Anna Creek Station.
- The emu and kangaroo were chosen for the coat of arms because they are incapable of walking backwards.
- Australia has more camels than the Sahara Desert. In fact, even the Kingdom of Saudi Arabia imports camels from Australia.
- Melbourne has the largest population of Greek people, outside of Greece.
- Australia is the only continent without an active volcano.
- It would take more than 30 years to visit Australia's nearly 12,000 beaches, if you visited one beach every day.



Anna Creek Station

Aussie Slang

There are many dialects of Australian slang which vary depending upon where you are and where the person comes from. These are just some common ones:

Slang	Meaning	Slang	Meaning	Slang	Meaning
Arvo / Arvy	Afternoon	Avo	Avocado	Bail	Leave
Barbie / BBQ	Barbeque	Bathers, Budgie Smugglers, Cozzies, Togs	Swimwear	Beauty, Ripper	Person, animal, object (subjective)
Biccy	Biscuit/Cookie	Bloody	Added for positive or negative emphasis	Bludger	Someone who is lazy
Bodgy, Dodgy	Dishonest or unreliable	Bogan	An uncultured person, 'red neck'	Bottle-O	Liquor Store
Brekkie	Breakfast	Bucks	Dollars	Chockers	Full, Crowded
Cooked	Dead, expired, over-heated, unservicable	Coppers	Police	Crook	Sick/Ill
Dacks	Pants	Devo	Devastated	Footy	AFT
Iffy	Unsure, unclear, dodgy	Info	Information	Intro	Introduction
Lollies	'candy'	Loo	Toilet	Maccas	McDonalds
Mate	Friend, acquaintance, stranger, foe, anyone...	Mo	Moustache	Mozzie	Mosquito
No Drama/ No Worries	It wasn't a big deal / don't worry about it	Piss Off	Go Away	Pissed Off	Annoyed
Pissed	Drunk	Poli	Politician	Ripper	
Roo	Kangaroo	Rugby	Union or League	Sanga	Sandwich
Servo	Service Station	Sick	Awesome	Sickie	A sick day
Snag	Sausage	Soccer	Football	Thongs	'flip flops'
Tinny	Aluminum boat or beer in a can	Tradie	Person who works in the trade/ construction industry	Tucker	Food
U-ie	U-turn	Uni	University/College	Yakka	Work (hard work)

Religion

In the Australian 2016 Census 52% of the population identified with a Christian religion, 8% identified with other religions; and about 39% said they had no religion.

Local places of worship in the Penrith Area and nearby:

- [Christian](#)
 - [Catholic](#)
 - [Anglican](#)
- [Judaism](#)
- [Hinduism](#)
- [Buddhism](#)
- [Islam](#)
- [Sikhism](#)

What is there to do?

Around Penrith

[Aqua Golf](#)

So, what is Aqua Golf? It's a bit like a driving range, but instead of a green, you have a lake... and the balls float! The aim is to hit balls into targets located randomly on the lake. If you hit the targets you can win prizes, including cash prizes ranging up to \$500. Have a friendly competition with friends, hit the targets to win prizes or just see how far you can hit the ball. No golf skill required. Fun for the whole family with the closest targets only ten metres away. Kids win the same prizes as adults. You can purchase balls by the bucket and hit the day away. Golf clubs are supplied. Rain, hail or shine Aqua Golf is a great venue for parties, large groups or team building events. The large undercover area means you can enjoy a round of golf, no matter what the weather is like.



Aqua Golf

[Black Door Gallery](#)

Visit the home of the artist who did the Indigenous Artwork for the RobotX 2022 shirts. As well as experience the works of other local indigenous artists.

[Cables Wake Park & Aqua Park](#)

An addition to Cables Wake Park, the Aqua Park area is situated in the back lake and boasts a series of inflatable slides, runways, jumping pillows and structures all connected together and floating close to the shoreline. It's the most fun for your money you could ever imagine and sits well with the parks outdoor and physical activity philosophy, and family friendly atmosphere. The Aqua Park is the perfect place for the young (and the young at heart!) to cool off whether the weather warms up. Featuring inflatable slides, trampolines and obstacles the Aqua Park is where your inner child comes to life!



Cables Wake Park & Aqua Park

[The Climbing Centre](#)

Scale to new heights at this state of the art climbing centre. Climbing for beginners and experts. Challenge yourself, conquer your fear of heights and get active at The Climbing Centre - your one stop shop for indoor and outdoor climbing.

[Flip Out](#)

Flip Out is a large indoor trampoline arena and also features a foam pit, ball games and special events. If you're looking for an affordable way to get active and have fun, then look no further.

[Foot Golf](#)

Part soccer, part golf - FootGolf a whole lot of fun! There's a new sport taking the world by storm and only one place in Sydney you can play it - the Colonial Golf Course in Werrington. FootGolf is the result of combining the popular sports of football (soccer) and golf. The rules largely correspond to the rules of golf. Worldwide FootGolf is regulated by the Federation for International FootGolf (FIGF). The game is rapidly expanding across the globe with deep roots in many countries. This game is played, for the most part, without the supervision of a referee. The game depends on the integrity of the player to show consideration for other players and to abide by the rules. Grab your friends, work mates or family and book them in for a game of FootGolf. You're guaranteed to have fun and get fit at the same time!

[Freak VR](#)

Get ready to step beyond reality with the most immersive multiplayer VR experiences imaginable. Next level entertainment, FREAK is an immersive virtual reality gaming venue, that combines cutting edge multiplayer games, incredible 4D effects and curated physical spaces to help you venture beyond reality.

[Hoytes Cinemas](#)

Experience the latest with a bigger screen and surround sound in HOYTS Xtreme screen or pick up a scoop or two of the good stuff with Ben & Jerry's Ice Cream. Surrounded by the hustle of the busy shopping centre, hide out with HOYTS Penrith and the biggest blockbusters.

[iFly Downunder](#)

No parachute, no jumping and nothing attaching you to planet earth! It's just you and the air... and an incredible adrenaline rush. Ever dream of flying? iFLY Indoor Skydiving is a state-of-the-art vertical wind tunnel that provides a fun and safe way to experience true human body flight. No experience necessary and all training is included. iFLY Indoor Skydiving is the latest thing in action sports. Whether you're 3 or 103, it offers the most exhilarating, involving and rewarding experience imaginable. Inside the giant glass tunnel, a massive wind generator lifts you effortlessly into flight on a cushion of air. Master the flying skills of expert skydivers in a state-of-the-art, fully-controlled, ultra-safe environment. And the all-round viewing platform lets you share the magic with family and friends. Experience the rush that makes the sport of indoor skydiving so big around the world.



Freak VR



iFly Downunder

[Luddenham Raceway](#)

Go fast and go hard... go kart at this world class outdoor karting centre with an awesome Pro Circuit and Rookie Circuit. Luddenham Raceway is Sydney's newest outdoor go karting centre providing high-speed fun for families and friends and a unique venue for bucks, birthdays and corporate team building. The Rookie Circuit has been specially designed for kids aged 8 - 14, while bigger kids (and adults!) can go head to head in the brand new go kart fleet on the adrenaline pumping Pro Circuit. Luddenham Raceway is also perfectly suited for any event you are hosting. Race Packages are available for birthdays (15 years and over) bucks and hens, Christmas parties, team building, product launches or just a fun get together for a bunch of mates.

[Narrow Escape Rooms](#)

The clocks ticking, can you find the clues, solve the puzzles and achieve your mission in time? Narrow Escape Rooms is a family owned business located in Penrith where couples or small groups (two to six players) enter a themed room and play a game to achieve a mission.

[Observatory at Western Sydney University](#)

The WSU (Western Sydney University) Penrith Observatory runs astronomy nights designed to enhance exposure to astronomy, science and space science. These nights run regardless of the weather and include a multimedia presentation with question time, a 3D astronomy movie, a tour of the dome area 0.6m telescope, and an opportunity to view the night sky through the University's computerised telescopes (weather permitting).



Luddenham Raceway

[Penrith Regional Gallery](#)

A beautiful gallery set in heritage gardens - explore a dynamic mix of exhibitions, workshops and events. The Penrith Regional Gallery & Lewers Bequest is one of Australia's most beautiful regional galleries. The Gallery is set on the Nepean River and in the former home of sculptor Gerald Lewers and his wife Margo Lewers, a well-known artist. The Gallery presents a dynamic and interesting mix of exhibitions, workshops and other programs.

[Penrith Whitewater Stadium](#)

Experience the thrills and spills of guided and unguided whitewater rafting and kayaking. Penrith Whitewater Stadium offers guided rafting for beginners (12yrs and over) and self-guided rafting for the more adventurous (16 years and over). Located at the foot of the world heritage listed Blue Mountains, Penrith Whitewater is the only man-made river of its kind in the southern hemisphere and was the competition venue for the canoe/kayak slalom events during the Sydney 2000 Olympic Games. The whitewater course was constructed using a combination of both natural and man-made materials to recreate the characteristics of a wild river. More than 14,000 litres per second of raging whitewater flowing over a moveable obstacle system, has proven to be a challenging and exciting ride even for the best paddlers in the world.



White Water Stadium

[The Rock Lookout](#)

Enjoy spectacular views of the Nepean River Gorge, Blue Mountains and Penrith. If you're after breathtaking views of the Nepean Gorge in the Blue Mountains National Park, take a short scenic drive south along Mulgoa Road from Penrith to reach the historic and picturesque Mulgoa Valley. Once there, take a short-walk of only a few hundred metres from Fairlight Road to The Rock Lookout where you'll be greeted by sweeping views of the Nepean River and you can pose for photos on the iconic rock which visitors have done for more than 200 years. A longer track of 2.5 kilometres takes keen bushwalkers through swampy heath and eucalyptus forest to Riley's Mountain where more views of the Nepean River and surrounds can be enjoyed.

[Throw Axe](#)

Like "darts on steroids", taking Penrith by storm... it's time to unleash your inner lumberjack today! Hurling your first axe down our fenced in range and hearing it thud as it sticks to the wood is an extremely satisfying experience. One you will never forget. It's quick to learn how to do it too. The learning process can be as quick as a few minutes before you feel like a natural lumberjack. The expert axe throwing coaches will make it super easy and safe for you to pick up techniques needed for axe throwing. It's great for all abilities.



TruNinja

[Timezone](#)

Indoor amusement arcade with interactive games - where the whole family plays! Situated in the Legendary Penrith Panthers, Timezone Penrith is an entertainment destination for all ages. You'll find the latest release arcade games as well as some old favourites - with over 70 to choose from, there's plenty to keep the kids occupied, or let your inner child out to play.

[TruNinja](#)

TruNinja brings fun, fitness and adventure together. TruNinja is a revolutionary adventure park that will give you a true taste of challenge. TruNinja brings fun, fitness and adventure together.

[Zone Bowling & Laser Skirmish](#)

Tenpin bowling, arcade games, laser tag and yummy food and drinks, ZONE BOWLING is the perfect place for some serious fun!

Dining

- [Eat & Enjoy Penrith](#)
- [Menu Log](#)
- [Deliveroo](#)
- [Westfield Shopping Centre](#)
- [Uber Eats](#)

Shopping

- Shopping Mall: [Westfield](#)
- Electronics: [Battery World](#), [Jaycar Electronics](#), [JB HiFi](#)
- Tools: [Bunnings Hardware](#)
- Marine/Boating: [Road Tech Marine](#), [Penrith Marine](#), [Boat Warehouse](#)
- Groceries: [Woolworths](#), [Coles](#), [ALDI](#), [IGA](#)

For more information about what there is to do, see, eat and much more around the Penrith Area, go to [Visit Penrith](#).



Westfield Penrith

Around Sydney

[Art Gallery of New South Wales](#)

Explore five levels of art at one of Australia's most popular art museums, located within beautiful parklands overlooking Sydney Harbour, just 10 minutes walk from the city. See an extensive collection of Australian art, including one of the largest galleries of Aboriginal art in the country, alongside European masters, Asian treasures and leading local and international contemporary art.

[Australian Museum](#)

The Australian Museum (AM) was founded in 1827 and is the nation's first museum. The AM has been transformed and visitors can now enjoy transformed spaces and updated amenities. Free general admission includes entry to all permanent exhibitions and Prehistoric Playground, which is open daily on Level 2 and features a variety of activities for children of all ages including a fossil lab and interactive dinosaur design station. The AM is internationally recognised as a natural science and culture institution focused on Australia and the Pacific. With more than 21.9 million objects and specimens and the Australian Museum Research Institute (AMRI), the AM is not only a dynamic source of reliable scientific information on some of the most pressing environmental and social challenges facing the region but also an important site of cultural exchange and learning.



Australian Museum

[Australian National Maritime Museum](#)

Spectacularly located at the waterfront of Darling Harbour, the Maritime Museum is a distinctive indoor/outdoor attraction and great entertainment for the whole family. The museum has one of the largest and most diverse in-water fleets in the world including cold war submarine HMAS Onslow, naval destroyer HMAS Vampire, and the stunning replica of Captain Cook's tall ship HMB Endeavour. Explore the danger and drama of military life at sea inside the interactive Action Stations experience; a high-tech immersive journey that shows the inner workings of the Royal Australian Navy like never before.

[Bondi Beach](#)

[Beach Safety](#)



[Bondi to Coogee Coastal Walk](#)

Offering visitors to Sydney an opportunity to join in and do what the locals do - the Bondi to Coogee Walk is a popular coastal walk offering beautiful coastline vistas, cosy beaches and cafe strips for refuelling. It is six kilometres long and takes about two hours to complete at a good pace, but why not break it up with a freshly squeezed juice or a relaxed coffee, then finish with a swim at Coogee Beach. The walk passes one of the world's more scenic operational cemeteries, the Waverley Cemetery where graves of famous Australians such as Henry Lawson can be found. The Bondi to Tamarama Beach section of the walk is transformed each spring with the Sculptures by the Sea exhibition. The walk is easy to medium with a steep section and quite a few steps. Don't forget your hat, sunscreen, and some water.

[Darling Harbour](#)

For more than 7,000 years Darling Harbour was a frontier; a boundary between the Wangal and Gadigal clans of the coastal Eora people who used the harbour for food and transport up the Parramatta River. The Eora people called Darling Harbour 'Tumbalong', meaning [a place where seafood is found](#).

[Darling Quarter](#)

Experience the best of Sydney at Darling Quarter – a contemporary commercial, retail and recreational precinct offering a diverse range of eateries, entertainment, art exhibitions and activities - all set in a lively community gathering space. Featuring renowned restaurants and cafes, one of Australia's best children's playgrounds, the acclaimed Monkey Baa Theatre Company, and some of the only greenery in Sydney CBD, Darling Quarter has a year-round program of free events and experiences for audiences of all ages. It's a thriving destination that welcomes everyone.



Darling Quarter

[Lord Nelson Brewery](#)

Today the Lord Nelson Brewery Hotel is Australia's oldest pub brewery, famous throughout the World for award-winning natural ales. Brewed with only malt, hops, yeast and water (no added sugars, preservatives or additives), ensuring 100 per cent natural beer.

[Luna Park – Sydney](#)

With spectacular views of the harbour, Sydney's much-loved Luna Park is a superbly restored 1930s amusement park where everyone goes - just for fun. Behind Luna Park's big old grin is an exciting new world. There's heaps of different rides and surprises that tickle the senses. You've now got clickety clack classics to world-first futuristic speed machines. Luna Park has packed-in G-forces that you didn't even know existed and plenty of G-rated fun that the family can ride on together. Music, laughter, screams, and the sound of clickety clack. Sliders, popcorn and fairy-floss, it even tastes and smells like fun. The colours, the shows, magic views and flashing lights, this is Sydney, overloaded with incredible sights.



Luna Park - Sydney

[Manly Beach](#)

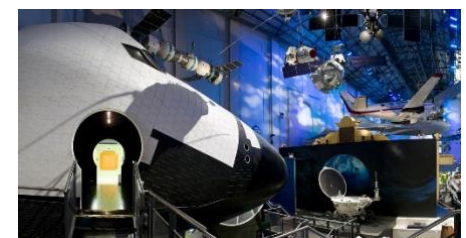
Manly Beach is one of Australia's most famous beaches, best known for being the beach where the world's first surfing contest was held in 1964. The iconic beach, a 1.5 kilometre stretch of golden sand, lined by magnificent Norfolk pines curves two kilometres from South Steyne to North Steyne and Queenscliff, where a submerged reef, or bombora creates waves prized by top surfers. It also caters for those wanting to learn to surf and most days you will see schools of surfers launching into the rips, paddling hard to get onto that elusive wave. Swimmers are, as always, advised to swim between the yellow and red flags which are patrolled by lifeguards.

[Powerhouse Museum](#)

Powerhouse Ultimo is a contemporary museum in the heart of Sydney with a focus on arts, science, innovation and design.

[Queen Victoria Building](#)

Rich in history and architecturally splendid, the Queen Victoria Building (QVB) occupies an entire block on Sydney's George Street, and has over 180 of Sydney's finest fashion boutiques, jewellery shops and homewares, accompanied by delightful cafes and restaurants. The grand building, built in the 1890s was erected as a Municipal Market on the scale of a Cathedral. The QVB was beautifully restored and re-opened in 1986, and quickly became Sydney's most popular and prestigious shopping centre. The dominant feature is the mighty centre dome, which during the Christmas period is occupied by a giant Christmas tree, a must see for any visitor. Glorious stained glass windows and splendid architecture endure throughout the building and an original 19th century staircase sits alongside the dome.



Powerhouse Museum

[Red Hands Cave](#)

For an opportunity to see one of the most famous Aboriginal heritage sites in Ku-ring-gai Chase National Park, Red Hands Cave walking track is the route you're looking for. Head out from Resolute picnic area on this easy bush track to see rock art of the Aboriginal people of this area.

[The Rocks Markets](#)

With a selection of handcrafted products, The Rocks Markets brings talented and experienced artists and makers to the heart of The Rocks every Friday, Saturday and Sunday. Take a stroll through the bustling market stalls and discover locally-designed fashion, handcrafted jewellery and unique homewares. Meet local artists and photographers, sample handmade beauty products, or simply grab a bite to eat from one of the many food vendors, to fuel your exploration. Stumble across live music and enjoy activations to entertain the whole family. There's excitement to be found around every corner of The Rocks Markets, with a diverse range of tastes and styles that proudly reflects Sydney's culture. It's an oasis that's as easy as the breeze, nestled next to the CBD and just footsteps from the ferries, trains and buses of Circular Quay and Wynyard.



Red Hands Cave

[Royal Botanic Gardens](#)

Welcome to the Royal Botanic Garden Sydney, an oasis of 30 hectares in the heart of the city. Wrapped around Sydney Harbour, the Gardens occupy one of Sydney's most spectacular positions. Established in 1816, it is the oldest scientific institution in the country and is home to an outstanding collection of plants from Australia and overseas. From the provocative rare and threatened plants of the world to the romantic rose garden, the themed garden areas show the diverse beauty of nature.

[SEALIFE Sydney Aquarium](#)

Located in the heart of Darling Harbour, SEA LIFE Sydney Aquarium is an underwater journey of amazing discovery with nine extraordinary themed zones. Meander through the Jurassic Seas, Sydney Harbour and Dugong Island, then, immerse yourself in the underwater world of Shark Valley, the majestic ocean tunnel walk-through, next visit the penguins on Macquarie Island and end with the mesmerising Great Barrier Reef zone. SEA LIFE Sydney Aquarium is one of the world's largest aquariums - with over 700 different species and 13,000 animals in an impressive six million litres of water. SEA LIFE Sydney Aquarium is also home to the world's largest variety of sharks and rays, as well as Australia's most famed marine animals, including a dugong and tropical reef fish. Explore Day and Night on the Reef – a brand new Great Barrier Reef experience, the largest in the world! Walk across bioluminescent beaches, journey through jellyfish garden and meet their marine turtles in this totally unique, interactive exhibit.



Sydney Eye Tower

[Sydney Eye Tower](#)

Sydney Tower Eye takes you to the highest point above Sydney for breathtaking 360 degree views of the beautiful harbour city. From the golden beaches to the distant Blue Mountains, you'll be amazed by the views.

[Sydney Harbour Bridge](#)

BridgeClimb Sydney is an iconic Australian experience that takes you on a journey to the top of the nation's most famous and celebrated structure – the Sydney Harbour Bridge. As you ascend to the summit of the world's largest steel arch, you'll experience breath-taking moments, spectacular 360-degree views, and insights into the engineering and cultural history of this world-famous icon. Climbs currently run every Friday, Saturday and Sunday, and every day during the NSW School Holidays. There are climbs available from dawn through to nightfall, delivering unique experiences and memorable moments on every ascent.



Sydney Harbour Bridge

[Sydney Harbour National Park](#)

Sydney Harbour National Park protects a number of islands and foreshore areas around one of the world's most famous harbours. The park is home to superb swimming spots, bushwalking tracks and picnic areas, which offer a huge range of activities that will have you coming back again and again.

See native wildlife living in rare pockets of bushland once common around Sydney, or take a fascinating walk to explore the park's cultural history. You'll see everything from convict-built buildings and military fortifications to Aboriginal sites and a heritage lighthouse. And with the harbour's staggering coastline creating an endless natural lookout, the park's jaw-dropping views simply have to be seen to be believed. If you're at one of the park's lookouts during winter, be sure to keep a lookout for whales on their annual migration north.



Sydney Harbour

[See the Harbour](#)

- [Tribal Warrior](#): Cruise the most beautiful city harbour in Australia, and enjoy the relaxed and friendly company of your Aboriginal hosts and crew. Embark on a two hour journey to hear the stories of the Cadigal, Guringai, Wangal, Gammaraigal and Wallumedegal. Learn the Aboriginal names and meanings of significant Sydney landmarks. Come ashore on an island in Sydney Harbour to an authentic Aboriginal cultural performance. Sydney Harbour as you have never experienced it before. Travel its waters on their cultural harbour cruise. You will be taken on a journey from pre-white settlement through our coastal lifestyle - uncovering traditional fishing methods and food gathering techniques. Discover the culture, meet the people and enjoy the sights of Sydney Harbour. Established in 1998, Tribal Warrior operates Sydney's only Aboriginal owned and operated Aboriginal cultural cruise.
- [Captain Cook Cruises](#): For over five decades Captain Cook Cruises has proven to be a market leader and premier Sydney Harbour cruise line. Their fleet offer an exciting range of public cruises and private charters for two to 2,000 guests. Daily cruises include the casual Harbour Bar and Restaurant, plus a range of premium dining cruises for dinner, lunch and high tea. Sightseeing cruises including Sydney's premium sightseeing cruise Harbour Experience and the flexible Hop On Hop Off Harbour Explorer, with up to two days to hop-on and hop-off at all harbour main destinations including Manly, Taronga Zoo, Watsons Bay, Circular Quay and more.

[Sydney Observatory](#)

Sydney Observatory, (1858) occupies a heritage-listed sandstone museum and venue set in a historically significant star-gazing site at Millers Point with the best views of Sydney.

[Sydney Opera House](#)

One of the most iconic buildings in the world – the Sydney Opera House, is an architectural masterpiece and vibrant performance space. It's a place where the past shapes the future, where conventions are challenged, and cultures are celebrated. Step inside and discover the stories that make the Opera House so inspiring. Where the Opera House sits, Bennelong Point has been a place for feasting and celebrating for millennia. So it's only natural that here at the Opera House, the entertainment jumps from the stage and onto the plate. Whether you're after a show-stopper meal at Bennelong, pre-theatre dining at Portside, a long lunch with a view at Opera Bar, drinks with mates or grabbing a bite on the go at Opera Kitchen, they've got Sydney's finest foods, drinks plus the best views in town.



Taronga Zoo

[Taronga Zoo – Sydney](#)

One of Sydney's most famous attractions, the award-winning Taronga Zoo is home to over 4,000 animals, including Australian native wildlife, as well as rare and endangered exotic animals. Overlooking the magnificent Sydney Harbour, Taronga Zoo is just 12 minutes from the city by ferry. Open 365 days a year, admission includes daily keeper talks and shows, and access to the Sky Safari, Sydney's only cable car.

Staying Safe on the Event Site

RobotX will have a Work Health and Safety Risk Assessment, and there will be professional first aid providers on site for the duration of the event.

Fauna

Australia is home to many deadly and dangerous animals and insects; and it is important to know who they are and how they behave, in order to stay safe.

Drop Bears

Looking very similar in appearance to the common Australian Koala, Drop Bears are a “large, arboreal, predatory marsupial”. Populations are thought to mainly exist in forested coastal regions of eastern and southern Australia stretching from Cape York Peninsular to Tasmania.

They are known to be very territorial, and do not stray far from a relatively small number of trees in close proximity that are used as ‘hunting grounds’.

Behavior and Avoidance:

Drop Bear attacks are rare and considered accidental and there are no stories of incidents being fatal. However, people who have reported attacked, had lacerations and occasional bites.

Deterrents/repellents*:

- Rub Vegemite on the back of your ears;
- Rub toothpaste on the back of your ears;
- Put a fork in your hair.

**There is no evidence to suggest that these deterrents/repellents work.*

What to do:

- If attacked, seek first aid
- If you see a Drop Bear, tell Event Staff where you saw it.

Insects

Australia is home to some of the most dangerous insects in the world. Although spiders are known for their deadly venom and mosquitoes are known for spreading malaria (you can't get malaria on mainland Australia or Tasmania) and other diseases, there are some insects that seem harmless but claim more lives every year.

Spiders

Common venomous spiders you may come across in the Penrith Area:

- White-tail Spider
- Redback Spider
- Funnel-Web Spider

Other spiders (low risk) you may come across in the Penrith Area:

- Huntsman Spider
- Garden Orb-Weaving Spider
- Saint Andrew's Cross
- Trap-Door Spider



Drop Bear



Huntsman Spider

Funnel-Web Spider

- **Habitat:** Funnel-webs burrow in sheltered sites under logs and rocks where they can find a cool and humid climate.
- **Behavior:** Funnel-webs rush out of their burrow when potential prey walk across their silken trip-lines. Male Sydney Funnel-web spiders have a habit of wandering into backyards and falling into suburban swimming pools, where they can survive for many hours.
- **Danger to Humans:** Only male spiders have been responsible for all recorded funnel-web envenomation deaths. During the warmer months (November-April). The male's venom is very toxic, containing a unique component called Robustoxin which severely affects the nervous system of humans and monkeys (this toxin is missing in the female venom). Since the development of the anti-venom in 1981, no deaths have occurred.

Redback Spider

- **Habitat:** Redback Spiders favor proximity to human habitation, with webs being built in dry, sheltered sites, and among rocks, shrubs, junk-piles, sheds, or toilets.
- **Behavior:** they are less common in winter months.
- **Danger to Humans:** Only the bite of a female Redback is dangerous, and cause serious illness but rarely death. Since they rarely leave their webs, humans are not likely to be bitten unless a body part such as a hand is put directly into the web, and because of their small jaws many mites are ineffective.

White-Tail Spider

- **Habitat:** They can be caught and removed easily, and clear away the webs of other spiders, which White-tail spiders prey on.
- **Behavior:** White-tailed Spiders are vagrant hunters that live beneath bark and rocks, in leaf litter, logs and detritus in bush, gardens and houses.
- **Danger to Humans:** White-Tail Spider bites can cause initial burning pain followed by swelling and itchiness at the bitten area. Occasionally there are unconfirmed reports of weals, blistering or local ulceration.

What to do:

- If you are bitten by a Funnel-Web, Redback or White-Tail, treat it as a medical emergency.
Call 000 (ambulance) and alert the first aider.
 - Apply an pressure immobilization bandage;
 - DO NOT TRY AND SUCK THE VENOM OUT!
 - Do not move around;
 - Keep the bite site below the heart;
 - If bitten on a limb, bandage the limb from the area of the bite to the hand/foot, then back up to the body;
 - Immobilize by splinting;
 - Don't move the person;
 - Wait for ambulance.



*Sydney Funnel-Web Spider
(Top: Male, Bottom: Female)*



Redback Spider



White-Tail Spider

Non-Spiders

Paralysis Ticks

- **Habitat:** They can be found all year round, particularly in wet sclerophyll forests and temperate rainforest areas.
- **Behaviour:** They find their hosts by waiting on vegetation with their legs outstretched and waving slowly until they can make contact.
- **Danger to Humans:** the bite initially causes local itchiness and a hard lump at the site of the bite with other serious symptoms presenting themselves over a number of days whilst the tick engorges itself. These include flu-like symptoms, rashes, an unsteady gait, weak limbs and partial face paralysis; as well as occasional allergic reactions and anaphylactic shock.



Paralysis Tick

Honey Bees

- **Habitat:** Honey Bees live in urban areas, forests, woodlands and heath. Honey Bees have successfully established feral hives throughout Australia.
- **Behavior:** They will defend their nest aggressively; if a bee is driven to sting, the action is fatal [for them] as it rips out the bee's lower abdomen. The sting, with venom gland pumping is left in the victim [you].
- **Danger to Humans:** Honey Bee stings are barbed and when a person is stung, the stinger (with venom gland attached) will stick in the skin and tear away from the bee – the venom gland continues to pump venom through the stinger.



Honey Bee

Bull Ants

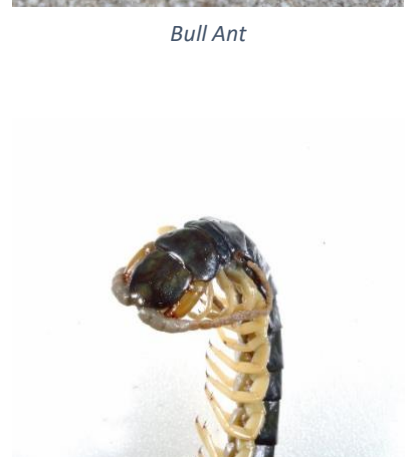
- **Habitat:** There are about 90 species of Bull Ant in Australia, nine of which have been recorded in the Sydney area, with many more undiscovered.
- **Behavior:** Some are known as 'Jumper Ants' after their habit of aggressively jumping toward intruders. They live throughout Australia in urban areas, forests, woodland and heath.
- **Danger to Humans:** these ants deliver painful stings and are aggressive.



Bull Ant

Giant Centipedes

- **Habitat:** They can be found throughout Australia mostly in dry and moist habitats, usually sheltered places such as under logs, in leaf litter, soil, under rocks and bark in urban areas, forests, woodlands, heath, rainforests and deserts.
- **Behavior:** They are nocturnal and can grow up to 16cm in length.
- **Danger to Humans:** they may bite if disturbed or handled, the bite may cause severe pain that could persist for several days; however, no deaths have been recorded from the bite of any Australian centipede.



Giant Centipede

Mosquitoes

- **Habitat:** everywhere
- **Danger to Humans:** as we do not have malaria on the mainland of Australia, mosquitoes pose little danger to humans. Just wear plenty of mosquito repellent when you are around bodies of water.

European Wasps

- Habitat: large communal nests, normally only visible as a small entrance hole. They are normally built either underground or in cavities in walls, ceilings, logs or trees.
- Behavior: It is significant that the warmer climate of Australia, means that the wasps don't hibernate in winter and over several seasons this can result in giant and dangerous nests of over 100,000 wasps. European Wasps are more aggressive than bees and will attack when their nest are disturbed, and they don't die after stinging.
- Danger to Humans: If stung it can cause a burning pain and swelling, if stung multiple time a more severe systemic reaction may occur. In some individuals the sting can cause an allergic or anaphylactic reaction, but this is relatively uncommon.



European Wasp

Paper Wasps

- Habitat: Urban areas, forests, woodlands and heaths.
- Behavior: They tend to only act aggressively when defending their nests, and are otherwise beneficial insects to have around the garden.
- Danger to Humans: Paper Wasps can deliver painful stings, but only attack humans if their nest is disturbed. If stings are multiple, a more severe systemic reaction may occur; and in rare cases anaphylaxis.



Paper Wasp

What to do:

- Paralysis Ticks: don't scratch at the site or try to remove it yourself. Seek first aid.
- Honey Bees: don't scratch or try to remove it as this can release more venom. Seek first aid.
- Bull Ants: apply an ice pack, but if there is evidence of an allergic reaction seek first aid.
- Giant Centipede: apply an ice pack, and seek first aid if symptoms persist.
- European Wasps: apply an ice pack, seek first aid if pain persists.
- Paper Wasps: apply an ice pack, seek first aid if pain persists.

Snakes

Australia is home to 21 of the 25 most venomous snakes in the world. Snakes are protected in Australia and recognized as an important part of our natural fauna; therefore please do not try to harm or capture a snake – this is actually when most instances of people being bitten by snakes occurs.

Three of which can be commonly found here in the Penrith Area:

- Red Belly Black Snake
- Eastern Brown Snake
- Tiger Snake

Other venomous snakes you may come across in the Sydney Area:

- Death Adder
- Brown Tree Snake
- Golden Grown Snake

Other non-venomous snakes you may come across:

- Diamond Python
- Green Tree Snake
- Carpet Python



Carpet Python

Red Belly Black Snake

- **Habitat:** [Red Belly Black Snakes are typical Australians](#) – they like sun and water; so you will most likely come across them sunning on open bitumen or rocks, or near the water and in long grass.
- **Behavior:** Males are more active in the spring, during mating season. Although they are the most frequently encountered snakes (on the east coast of Australia) and are responsible for a number of bites every year. They are a shy snake and generally a shy snake, and only deliver a serious bit under severe molestation. When approached in the wild, they will generally freeze to avoid detection, if approached too closely, the snake will generally try to flee. If it is unable to escape, it may rear up its head, spread its neck and hiss loudly; and may make 'mock strikes' with its mouth closed.
- **Danger to Humans:** The venom has a predominantly anticoagulant and myotoxin effect and symptoms of envenomation including bleeding and/or swelling at the bite site, nausea, vomiting, headache, abdominal pain, diarrhea, sweating, local or general muscle pain and weakness, and red-brown urine. Many bite victims experience only mild or negligible symptoms, however a number also end up hospitalized.



Red Belly Black Snake

Eastern Brown Snake

- **Habitat:** They can be found across a wide range of habitats, however, they seem to prefer open landscapes such as woodlands, scrublands, and savannah grasslands.
- **Behavior:** breeding activity usually begins in mid-late spring (late October/early November). Eastern Brown Snakes are encountered more by humans than any other snake. Being an alert, nervous species they often react defensively if surprised or cornered, putting on a fierce display and striking with little hesitation. However, if approached over a distance, they will usually choose to flee or else remain stationary, hoping to avoid detection. When approached by an 'intruder', the Eastern Brown displays one of two forms of threat:
 - Mild threat: the snake raises its head and anterior part of the body slightly off and parallel to the ground, with the neck spread laterally and slightly hooked but the mouth closed.



Eastern Brown Snake

- Strong threat: the snake raises the anterior part of the body, with the neck spread, well off the ground in an s-shaped coil and with the mouth slightly open.
- Danger to Humans: As the initial bite is generally painless and often difficult to detect, anyone suspected of receiving a bite from an Eastern Brown Snake should call for immediate attention without delay. This species has the unfortunate distinction of causing more deaths from snake bite than any other species of snake in Australia.

Simple precautions, such as wearing long pants, thick socks and solid footwear when working or exploring outdoors generally reduces the risk of being envenomed should there be an encounter with a startled snake.

Tiger Snake

- Habitat: The species is often associated with watery environments such as creeks, dams, drains, lagoons, wetlands and swamps; especially where there is water and local cover. Tiger snakes will shelter in or under fallen timber, in deep matted vegetation and in disused animal burrows. Tiger snakes climb well on both vegetation and human constructions, and have been found as high as 10m off the ground.
- Behavior: Tiger Snakes are known for their fearsome reputation – aggressive nature and toxic venom. These snakes are typically more active during the warmer months. The snake's large size, often aggressive defence and toxic venom make it extremely dangerous to humans. Although generally shy and preferring escape over conflict, a cornered Tiger Snake will put on an impressive threat display by holding its fore body in a tense, loose curve with the head slightly raised and pointed at the offender. It will hiss loudly as it inflates and deflates its body, and if provoked further will lash out and bite forcefully.
- Danger to Humans: The venom of the Tiger Snake is strongly neurotoxic and coagulant, and anyone suspected of being bitten should seek immediate medical attention.



Tiger Snake

Birds

Australian Magpies

- **Habitat:** Magpies are one of Australia's most [highly-regarded songbirds](#). They have a wide variety of calls, many of which are complex, and their pitch may vary over up to four octaves. Magpies are found wherever there is a combination of trees and adjacent open areas, including parks and playing fields. They are absent only from the densest forests and arid deserts.
- **Behavior:** Although the Australian Magpie is generally quite tame, during the breeding season some individuals become aggressive towards any intruders, including humans, which venture too close to their nest sites. Peak breeding season is August through to November.
- **Danger to Humans:** Some Magpies can be very aggressive during breeding season and attacks on humans and pets can occur. Magpies are protected throughout NSW, and it is against the law to kill the birds, collect their eggs or harm their young. They are strongly territorial and defend their territories both from other Magpies as well as potential predators. Unfortunately, some individual Magpies perceive humans as a potential threat and accordingly, swoop down with a fast warning flight, occasionally making contact. Only a small minority of Australian Magpies behave like this, and some of these aggressive Magpies will only swoop on particular people.

Sulphur-Crested Cockatoo

- **Habitat:** Potentially Australia's most iconic bird, they are found in a variety of timbered habitats and are common around human settlements.
The birds stay in the same area all year round. They have a [distinctive loud screech](#), ending with a slight upward inflection – just like Australian humans.
- **Behavior:** They are highly intelligent and have been known to [harass humans and other animals](#).

Kookaburra

- **Habitat:** The Kookaburra is instantly recognized in both plumage and voice – though not all Kookaburra's laugh. They inhabit most areas where there are suitable trees.
- **Behavior:** The chuckling voice that gives this species its reputation is a common and familiar sound throughout the birds' range. The loud ['koo-koo-koo-koo-kaa-kaa-kaa'](#) is often sung in chorus with other individuals. They mate for life, with both sexes sharing the incubation period of the eggs; and the offspring of the previous one to two years act as 'helpers' during the breeding season. Kookaburra's have become quite tame around humans and will readily accept scraps of meat.

Galah

- **Habitat:** Galahs can be found in large flocks in a variety of timbered habitats, usually near water. They are the most abundant and familiar of the Australian parrots, occurring over most of Australia.
- **Behavior:** They form permanent pair bonds, although a bird will take a new partner if the other one dies. Both sexes incubate the egg; whilst there is a high-mortality rate in Galah's (up to 50% of chicks dying in the first six months), they have been recorded breeding with other members of the cockatoo family, both in the wild and captivity – including the Sulphur-Crested Cockatoo.

Rainbow Lorikeets

- **Habitat:** Rainbow Lorikeets are found in a wide range of treed habitats including rainforests and woodlands, as well as in well-trees urban areas.
- **Behaviour:** They are largely sedentary with some nomadic movements in response to seasonal flowering or fruiting plants.

Rosellas

Eastern Rosella: found in open woodlands, grasslands, farmlands and remnant bushland. Often found in urban habitats such as parks, gardens and golf courses.

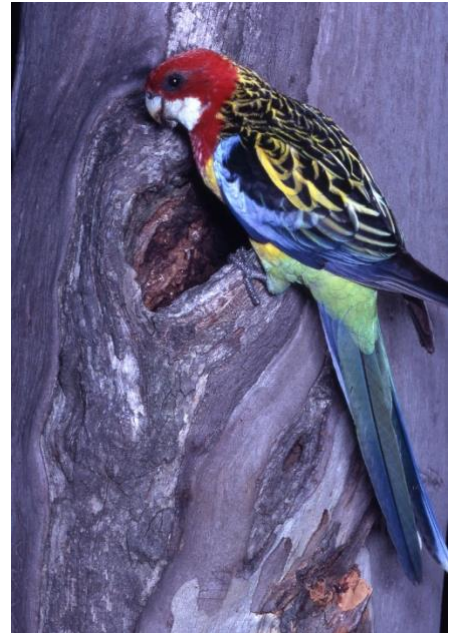
Crimson Rosella: commonly found in tall eucalyptus and wetter forests. It has a range of calls, the most common being a two-syllabled '[cussik-cussick](#)'. It also has a range of harsh screeches and metallic whistles.



Galah



Rainbow Lorikeet



Eastern Rosella



Sulphur Crested Cockatoo



Kookaburra



Australian Magpie

Flora

About 1000 species of plants in Australia are known to be toxic to animal and humans and plenty more cause skin and eye irritation, rashes and discomfort. About 10% of plants in Australia even make cyanide. Plants vary from region to region, but no matter where you are you need to know what to keep any eye out for – though these you may see around the event site and Penrith area:

Black Bean

- **Habitat:** Native to Queensland and New South Wales, the Black Bean or 'Moreton Bay Chestnut', thrives in moist soil along river banks and mountain-sides, in coastal rainforests and is considered a valuable source of timber.
- **Danger to Humans:** Between March and May, it produces large pods filled with toxic seeds that weigh roughly 40g each. Ingesting the seeds can cause vomiting and diarrhea and can be serious if medical attention is not sought.



Black Bean

Angel's Trumpets

- **Habitat:** Common garden plant.
- **Danger to Humans:** Despite their pleasant appearance and aroma, these common garden plants are highly toxic, particularly their leaves and seeds. Rich in alkaloids such as scopolamine and hyoscyamine, if ingested by humans, the trumpets can cause diarrhea, confusion, migraines, paralysis and even death.



Angel's Trumpets

Deadly Nightshade

- **Habitat:** common garden plant, not native to Australia.
- **Danger to Humans:** Also known as 'Devil's Berries' or 'Death Cherries', the Deadly Nightshade plant and its berries are very poisonous and contain tropane alkaloids that cause hysteria, hallucinations, erratic behavior and delirium. Ingestion of a single leaf or about 20 berries can be fatal to adults.



Deadly Nightshade

Oleander

- **Habitat:** common garden plant.
- **Danger to Humans:** People who come into contact with the plant may experience mild irritation on their skin but a greater risk is posed if any part of the plant is ingested, particularly by children, as this can be fatal.



Oleander

Spurge

- **Habitat:** widespread across Australia.
- **Danger to Human:** The sap inside these plants is called 'latex' and is highly poisonous. Contact with the sap can cause serious inflammation of the eyes, nose or mouth and even blindness.



Spurge

Common/Famous Australian Flora

You won't see all of these non-dangerous iconic plants around the event site or Penrith area; but even from a great distance, some of these can cause bad hay-fever.



Gum Tree (Eucalypt)



Banksia



Bottlebrush



Wattle



Waratah



Grevillea



Kangaroo Paw



Flannel Flower



Sturt Desert Pea

Boat Ramp Safety

When using the boat ramp at the Sydney International Regatta Centre to launch or recover your WAM-V or other water craft, it is important to do so safely so that you don't harm yourself, your equipment or the boat.

All boat launches and recoveries will be done using an assigned vehicle, which will be operated by an approved driver with an Australian driver's license.

Launching

1. Make pre-launch preparations well away from the boat ramp;
2. Secure lines to the bow and stern, then either float or motor off with care;
3. Check for overhead obstacles before you move your boat;
4. Line up the car and trailer so that the backing process will be straight and as short as possible.
5. Study the boat ramp and surrounding area for hazards;
6. Make sure no one is standing behind the boat and trailer when winching your boat off or on the trailer, in case the line breaks;
7. Maintain a firm hold on the bow line, but remember it is dangerous to wrap it around your hand;
8. Do not remove the trailer winch or safety chain until your vessel is in the water;
9. Don't step inside or on the trailer frame;
10. Using the bow line, move the boat to one side, away from the launch position.
11. Once you've launched move the trailer out of the way so you don't hold up the other operators.

Taking-off and Berthing

- Move slowly when moving from or to a jetty, mooring or ramp.
- Always check for trailing ropes or weed that may be caught in your propeller.

Recovering

1. Align the centre of your vessel to that of the trailer; proceed carefully up the trailer until the winch or safety chain can be secured;
2. If you are not confident in driving your vessel on to the trailer, you can secure a line to both the bow and stern to control the boat as you use the winch;
12. Vacate the ramp as quickly as possible and park in the appropriate preparation area to finish securing the vessel for towing.



SIRC Boat Ramp



SIRC Boat Ramp

Working in the Sun – Ultra-Violet Radiation

Australia has the highest rate of skin cancer in the world. This is predominately due to our mainly fair-skinned population, our outdoors lifestyle and our exposure to high levels of UV radiation. Excessive exposure to the sun is known to be associated with increased risks of various skin cancers, cataracts and other eye diseases, as well as accelerated skin aging. It may also adversely affect people's ability to resist infectious diseases and compromise the effectiveness of vaccination programs.

Sunburn

The most easily identifiable form of overexposure is sunburn, the higher the UV exposure the worse the sunburn becomes. A person's cumulative exposure to UV radiation along with the number of severe sunburns they receive, especially during childhood, increases the risk of developing skin cancers.

Skin Cancer

If exposure to sunlight continues for several years, the damaged skin has an increased chance of developing one of the forms of skin cancer. Exposure to UV radiation increases the risk of developing these cancers. Skin cancer occurs when skin cells are damaged, e.g. by overexposure to UV radiation from the sun. Between 95% and 99% of skin cancers in Australia are caused by exposure to the sun. There are three main types of skin cancer, these are:

- Melanoma
- Basal Cell Carcinoma
- Squamous Cell Carcinoma

Eye Damage

Eyes, like skin, are susceptible to damage from exposure to UV radiation, it may not be seen or felt, but the damage it causes is cumulative. UV exposure of the eye depends on many factors, ground reflection, the amount of atmospheric reflection and the use of eye-wear. The acute effects of UV on the eye include the development of photokeratitis and photoconjunctivitis, which are like sunburn of the delicate skin-like tissue on the surface of the eyeball (cornea) and eyelids. While painful, they are reversible, easily prevented by protective eyewear and have not been associated with any long-term damage.

Lip Damage

Because the outer layer of the lip is so thin, the lips in their natural state are not adequately shielded from the sun. Lips have almost no melanin, which is the natural pigment in skin that helps screen out the sun's harmful rays. As a result lips can easily burn. When unprotected the collagen within lips changes. This causes lips to wrinkle and fine lines to form around the mouth. To avoid damage caused by UV radiation lips should also be protected with lip care products containing sunscreens or a lipstick that has an SPF rating.

Sun Protection Measures

[Personal Protective Equipment](#) (PPE) used for sun protection includes:

Sun protective work clothing

The overall protection provided depends on the clothing's material and the garment's design

Sun protective hats

Shades the face, head, ears and neck. The overall protection depends on the material and design of the hat

Sunglasses

Can provide excellent protection for the eyes depending on the protective qualities of the lens and design.

Sunglasses in Australia must comply with: AS/NZS 1067:2016 *Eye and face protection: Sunglasses and fashion spectacles*

Sunscreen

Should always be used with other sun protection control measures and carry a sun protection factor (SPF) of 30 or higher.

Event Transport

There will be a shuttle bus which will pick-up event participants in the mornings and evenings of the event, and take them to/from the Mercure Hotel and the Sydney International Regatta Centre (SIRC). In the afternoons there will be a shuttle to take participants into the local area; as there has been at previous RobotX events. The schedule for this service will be made available close to the event.

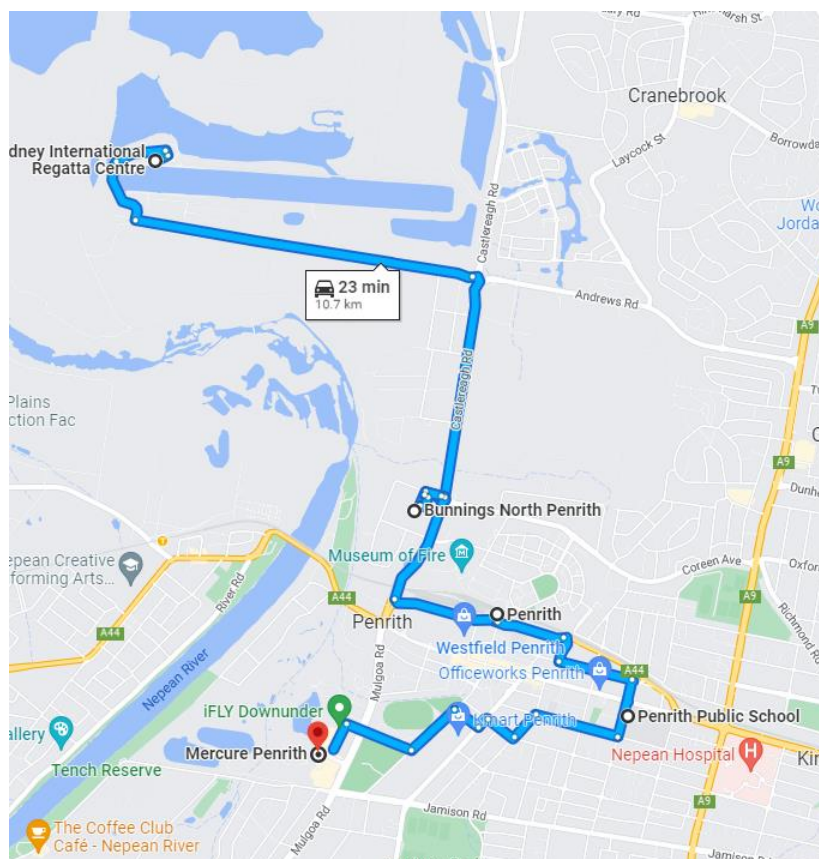
EXAMPLE ONLY – Afternoon Shuttle Service

Pick-up Time	Pick-up Location	Drop-off Time	Drop-off Location	No. people
0615	Mercure Hotel	0630	SIRC	60
1730	SIRC	1815	Mercure Hotel (via Bunnings , Westfield , High Street)	

High Street drop-off location

This drop-off location is close to:

- [Jaycar Electronics](#)
- [Battery World](#)
- [Officeworks](#)
- [Autobarn](#)



EXAMPLE ONLY - Afternoon Shuttle Service