

23rd National Street Tree Symposium



Program summary

1st and 2nd September 2022

Day One: National Wine Centre, Adelaide, SA

Day Two: Botanic Gardens & National Wine Centre, Adelaide SA





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Symposium Program - Day 1

Thursday 1st September 2022, at the National Wine Centre, Adelaide — Hickinbotham Hall

Time	Presenter	Topic
8:50 - 8:55am	<i>Dr Tim Johnson/Dr Lyndal Plant</i>	Welcome & Housekeeping; Launch of 23rd Symposium
8:55 - 9:05am	<i>Mickey Kumatpi Marrutya O'Brien</i>	Welcome to Country
9:05 - 9:45 am	<i>Prof Robert Hill</i>	Bob Such Keynote Address: Trees, Cities, Drought and Extreme Heat
9:50 - 10:25 am	<i>Dr Jacob Mills</i>	Urban microbiome restoration
10:30 - 11:00 am	<i>Morning Tea</i>	
11:00 - 11:35 am	<i>Dr Greg Moore OAM</i>	Connected treed greenspace: A salve for climate change
11:40 - 12:15 pm	<i>Shelley Shepherd</i>	Green infrastructure is a fundamental element of a water sensitive city
12:20 - 1:30 pm	<i>Lunch</i>	
1:30 - 1:55 pm	<i>Michael Hewitson AM</i>	Will inner suburbs cook? Efforts to grow and save trees in the City of Unley
2:00 - 2:25 pm	<i>Kerry Gore</i>	A community urban forest strategy
2:30 - 2:55 pm	<i>Ruby Wilson</i>	Tree valuation: a council practitioner's perspective
3:00 - 3:30 pm	<i>Afternoon Tea</i>	
3:30 - 3:55pm	<i>Tim Jarvis AM</i>	Case study: The Forktree Project
4:00 - 4:25pm	<i>Geoff Connellan</i>	Achieving sustainable green infrastructure - is there a formula?
4:30 - 4:40pm	<i>Dr Greg Moore OAM</i>	The day in review
4:45 - 6:45 pm	<i>Networking Session</i>	Networking in relaxed style



Symposium Program - Day 2

Friday 2nd September 2022, at the Botanic Gardens — Noel Lothian Hall for 9am start

Time	Duration				
9:00 - 9:05 am		Dr Lyndal Plant	TREENET Chair	Welcome to Day 2: Noel Lothian Hall	
		SANTOS Museum of Economic Botany Tour Kelly Bramhill - Botanic Gardens & State Herbarium	Aussie Forest Tour Lilith Tremmery & Thomas Burke - Botanic Gardens & State Herbarium	Botanic Park: Managing the Challenge of Tree Conservation & Fruit Bat Colony Conservation Karen Smith - Botanic Gardens & State Herbarium Linda Collins - Fauna Rescue	Economic Garden & Garden of Health Tour Paul Winter - Botanic Gardens & State Herbarium
9:05 - 9:45 am	40 mins				
9:50 - 10:30 am	40 mins				
10:30 - 11:00 am	30 mins	Morning Tea			
11:00am - 11:40 pm	40 mins				
11:45am - 12:25 pm	40 mins				
12:30 - 1:20 pm	50 mins	LUNCH - National Wine Centre Exhibition Hall			
1:30 - 2:10pm	40 mins (including audience interaction / Q and A)	Friday Forums - Group A - National Wine Centre			
		Option A1 Tropical Fungi & Urban Tree Management Broughton — Pieter Taylor	Option A2 Fauna Habitat Hollows: Current and emerging knowledge Ferguson — James Smith	Option A3 Street Tree Trials The Vines — Ruby Wilson	
2:15 - 2:55 pm	40 mins (including audience interaction / Q and A)	Friday Forums - Group B - National Wine Centre			
		Option B1 Stop the rot: Phytophthora in our urban tree planting stock: are we managing the risk? Broughton — Matthew Laurence	Option B2 Fauna Habitat Hollows Workshop: The long-term importance of urban fauna hollows Ferguson — Quang Vu & Brian Gepp	Option B3 Monitoring newly planted street trees using remote sensing The Vines — Patricia Torquato	
3:00 - 3:20 pm	20 mins	Refreshments & Wrap-up		Exhibition Hall	
3:30 - 4:00 pm	30 mins	TREENET AGM		The Vines Room	

Venue & Accommodation



VENUE

The National Wine Centre...

will host the 23rd National Tree Symposium all day Thursday and on Friday afternoon. This venue is located in the heart of Adelaide and nearby to a range of accommodation options.



VENUE

Adelaide Botanic Garden & State Herbarium...

will host the 23rd National Tree Symposium Friday morning workshops. The Garden is located within walking distance of the National Wine Centre. Delegates will meet at Noel Lothian Hall for 9am start on Friday.



ACCOMMODATION

Majestic Roof Garden Hotel...

A TREENET discounted rate for accommodation at the Majestic Roof Garden Hotel is available with 20% off of the standard rate. Quote "TREENET Symposium 2022" to secure this rate. This hotel is located nearby the Symposium venue, on Frome Street, Adelaide.



Presenters, Bios and Topics - Day 1

Thursday 1st September 2022, at the National Wine Centre, Adelaide — Hickinbotham Hall

Welcome to Country



Mickey Kumatpi Marrutya O'Brien

Uncle Mickey is a Senior Aboriginal Man, a descendant of the Kurna (Adelaide Plains) and Narungga (York Peninsula) peoples. Mickey enjoys opportunities to engage and share his cultural knowledge, a role handed to him by his Father, Uncle Lewis Yerla Burka O'Brien, and he recognises and appreciates the responsibilities of this role.

Mickey is a Foster Parent to three beautiful children. He has travelled and lived and worked in many Aboriginal Communities across Australia, where he has delivered programs and taught, trained and mentored youth and adults. He enjoys the opportunity to support the Aboriginal Community through participating on boards and advisory panels.

Mickey is a recipient of the Rotary Club Courtesy Award for Community for his work with youth. He is an Australia Day Service Award recipient, for his contributions as a volunteer on advisory groups. He enjoys sharing Cultural Knowledge and providing Welcome to Country with people, not at people. As Mickey's father told him, "Aboriginal people have always welcomed people to this country, we just never told them to go home"

Launch of the 23rd Symposium



Dr Lyndal Plant, TREENET Chair

Lyndal has been Chair of TREENET since September 2019. She is an urban forester with extensive experience in local government, in policy and in strategic planning. Following many years leading urban forestry with Brisbane City Council Lyndal is now a researcher and consultant. She devotes her time to policy development and review, and to cutting-edge urban forest initiatives. Lyndal has helped to advance evidence gathering techniques to support business cases for greater investment in green infrastructure. She focuses on trees for people, and she helps plan for and monitor outcomes for people, not just project outputs. Lyndal is committed to delivering greener, cooler, healthier and safer neighbourhoods for all; she presents and publishes her research for local, national and international audiences.



Presenters, Bios and Topics - Day 1

Thursday 1st September 2022, at the National Wine Centre, Adelaide — Hickinbotham Hall



Professor Robert Hill

Bob graduated from the University of Adelaide in 1981 with his Ph.D. on Tertiary plant macrofossils and more recently with his D.Sc. on the interaction between climate change and the evolution of Australia's living vegetation. He has held positions in Botany at James Cook University and at the University of Tasmania, where he was Head of the School of Plant Science and was awarded Professor Emeritus status. In 1999 he returned to Adelaide as a Senior Research Fellow. In 2003 he became Head of the School of Earth and Environmental Sciences while also Head of Science at the South Australian Museum. Bob held the position of Executive Dean of the Faculty of Sciences for 11 years from 2006 and recently completed a long period as Director of the University's Environment Institute.

Bob has made significant contributions to the areas of palaeobotany, plant systematics, plant ecophysiology and the application of research from these areas to interpreting changes that have occurred to the Australian flora through evolutionary time. He has had a lifetime interest in the evolution of the vegetation of Australia and Antarctica. He has published more than 150 refereed journal papers, 35 book chapters, several symposium papers and has edited or co-edited four books. In recent years he has turned his attention to the impact of climate change on living vegetation, with a strong interest in the impact of extreme weather events on vegetation in urban areas and on the recovery of native vegetation following extreme fire events.

Trees, Cities, Drought and Extreme Heat

Human-induced climate change continues to gain considerable publicity as our politicians in general follow rather than lead public opinion. Recent extreme flood and fire events have demonstrated what the future might look like and while we can be certain of nothing in the future, it would be irresponsible not to plan for continuing weather extremes. While summer floods on the east coast have been the latest large-scale catastrophe originating from extreme weather events, across most of Australia planning for urban areas must focus on what we should do to prepare for extreme drought and/or extreme heat in our cities and towns. While we have reached a point where we will require massive technological solutions to retain anything like our current life-styles, it is critical that we future-proof our cities as well as we possibly can. Urban vegetation has the capacity to play an important role in making our towns and cities more liveable and in providing some precious time for us to develop longer-term and more permanent solutions to climate change. This presentation will focus on the key planning issues and what we can expect in the best case from well-planned urban vegetation.



Dr Jacob Mills

Jacob's upbringing on the family sheep station and time spent with Indigenous peoples formed and established his connection with nature early in life. His appreciation of biodiversity, his ecological empathy, and his conservation ethos led him to relinquish his industrial electrician's tools to begin research to better understand this connection. Working at the microscopic scale, he and his colleagues have shown that the urban microbial world is tied to a city's larger biodiversity. They have shown that urban green spaces with more complex vegetation diversity give children better exposure to complex soil microbiomes which potentially reduce the incidence of non-communicable disease through improved training of their immune systems. Published in the journal *Restoration Ecology*, Jacob's team's paper titled 'Urban habitat restoration provides a human health benefit through microbiome rewilding: the Microbiome Rewilding Hypothesis' won the International Society for Ecological Restoration's 2017 Bradshaw Medal for 'work that significantly advances the field'.

Urban Microbiome Restoration

Working with the City of Unley and TREENET, in 2022 Jacob undertook a study to investigate variation in the soil microbiome in Heywood Park, a high profile urban green space in Unley Park in South Australia. Analysis revealed microbe diversity and abundance beneath areas of irrigated turf, mulched tree root zones, and well-established and companion-planted mass-mulched tree protection zones. This study showed that mulching and understorey planting beneath mature trees warrants further development and application in urban green space as a biodiversity intervention to improve tree health and human health. For more see: <https://www.jacobmills.org/scientific-articles>



Presenters, Bios and Topics - Day 1

Thursday 1st September 2022, at the National Wine Centre, Adelaide — Hickinbotham Hall



Dr Greg Moore OAM

Greg is a Senior Research Associate at the School of Ecosystem & Forest Sciences, University of Melbourne. He was Principal of VCAH (Burnley) from 1988 to 2007 and Head of the School of Resource Management at the University from 2002 to 2007. With a general interest in horticultural plant science, revegetation and ecology, Greg is particularly interested in arboriculture. He was inaugural president of the International Society of Arboriculture, Australian Chapter, and has been a member of the National Trust's Register of Significant Trees since 1988 and Chair since 1996. He has served the boards of Greening Australia (Victoria) 1988-2012 and Trust for Nature, 2009-17. He is on the board of TREENET (chair 2005-2019) and Sustainable Gardening Australia. He has written three books, seven book chapters and has published over 200 scientific papers and articles. He was awarded an OAM in 2017 for services to the environment, particularly arboriculture.

Connected Treed Greenspace: A Salve for Climate Change

The rapid expansion of Australian cities presents planning challenges as there are demands to subdivide undeveloped land for housing countered by demands for connected public open space (POS). The lowest socio-economic status (SES) sectors of our society have the poorest access to connected treed greenspace but are the group that needs it most. This paper defines connectivity in relation to its function and estimates the unimpeded connected POS required for travel by foot, wheelchair, skateboard, scooter, rollerblades or bicycle. It considers the rise in the use of greenspace during covid-19 lockdowns and lessons that might be drawn for valuing treed greenspace as climate changes. Connectivity was measured as the unimpeded distance travelled without retracing the course in the same direction. Distances required ranged from 0.5-20km. Providing connected POS requires careful planning and insight to minimise costs and maximise use and benefits.



Shelley Shepherd

Shelley is a Director of Urbaqua, a not-for-profit environmental organisation that works to support and deliver water sensitive and environmentally sensitive outcomes in Western Australia. She is also the Program Manager of New Water Ways Inc which is Western Australia's capacity building association for water sensitive urban design. She is a strong advocate for the ability of the land use planning system to deliver innovative development outcomes and liveable communities which respond to environmental and climatic conditions.

Green infrastructure is a fundamental element of a water sensitive city

The south west of Western Australia has experienced the impacts of climate change and reduced rainfall more than most places on Earth. Our average rainfall has fallen by about 100mm in the last 30 years while the average temperature during summer has increased, with a record-breaking 6 days over 40 degrees in a row earlier this year. The ability to cool our cities and provide access to nature for the community has never been more critical to our mental and physical well being. The Vision and Transition Strategy for a Water Sensitive Greater Perth supports the implementation of water sensitive urban design to facilitate better places for our community that are resilient, adaptive, productive and sustainable.

The integration of green infrastructure into our urban spaces and public realm is a key strategy to support urban cooling and the creation of natural landscapes. While there are many measured benefits from greening our streets and buildings, there are still a number of implementation issues that need to be overcome so that the practice is mainstreamed. This presentation will outline some of the documented benefits from integrating green infrastructure into our urban areas and share insights into addressing barriers within a Western Australian context.



Presenters, Bios and Topics - Day 1

Thursday 1st September 2022, at the National Wine Centre, Adelaide — Hickinbotham Hall



Mayor Michael Hewitson AM

Michael graduated from Adelaide University with honours as a microbiologist and as a Pilot Officer with the RAAF. He taught maths and sciences at State and independent schools across South Australia. In 1975 he was appointed as Director of the Salisbury Education Centre to progress teacher training, publishing, and engaging the community which included establishing Radio Station 5PBA. Michael has been instrumental in founding nine schools and re-establishing two bankrupt schools. He was the foundation Principal and CEO of Trinity College Gawler in 1984, growing the student population to 3,300 students in 2002. Michael's service ethos has led him to serve on many boards including Rostrevor College, the Australian Board of Education, Oceania ICLEI Steering Committee for Global Covenant of Mayors, the Australian Curriculum Assessment and Reporting Authority (ACARA), and to Chair ACARA's Audit and Risk Committee. He was recognised as a Fellow of the Australian College of Education in 1998, and in January 2013 was made a Member of the Order of Australia. His book 'How will our children learn?' was published in 2012. Michael was elected as a Councillor for the City of Unley in 2006, serving for 12 years prior to being elected as mayor in 2018. Michael is married to Rosslyn; they have four children who have three children each; nine of whom live in Unley.

Will Inner Suburbs Cook? Efforts to grow and save trees in the City of Unley.

The City of Unley covers 1,429 hectares, tree canopy cover is currently 28% or 400 hectares. Annual loss of canopy from private land totals 4 hectares, with 50% due to 200 new developments each year. To be cool and green Unley has a target of 31% canopy cover, but Council's land, open space, buildings and roads cover just 16% of the total land area. By planting out all remaining opportunities Council's land can only contribute 6.4% canopy cover to the City. The solution must involve trees on private property.

Unley Council won a national award for its use of LiDar to map every property's canopy cover to 10 cm accuracy. Recent data and data from three years ago record the % canopy cover now and previously and reveal the change in canopy cover. Increasing canopy cover requires that either more trees are planted on private property or Council has a fund to allow more land to be purchased to plant trees on – a tree land fund. This paper details what needs to be done to incentivize new developments to retain and grow trees. It is hoped that by the time of the symposium, Council will have received the support of the SA Minister for Planning to consult the community on our proposed solution: that new development approvals that will increase the built form will retain 15% canopy cover or will contribute to a tree land fund until they achieve 15% cover. Should our community support the proposal we would undertake a trial and measure the outcomes... to 10 cm accuracy.



Kerry Gore

In his 45-year career in the finance industry Kerry planned and managed major corporate and state and federal government tenders and projects and he participated in expert panels informing, in part, government policy. Following his retirement, in 2019 he was encouraged by his local government councillor brother to attend TREENET's 20th National Street Tree Symposium. The opportunity to benefit communities and the environment was so clearly presented at the symposium that upon return home Kerry's focus shifted to how he could support his council's urban forest management for the benefit of his community.

A Community Urban Forest Strategy

The City of Glen Eira recognised it needed urgent action to increase its urban forest canopy cover. Community members engaged with council to improve their urban forest and a project finance approach was developed and applied to grass-roots community urban forestry. Modelling tree volumes, undertaking costings, informing budgets and implementation, and aggregation of more than 20 separate project components into financial planning ensured a successful commencement of the Urban Forest Strategy (UFS). Community input led to annual budgets and long-term financial plans being revised to deliver an expanded list of 65 actions. Funding for 2022/23 increased by \$1.35 million for tree planting and replacement and \$4 million for ongoing urban forest expansion. The UFS's success now underpins components of other strategies, including projects of the City's Open Space Strategy Refresh 2020, the Community Wellbeing Plan 2020 – 2025 and the Our Climate Emergency Response Strategy 2021–2025.



Presenters, Bios and Topics - Day 1

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Ruby Wilson

Ruby is an experienced horticulturist and arborist, having worked in local government in Victoria before moving to Tasmania where she is the City of Hobart's Program Leader of Arboriculture and Nursery. Her Master of Urban Horticulture degree from the University of Melbourne (Burnley Campus), underpins her applied research activity, particularly in relation to better integration of trees into built environments. Ruby is a passionate advocate for and manager of trees, urban green spaces and biodiversity; she understands the value of trees and the contributions they make to the health and well-being of individuals, communities and to the environment. Ruby has a strong focus on strategy and policy development to ensure consistent and robust local government decision making, fairness, and social equity. Ruby has been a local government representative on the TREENET Management Committee since 2021.

Tree valuation: a council practitioner's perspective

Street and park trees are essential public assets that require public funds to install and maintain. Unlike most other public assets, the value of an established tree is greater than the cost to replace it. Large, mature trees provide significantly more amenity and value to the community than saplings planted to replace them. To address this, tree valuation methods are being used more commonly by Australian Councils to help to balance management decisions involving trees. This paper presents a council approach to tree amenity valuation, and introduces the Minimum Industry Standard method developed by Arboriculture Australia Ltd and the New Zealand Arboricultural Association in consultation with their many collaborators across the national arboriculture communities in both countries.

Day 2: Tree species trials

Planting locally unfamiliar tree species to assess their performance under urban conditions has been a major focus since TREENET was founded. Early species trials now provide valuable information, but they are limited in quantity, species diversity and spatial distribution. Familiarity with a wide range of resilient tree species is fundamental to addressing urban forestry's needs in relation to urbanization, the changing climate, heat island effects, soil degradation and other challenges. To obtain and share the necessary knowledge TREENET is expanding its tree species trials project and seeking to collaborate with more councils and communities across the nation to introduce a greater range of species to urban cultivation. This presentation will reveal how TREENET is working to engage with communities to record and share existing local knowledge. It will provide an update on the progress of some early street tree species trials and will share ideas on how delegates might support new trials to contribute further to the knowledge base.



Presenters, Bios and Topics - Day 1

Thursday 1st September 2022, at the National Wine Centre, Adelaide — Hickinbotham Hall



Tim Jarvis AM

Tim is an environmental scientist, conservationist, author, film maker and adventurer with Masters degrees in environmental science and environmental law. He is a Senior Associate of global engineering firm Arup and a sustainability adviser to Australian insurance industries as well as to the World Bank and Asian Development Bank regarding aid projects in developing nations. Tim has led expeditions to remote regions including the South Pole, the high Arctic and across the Great Victoria Desert. He retraced Sir Douglas Mawson's 1913 polar journey using only the same gear and rations and in 2013 he retraced Sir Ernest Shackleton's "double": he sailed from Antarctica to South Georgia and climbed South Georgia's mountainous interior using only period clothing and equipment. Tim's books include *The Unforgiving Minute* (Random House) and *Mawson: Life and Death in Antarctica* (MUP), which was released with his UN-endorsed documentary of the same name. He co-authored *The Frozen Planet* which was jointly released with Sir David Attenborough's TV series.

Tim received the Bettison & James Award for documentary film-making for his current project, *25Zero*, which highlights climate change through the plight of the world's melting equatorial glaciers, for excellence in scientific achievement and commitment to science communication. He received the Royal Institute of Navigation's Certificate of Achievement as Expedition Leader of the Shackleton Epic Expedition. He was inducted into the Royal Institution of Australia (2017), received the Sydney Institute of Marine Science's Emerald Award (2013), was named Conservationist of the Year (2015) by Australian Geographic, and was conferred a Member of the Order of Australia (2010) for services to the environment, community and to exploration. He was granted Fellowship of the Yale World Fellows Program for international leadership in environmental sustainability, and is a Global Ambassador for international sustainability NGO the World Wildlife Fund.

The Forktree Project: A case study

The Forktree Project began in April 2019 to restore 53 hectares of degraded farmland to its natural state. The project's primary goals are to conserve local species and to engage other peri-urban landholders to undertake similar actions by demonstrating how they can contribute to conservation, habitat restoration, and to combatting climate change. Restoring Forktree involves planting approximately 20,000 native trees and shrubs to re-wild the site, encouraging natural regeneration, and managing introduced species. Forktree is providing habitat to rare and threatened species and it will continue to bring back other native animals to the site. Achieving and demonstrating success and encouraging others to embark on similar projects involves engaging local and wider communities. The Forktree Project engages through educational and interpretive activities, working bees, planting days and other events and outreaches. The expansion of Adelaide's suburbs to Forktree's north and rapid growth and urban agglomeration of nearby towns to the south are progressively consuming open space and habitat in the region, increasing the need and urgency for projects like Forktree to sustain ecosystem services and connections with nature for the encroaching urban populations.



Presenters, Bios and Topics - Day 1

Thursday 1st September 2022, at the National Wine Centre, Adelaide — Hickinbotham Hall



Geoff Connellan

Following his research, teaching and outreach work with the University of Melbourne at the Burnley Campus, in 2007 Geoff began consulting in the field of water management for sustainable green space. Geoff's focus on development of water management plans, evaluation of irrigation system performance and water use efficiency and irrigation design solutions for turf, urban trees, high value landscapes, green roofs, multi-story building plantings and botanic gardens has led to his expertise being sought in setting standards for industry. He was the Principal Consultant for the development of Best Practice Guidelines for Functional Open Space, published by Smart Water Fund and City West Water, in 2015. He is author of the key open space management text; Water Use Efficiency for Irrigated Turf and Landscape, published by CSIRO, March 2013. Geoff has presented and published widely in Australia and internationally. He has been a member of the Stormwater (Vic) Committee (2014-2018). He is an Honorary Adjunct at the School of Ecosystem and Forest Sciences at the University of Melbourne's Faculty of Science, has been a judge for the National Stormwater Awards hosted by Stormwater Australia, and in 2008 he was awarded the National McLean Iedema Award in recognition for his outstanding contribution to irrigation in Australia. He is a Life Member of IAL.

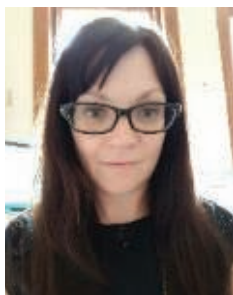
Achieving sustainable green infrastructure - Is there a formula?

The environmental and social benefits provided by green infrastructure make it an essential part of a city. Terms like sustainability and resilience are often attached to green space messaging, but what do these mean when planning and designing green infrastructure? Sustainability is about meeting our current needs without compromising the ability of future generations to meet theirs; it commonly focuses on avoiding resource depletion. Providing for current and future needs requires understanding (i.e. definition and quantification) of relevant green space services. Green space water schemes commonly involve a combination of mechanical and natural systems interacting with complex natural (plant based) systems. Specialist knowledge, skills and expertise are needed to develop long-life green systems. Design processes require data on system inputs and outputs. Currently there are very little data describing the green space outcomes or services side of the equation. This paper considers and reviews strategies to inform and balance this equation, including defining the green space services to be delivered, improving their consideration in planning stages across multi-disciplinary teams, strengthening their valuation, measuring and reporting of performance, and evaluating the effectiveness of supplementary water delivery.



Presenters, Bios and Topics - Day 2

Friday morning at the Botanic Gardens, 2nd September 2022



Kelly Bramhill

Kelly has worked in a variety of roles with the Botanic Gardens and State Herbarium's Public Programmes team since 2015. Kelly has a multidisciplinary background and experience in public programming, community engagement, and education and training delivery in scientific and cultural institutions. Kelly's experience includes compliance and operational management in the education sector, having worked in private and public-sector institutions across the United Kingdom and Australia.

Santos Museum of Economic Botany Tour

The last of its kind in the world, the Santos Museum of Economic Botany is home to a fascinating collection which dates back to the original Museum that opened over 130 years ago. This guided tour will take you back in time to 1881 where you will delve into the importance of plants in our lives; past, present and future. Learn how plants have been used by communities across the world for food, fabrics, medicine and for a plethora of other fascinating purposes.

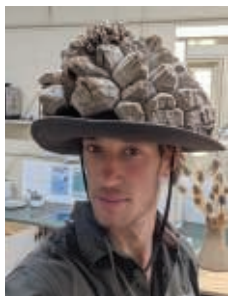


Lilith Tremmery

Lilith is a horticulturist at the Botanic Gardens and State Herbarium where her responsibilities include tending the plantings associated with the First Creek Wetland and the International Rose Garden. Beyond her work at the Botanic Garden she is a passionate advocate for native revegetation, particularly of road verges, and she is volunteer grower for Trees For Life.

Australian Forest Tour

The spectacular diversity of the Adelaide Botanic Garden's Australian forest species is represented by trees dating back to the original plantings of the Garden over 150 years ago. This session will showcase some of the Garden's living collection of trees and how they are managed, including discussion of aspects of habitat pruning by experienced arborists to retain and create opportunities for our resident fauna, preventing tree injury when labelling, and balancing species selections to match light levels and utilise the benefits that canopy provides in creating microclimates.



Thomas Burke

Thomas began working with the Botanic Gardens and State Herbarium as a trainee in 2018. His proficiency, application of best horticultural practice, and passion to further develop his horticultural knowledge have since secured him a permanent position as one of the Garden's horticulturists. Thomas has an appreciation for natural landscapes and a passion for horticulture which was heavily influenced by being surrounded by nature in his formative years. Thomas' interests include the native flora of his own backyard and exotic species from far and wide.

Presenters, Bios and Topics - Day 2

Friday morning at the Botanic Gardens, 2nd September 2022



Linda Collins

Linda has been a volunteer flying-fox rehabilitator, consultant and researcher for 33 years. She has worked in numerous colonies throughout New South Wales and Queensland with a range of roost canopies including rainforest, Bangalow palms, casuarinas and mangroves. Linda is currently working as a consultant for wildlife care groups and stakeholders responsible for monitoring and managing Adelaide's colony of Grey-headed Flying-foxes.



Karen Smith

Karen commenced her horticultural career as an Apprentice at the Adelaide Botanic Garden in 1987. She has held a variety of roles across the horticultural industry since, including tending the Roma Street Park Lands in Brisbane and working at the University of Adelaide's Waite Arboretum. While studying for her Bachelor of Science degree Karen specialised in plant physiology and investigated plants in saline environments. Karen has held the role of Horticultural Curator at the Adelaide Botanic Gardens since 2006 where she oversees two of the largest tree collections.



Paul Winter

Paul is Senior Horticultural Curator at the Adelaide Botanic Gardens and State Herbarium. Every day he witnesses staff and visitors reap the benefits of decisions made 20, 50 or more than 100 years ago by past gardeners, curators and directors who planted the trees that now dominate the landscape. He has a background in visual arts and for more than 17 years he has worked as a horticulturalist. Paul's special interests include Australian native flora and the aesthetics of natural landscapes.

Managing the Challenge of Tree Conservation and Fruit Bat Colony Conservation

Balancing the Botanic Gardens' business needs and the expanding events calendar is never straightforward, particularly in Botanic Park while meeting the needs of a growing population of a protected animal species. In this session you will be introduced to the Grey-headed Flying-foxes (*Pteropus poliocephalus*). You will hear about the effect of heat stress on the colony, the measures that have been put in place to reduce the colony's impact on the living plant collections, and some common myths about the flying foxes will be dispelled.

Economic Garden and Garden of Health

Located in the western part of Adelaide Botanic Garden next to the Ginkgo Gate, the Garden of Health demonstrates the use of plants to heal and promote health and wellbeing in western and non-western cultures. This garden has been designed to give visitors a sense of how the use of medicinal plants has developed over time, from the Neolithic period to present medical science and pharmacology. In this session you will learn about the complexities of managing over 2,300 plants in such a unique collection and you will be given a glimpse into how important the significant trees in the space are for the surrounding collections. Paul will also present some of the history of the development of the garden.

Presenters, Bios and Topics - Day 2

Friday afternoon at the National Wine Centre, 2nd September 2022



Dr Matthew Laurence

Matthew is head of PlantClinic at the Royal Botanic Gardens, Sydney, and he also operates a private arboriculture consultancy. He has an academic background in arboriculture, plant sciences, molecular biology, plant pathology, ecology/mycology and is an accredited member of the Institute of Australian Consulting Arboriculturists & Australasian Plant Pathology Society. He is an associate editor of the Australasian Plant Pathology Journal. Matthew has been involved in the molecular diagnostics of tree diseases including Mango Malformation Disease, Pine Wilt Nematode, Myrtle Rust and a number of other diseases affecting horticulture, agriculture and the natural environment.

Stop the rot. Phytophthora in our urban tree planting stock: are we managing the risk?

The genus *Phytophthora* is a serious plant pathogen that can infect and kill a range of tree species. *Phytophthora cinnamomi* is identified as a Key Threatening Process under the NSW Biodiversity Conservation Act (2016) and the Environment Protection and Biodiversity Conservation Act (1999), and exotic species pose a threat to horticultural production. *Phytophthora* is a significant threat to urban forests but its extent has not yet been well documented. Matthew will present the results of a pilot study which investigated the occurrence and diversity of *Phytophthora* species in urban tree planting stock and will discuss measures which can be adopted by practitioners in nursery and urban forest management to manage this risk.



Pieter Taylor

Pieter was Cairns Regional Council's first arborist when he started in 2007; as Principal Arborist he now leads a team of five others. Pieter earned a Graduate Certificate in Arboriculture from the University of Melbourne to add to the knowledge he has gained through his local arboricultural experience and background in silviculture in South Africa. The team he leads has responsibility for managing Council's trees across a region stretching over 100 km from Mirriwinni to Ellis Beach in Queensland's tropical north. Pieter has developed Cairns' tree database as a management tool and, as a subset of that, a database of the fungi that affect trees in the region. His interests include ongoing improvement of methods for diagnosis, assessment and reporting for diseased trees. Risk management in relation to public perception is also a focus, due to the impact of some of the fungal diseases on large trees, and he is working with experts at James Cook University on research projects relating to local strains of *Pyrrhoderma noxium* and the use of *Trichoderma spp.* as a treatment option.

Tropical fungi and urban tree management

Pieter's presentation will look at how tropical fungi affect tree assessment, data collection, decision making processes, public consultation, and tree management costs. As with many councils, Cairns' decisions are closely scrutinised by the public, particularly in relation to the removal of large trees infected by fungi. Extensive consultation campaigns can be good for public relations but are not always expedient due to unacceptable levels of risk, rapid tree growth, and high rates of decay. Cairns Regional Council actively involves community groups in decision making processes, to inform them and to try to gain their support for remedial actions once a high-risk tree has been identified. When there is time, engaging with and informing the public regarding Council's tree management processes builds trust, which is of considerable benefit when high risk prevents consultation.



Presenters, Bios and Topics - Day 2

Friday afternoon at the National Wine Centre, 2nd September 2022



James Smith

James began his career working in public education with the Queensland Museum and with the CSIRO on fisheries research. Following international experience of citizen engagement with wildlife, James returned to Australia and established his company, fauNature, to help bring people and wildlife together in urban and peri-urban environments. fauNature manufactures, installs and manages fauna habitat boxes for a range of clients including private individuals, councils, NGOs, state environment departments and university researchers. James has an Honours Degree in zoology and enjoys sharing his passion for wildlife and environmental education.

Fauna habitat hollows: Current and emerging knowledge

Following a workshop on hollow dependant fauna he gave at TREENET over a decade ago, James co-developed the original Carved Hollow-Habitat Creation Workshop. This workshop has been delivered widely across Australia and is the basis for the Environmental Arboriculture Minimum Industry Standard (MIS312). In this session James will provide an update on the current state of knowledge and practice in fauna habitat hollow provision and maintenance.



Brian Gepp

Brian assisted with research projects on seagulls, seals and termites prior to graduating with his Bachelor of Science (Hons) and Master of Science degrees. His Honours Degree focussed on the social behaviour of the endemic Pearson Island Rock Wallaby. For his MSc, whilst employed by the South Australian Government's forestry organisation Brian investigated differences in bird populations between different aged pine plantations and native forests in the Mount Lofty Ranges. Over a 30-year career Brian has led research projects examining the effects of erosion, recreational impacts and the use of fire in habitat management. Research regarding the significance of retaining and managing sustainable cohorts of hollow-bearing trees for fauna remains a particular interest.

The long-term importance of urban fauna hollows.

Many peri-urban areas in Australia have been devastated by wildfires, leading to the decline of hollow-bearing trees and, subsequently, the loss of suitable habitat for hollow-dependent species. Fauna boxes were proposed as a temporary solution and were installed as a substitute for natural tree hollows; however the visitation rate of hollow-dependent species was low. It was suspected that the nest box microclimate differed from the microclimate of natural tree hollows. To better understand the differences between fauna boxes and natural hollows, Quang's Honours project focused on two main objectives: to investigate the internal structure of natural tree hollows and to recreate the structure of natural hollows in artificial fauna boxes to potentially encourage greater use. Temperature testing showed that the newly designed fauna boxes had better insulation and moderated their microclimate more than previous designs, which supports further application of the new design and ongoing research to investigate its potential benefit to fauna.



Quang Vu

Quang has recently completed his Bachelor of Environmental Science and Bachelor of Science (Honours) degrees at the University of South Australia. Quang is an active and regular volunteer on park maintenance, habitat revegetation and ecological survey projects. He also contributes as a committee member of Friends of Adelaide International Bird Sanctuary (FAIBS). Quang is looking forward to building upon the learnings of his Honours research project and commencing studies toward a PhD in ecology, sustainability or fauna protection.



Presenters, Bios and Topics - Day 2

Friday afternoon at the National Wine Centre, 2nd September 2022



Patricia Torquato

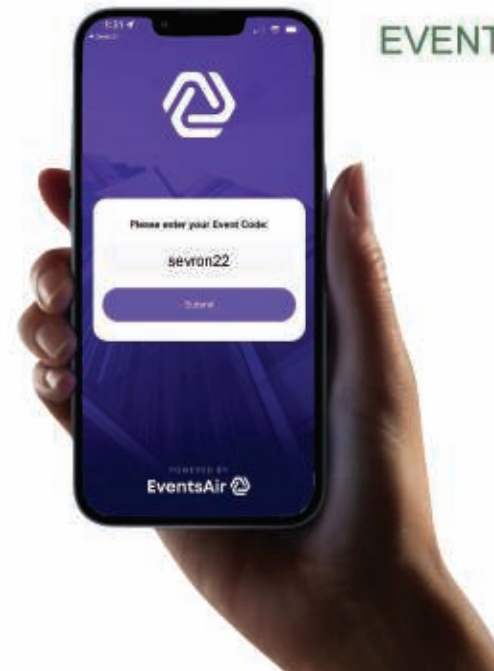
After graduating in forestry from the University of Sao Paulo, Brazil, Patricia completed a Master of Natural Resources Ecology and Management at the Oklahoma State University. Her research has included studying industrial plantation forests, investigating above and below ground biomass growth, and evaluation of silvicultural operations from nursery to harvest for national companies in Brazil. Patricia is currently undertaking research toward a PhD with the School of Ecosystem and Forest Sciences at The University of Melbourne.

Monitoring newly planted street trees using remote sensing

Patricia's presentation will focus on her current research, in which she applies her expertise in GIS, forest dynamics and tree water-related physiology to the analysis of tree canopy cover data to estimate the rate of canopy change. Her study of canopy change rates for common trees in differing soil and rainfall zones of Melbourne's newly urbanised outer suburbs will identify species which perform well and are therefore likely to better support future urban greening initiatives.

Get connected

DOWNLOAD THE ATTENDEE APP



EVENT CODE: sevron22

Adelaide BOTANIC Garden

Map guide

- Information
- Guided walks meeting point
- Toilets
- Wheelchair access
- Parking
- First Aid
- Cafe / restaurant
- Historical interest
- No public access

Regulations

The garden is a museum of valuable living collections. Please help us to protect them.

- Do not damage / remove plants or enter garden beds
- No skateboarding, rollerskating, bicycle, or scooter riding.
- No vehicles
- No pets or animals
- No alcohol
- No BBQs
- No ball or throwing games
- No drones



F7 Amazon Waterlily Pavilion

G9 Araucaria Avenue

D11 Australian Forest

F11 Australian Cycad Collection

J15 Australian Native Garden

C9 Barber Shop Rotunda

C12 Bicentennial Conservatory

E3 Cactus and Succulent Garden

B10 Classgrounds

G5 Cycad Collection

G11 Dahlia Triangle

F12 Deadhouse

J14 East Lodge

D4 Economic Garden

H6 Elvis Memorial

I14 Eremophila Garden

D7 Ficus / Murdoch Avenue

F15 First Creek Wetland Viewing Area

F14 First Creek Wetland

G4 Francis Arbour

D2 Garden of Health & Ginkgo Gate

E17 Goodman Building (Administration)

C15 International Rose Garden and National Rose Trial Garden

F6 Main Lake / Kainka Wirra

F14 Karna Cultural Presentation

E15 Kitchen Garden

K12 Mallee section

D9 Mediterranean Garden

H8 Nelumbo Pond

D15 Noel Lothian Hall

B7 North Lodge

I6 Palm collections

F4 Palm House (Malagasy Collection)

D8 Plane Tree Lawn

E18 Rangelands Plaza (Hackney Gate)

E6 Restaurant Botanic

F9 Santos Museum of Economic Botany

E9 Schomburgk Pavilion

Café Fibonacci

Diggers Garden Shop

Visitor Information Centre

H13 Seed Orchard

E6 Simpson Kiosk

D10 Simpson Shadehouse

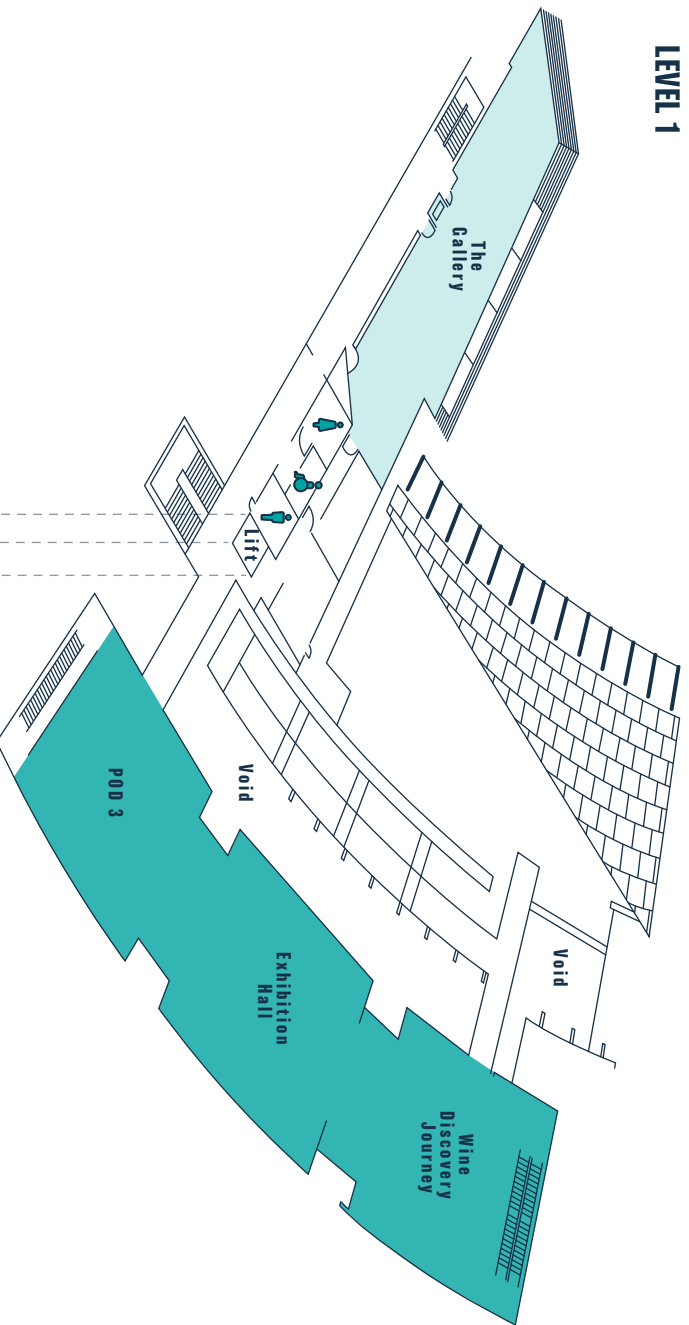
D16 State Herbarium

K8 Summer House

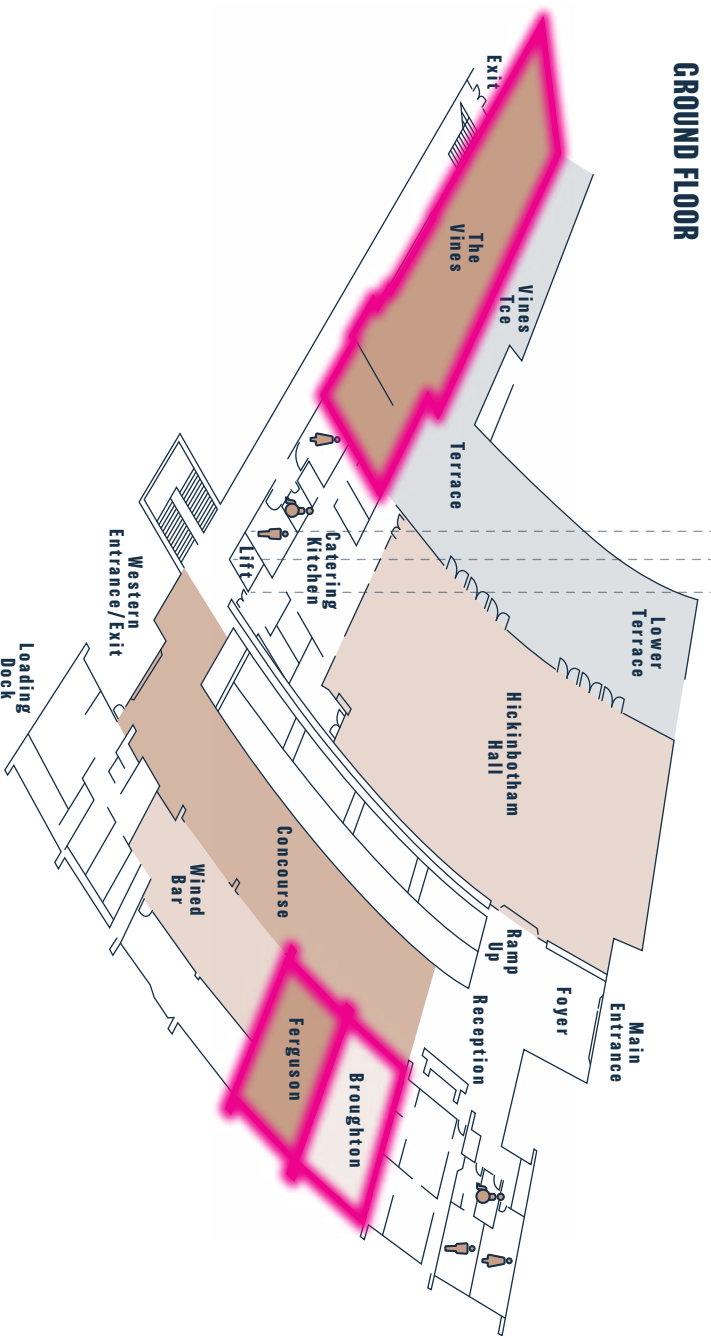
H14 Sunken Garden

D9 Wisteria arbours

LEVEL 1

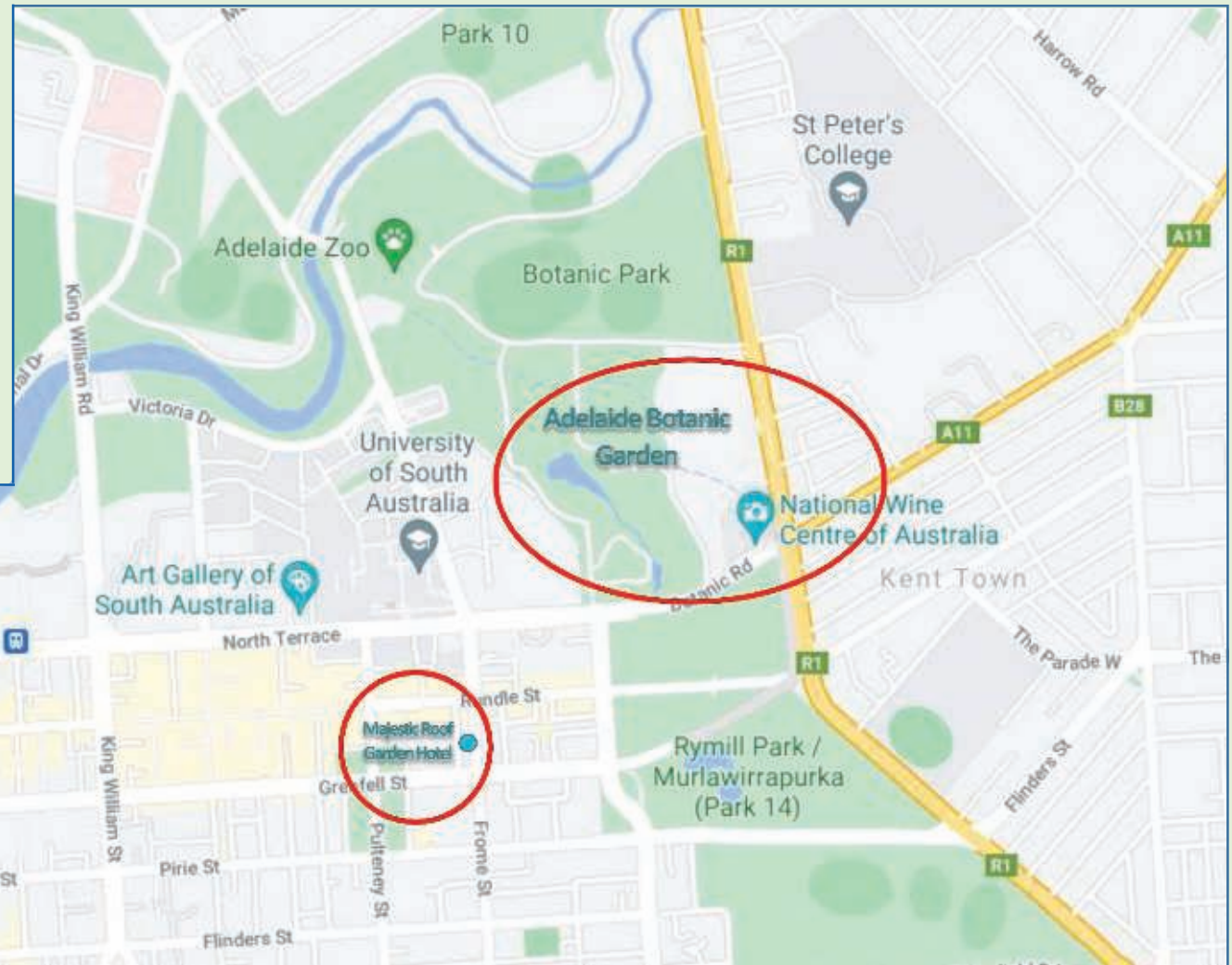
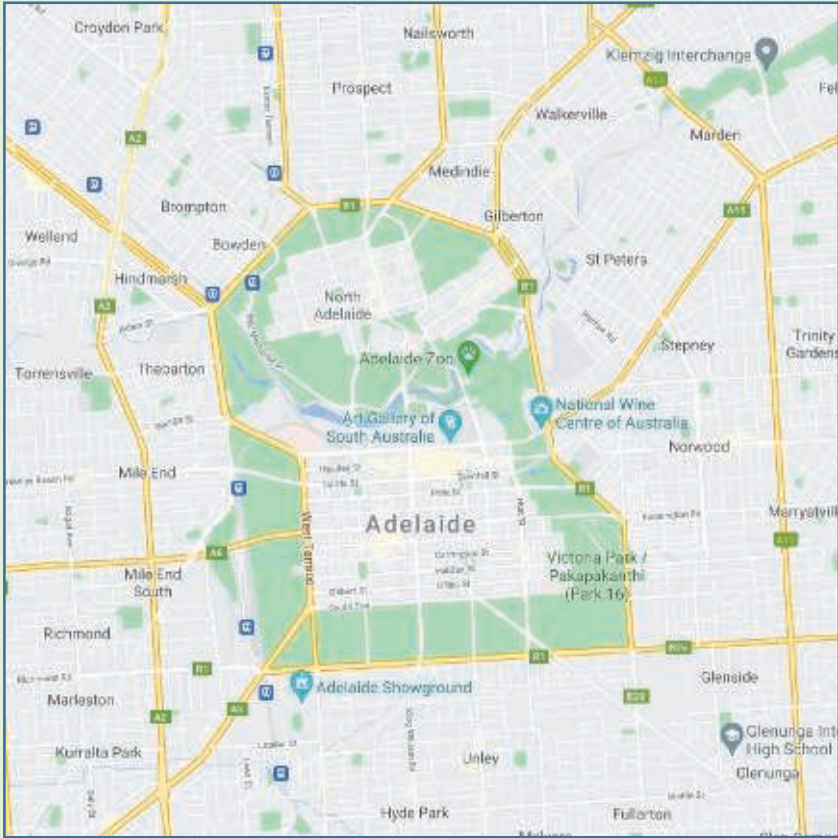


GROUND FLOOR



Location of the National Wine Centre, the Adelaide Botanic Garden and the Majestic Roof Garden Hotel

The National Wine Centre of Australia is adjacent to the Adelaide Botanic Gardens, in the north east corner of the city. Enjoy the scenic walk through the Botanic Gardens and enter either via the pedestrian entrance on Botanic Road, (the continuation of North Terrace) or the main entrance on Hackney Road.



If you're staying in accommodation in the NE corner of the CBD, the Symposium venues are a comfortable ~ 1km stroll or less – about 10-15 mins.