

# ForestrySA Cave Management System

## *Trevor Wynn*

Many people in this region saw caves & sinkholes as nuisance value holes in the ground. They were often filled in or used as rubbish dumps which created the potential to pollute groundwater. Those on Forest Reserves were no exception – often filled with original vegetation when cleared, planted right up to or through.

### Background

- 1996 - With the inception of a Community Forestry Section, the author was appointed to a Ranger position – interested in caves, but didn't know much about their locations.
- Became aware of location of dive sites & some regularly-visited dry caves.
- Over a period of time as logging machinery & mechanical treatments became bigger, caving people contacted Forestry SA saying we have damaged or destroyed a cave – eg through chopper rolling or harvesting contractors who had stood logs into entrances etc.
- Began to erect danger / warning signs at selected sites.
- 1999/2000 – started fencing using post & rail (200 x 50 treated timber) and included elongated versions of our warning signs.
- Could then see a need to get karst features onto some sort of database.
- 1999 – Tracee Perry was appointed to the Community Forestry Section as a Project Officer, so one project was to come up with how to capture information on a database.
- Project involved local caving / CEGSA gurus Fred Aslin and Kevin Mott also with Peter Mackenzie (GIS) who also has interest in caves.
- Of about 500 CEGSA-numbered cave sites throughout the Lower South East, there are about 130 in Forest Reserves.
- Information Collected:
  - L Number (L being LSE) if already numbered
  - Sensitivity
  - If site needs fencing
  - Gating
  - Rubbish
  - Dimensions
  - Comments, eg doline, cave, etc, if visited by public, etc.
  - Popular name
  - Alternative names
  - Actual name
  - If cave has a thin roof
  - Special features, ie formations, etc
  - GPS coordinates
  - Photo
- During this process were found approx 100 more karst features (900 or 1000 series)
- Data-loaded this into GIS system developed by P Mackenzie

**Procedure**

- When we log on, we see red dots, representing karst features, plus L numbers
- Hot-linked, so when we click on dots it will bring up a photo, plus site information
- Our Sales Division see forest compartments on the GIS system coloured in red - indicating Exclusion Zones - and will need to see the Forester (Troy) or myself. This may result in a site visit with the Logging Coordinator, Contractor CF and possibly the operations coordinator to agree about a buffer zone regarding treatment and safety if the cave area has a thin roof, etc
- In the meantime we have gated about 12 sites, including 4 out of 7 diving sites
- EMS & Buffer Zone guidelines were developed – the cave info already collected complement the system well
- Continue to put new features on system as they're often found & identified in Hazard / Incident Reports
- 2005 – formation of ForestrySA caving / cave management group, which consisted of myself, Troy (a Forester), Grant Pearce & Peter Mackenzie, with advice from local CEGSA people when needed
- We look at new discoveries & what to do with them - eg if sand holes we GPS and photograph them, put on the database & fill hole. Another example is Hells Hole Quarry - how to make it secure in the short term eg standardising fencing (post & cable?)
- Developed "Significant Site Record Form" (on Standard Forms)
- Where to from here? There will always be opportunities for continuous improvement, eg -
  - Establishing Buffer Zones around caves (eg Wandilo Siding)
  - Establishing buffers along drainage lines / creek lines at (eg Claypans Everglades)
  - Should be an easy way to capture such improvements on FMS system!
  - Need to capture other hazards (eg, wells at Myora / Caroline)
  - Need to develop a "Significant Site" on-ground marking system to include heritage (European & Indigenous), rare plants, etc (looked at Ezy Drive marker post system).