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*
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 10th 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 11th 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 Woolongong, Rates and timing of Critical Zone processes
  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 12th 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