



**Critical zone observatories in the southern hemisphere  
– An international workshop.**

*Ancient soils and modern land use – A challenge for critical zone science*

*Perth, Australia, 10th – 12th April 2014  
2 day workshop & 1 day field trip*

*Collaborating universities*



*Sponsors*



## Getting to the University Club

### Location of the University Club

The University Club is in the grounds of the University of Western Australia in the suburb of Crawley. The University Club is just off Hackett Drive, near Hackett Entrance 1 (see map below).

### Parking at UWA

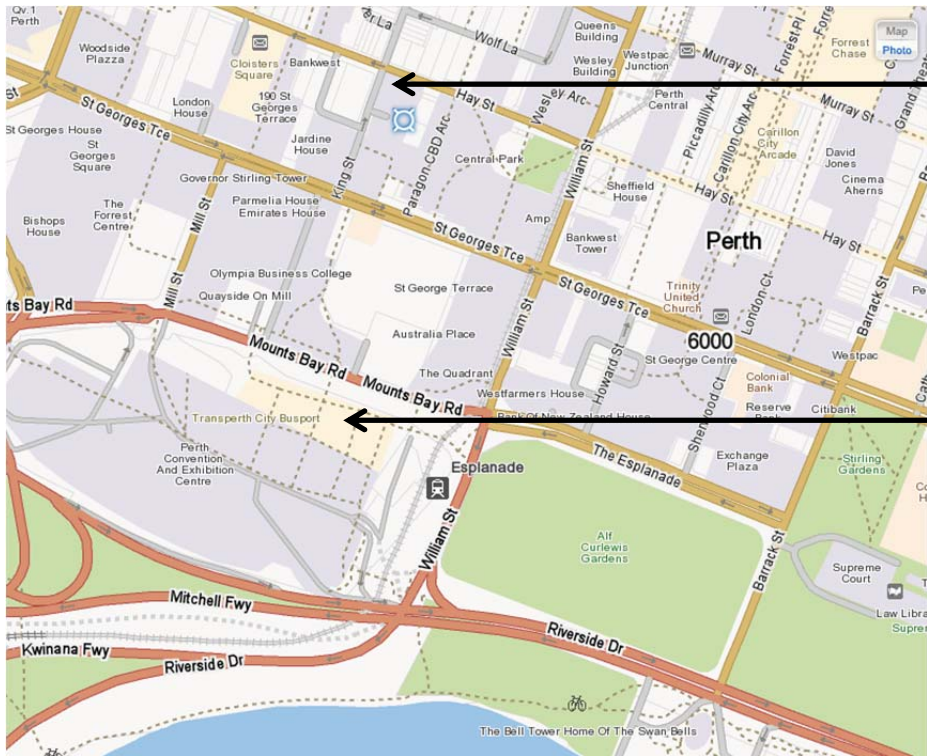
Visitor parking at UWA is in short supply and you must pay by the hour between 8am and 5pm. Visitors can park in car parks along Hackett Drive and also in *selected* bays in UWA Car Parks 9, 17, 23, 25, 31, 33 and 35.

### Travelling to the University Club from central Perth hotels

The easiest ways to get to UWA from central Perth are by taxi or by bus.

**Taxi:** To travel by taxi, you'll need to phone for one and it may be best to check with the hotel reception staff the day before. Ask the taxi driver to take you the University Club at UWA, Entrance 1 on Hackett Drive or Hackett Drive near Mounts Bay Road or show them the map below. The journey should take 10-15 minutes.

**Bus:** To catch the bus, first walk to the Esplanade Busport (see map below, 500m from the Rydges Hotel) or catch one of the CAT shuttle buses there. If you're too far away to walk, ask your hotel reception staff which bus will take you there. At the Esplanade Busport, wait at stand E1, board bus number 950, 23, 102 or 107 and purchase a 1 Zone ticket for \$2.80. The journey takes 10-15 minutes and you'll know UWA by the way everyone gets off the bus! In the morning there is a bus to UWA every 5 minutes, and in the late afternoon there are buses from UWA to the Esplanade Busport every 5-10 minutes. The journey (including walking should take about 30-50 minutes.



Rydges Hotel

Esplanade Busport



Where you will get off the bus at UWA

University Club of WA

**Thursday 10<sup>th</sup> of April**  
**University Club at the University of Western Australia**

**9:00-10:00** Morning tea and coffee, registration etc.

**10:00-12.45** Opening presentations

**10:00-10:10** Welcome, Asst/Prof Matthias Leopold & A/Prof Deirdre Gleeson,  
Convenors of CZO Workshop

**10:10-10:20** Official opening, Winthrop Prof Tony O'Donnell, Dean of the  
Faculty of Science, UWA

**10:20-10:30** Introduction round of all participants

**10:30-11:10** Opening talk, Major General the Hon. Michael Jeffery, Advocate  
for Soil Health, DAFF AU

**11:10-12:25** Dr Tim White, Pennsylvania State University, USA

Prof Steven Banwart, University of Sheffield, UK

**Critical Zone NSF Cross CZO Initiative & European SoilTrEC  
program, *Observatories for adapting to environmental change - a  
European perspective from the SoilTrEC programme***

**12:25-12:45** General discussion

**12:45-14:00** Lunch break

**14:00-17:00** Afternoon talks

**14:00-14:45** Prof Oliver Chadwick, University of California at Santa Barbara,  
USA, *Southern hemisphere CZOs – Are they needed?*

**14:45-15:30** E/Prof Bob Gilkes, University of Western Australia, AU, *Unique  
landscapes in the south-west of Australia – A challenge or chance for  
CZ science?*

**15:30-16:00** Coffee break

**16:00-17:00** Closing session

**16:00-17:00** Asst/Prof Matthias Leopold & A/Prof Deirdre Gleeson, UWA  
*opportunities general discussion*

**18:30** Evening event at the Little Creatures Brewery, Fremantle

**Friday 11<sup>th</sup> of April (talks will be 15 min + 5 for questions)**  
**University Club at the University of Western Australia**

**8:40-10:10 Existing monitored sites across Australia**

**8:40-9:00 Mark Farrell, CSIRO Adelaide, *Sensors and sequences for soil biological function***

**9:00-9:20 Talitha Santini University of Queensland, *UQ potential site***

**9:20-9:40 Uta Stockmann & Stephen Cattle, U Sydney, *Australian soils within CZO and TERN program***

**09:40-10:10 Group Discussion**

**10:10-10:40 Coffee break**

**10:40-12:00 Land Use – Agricultural, social and cultural issues**

**10:40-11:00 David Collard, Wheatbelt NRM, *Aboriginal land use past & present***

**11:00-11:20 Michael Poole, CSIRO, *History of modern agriculture in WA***

**11:20-11:40 Matthew Tonts, UWA, *Contemporary economic and social dynamics in the Avon catchment***

**11:40-12:00 Group Discussion**

**12:00-13:00 Lunch break**

**13:00-14:50 Hydrology and Geomorphology**

**13:00-13:20 Anthony Dosetto, University of Wollongong, *Rates and timing of Critical Zone processes***

**13:20-13:40 Dirk Mallants, CSIRO, *Biogeochemical simulators for Critical Zone Research***

**13:40-14:00 Andrew Rate, UWA, *Weathering profiles in WA***

**14:00-14:20 Ryan Vogwill, UWA/DEC, *Hydrogeology and the Critical Zone***

**14:20-14:50 Group Discussion**

**14:50-15:20 Coffee break**

**15:20-17:00 Ecological aspects within the Critical Zone**

**15:20-15:40 Andy Whiteley, UWA, *MicroBlitz and the soil microbial communities in WA***

**15:40-16:00 Luitgard Schwendenmann, Univ. Auckland, *Ecological studies in the Critical Zone***

**16:00-16:20 Mike Perring, UWA, *Influence of Eco-restoration on the Critical Zone***

**16:20-16:40 Lesego Khomo, University of Cape Town, *Soil-ecology relationships in the Critical Zone in South Africa***

**16:40-17:00 Group Discussion**

## Saturday 12<sup>th</sup> of April

### Full day field trip to the UWA Future Farm

#### What to bring

Everyone should wear sun protection including a hat. Boots and long trousers are also recommended to protect from rocks, thorns, flies and ticks. Please bring a rain jacket just in case. Bottled water and food will be provided but it's a good idea to bring some water along.

- 09:00** Depart from UWA/city
- 09:45-10:00** The West Australian jarrah forest east of Perth
- 10:00-11:45** Trip to UWA Future Farm
- 10:45-11:15** Future Farm farm house, *Short report of Future Farm initiative*
- 12:15-12:45** GPS station, *General overview of future CZO - landscape, geology and soils*
- 12:45-13:15** Weather station, Lunch break
- 13:15-13:25** Hike to dolerite dyke and CRC field site
- 13:25-13:50** CRC field site, *CRC for Polymer field trial & typical WA duplex soils*
- 13:50-15:00** Avery Hill laterite outcrop, *Soils & sediments, old weathering (pallid zone)*
- 15:00-15:30** Eco restoration & Hydrology
- 15:30-15:45** Summary and futures for CZO
- 16:00-18:00** Future Farm farm house, dinner with people from Pingelly State Emergency Services
- 18:00-20:30** Drive back to city/UWA