

Leeuwin-Naturaliste Ridge Cave Rescue Response Plan

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Abstract

The Leeuwin-Naturaliste Ridge Cave Response Plan is the result of a collaborative effort between the Department of Biodiversity Conservation & Attractions Parks and Wildlife Service (P&W), Department of Fire & Emergency Services of WA (DFES), Cavers Leeuwin Inc. (CLINC), Margaret River Busselton Tourism Association (MRBTA), West Australian Speleological Group (WASG), Western Australia Police (WAPOL) and Commercial Operators.

The process to create and implement a dedicated response plan for this area was the result of issues identified with the current response processes to a cave rescue incident, with the perception that one agency was able to complete this should it occur. Representatives from DFES, P&W and CLINC reviewed current practices and agreed that in order to provide an adequate response; it would require a coordinated multi-agency, multi-discipline approach; that would enable all relevant stakeholders to work together towards achieving the objective.

The aim of the response plan is to provide for and support a strong cave rescue response capability within the City of Busselton, Shire of Augusta/Margaret River and the Leeuwin-Naturaliste Ridge National Park.

The plan seeks to provide a set of response arrangements for a cave rescue incident, detail logistical arrangements including contacts and response resources, detail triggers for escalation of response efforts and provide arrangements for incident management; including facilities, competent personnel and inter-agency cooperative arrangements.

It was recognised through the response plan working group; that any response to a cave rescue incident will be multi-agency. With the integration of members from local caving clubs, commercial operators, P&W, DFES, St John Ambulance, WAPOL, Local Government, MRBTA and other non-government organisations. While it is recognised that the Hazard Management Agency within our emergency management framework is WAPOL, the coordinated

multi-agency approach will enhance the effectiveness of responding agencies to deal with such an incident.

The working group began the process in October 2016 and with the positive input of a range of stakeholders, was able to have a draft compiled for endorsement by DFES, WAPOL, P&W and the Australian Speleological Federation by November 2017. The plan is currently going through the endorsement review process and will be implanted across relevant agencies once completed.

Introduction

This article seeks to introduce you to the background and intent of the Leeuwin-Naturaliste Ridge Cave Rescue Response Plan.

To build an understanding of the process of its development, we will step through the history of cave rescue in WA, stakeholder relationships and the overall concept of the plan.

As part of the article, included is a version of the plan for your review and background of the final endorsed plan.

History of the Caves and relationships of the stakeholder groups of the Leeuwin-Naturaliste National Park in Western Australia – Carolina Paice

It must be acknowledged first and foremost that the caves of the Leeuwin-Naturaliste Ridge were here, long before European settlement and are still to present day, culturally and spiritually significant places to the local indigenous owners. Many cave entrances were found by early settlers from the 1830's when looking for lost stock and by timber fellers in the 1880-1890's. In the early 1900's, Marmaduke Terry surveyed all the known karst features from Yallingup to Augusta. When the Government surveyor reported on the advantages of caves for tourism, a Caves Board was formed to protect and administer the South West Caves and Caves House was built to accommodate travellers to the caves. Steps and gates were installed in many cave entrances. Maps were produced of the capes region with many of the known cave locations marked. Pictorial records of some of the pristine formations of some of the early

tourist caves remain, taken around 1902. As other worldly affairs started taking up people's time, the Caves Board disbanded in 1910 and the caves suffered long periods of neglect under management of the State Hotels Association. In 1958, control of the major Tourist Caves was handed to the Tourist Bureaus and caving clubs became heavily involved in the management of the wild caves.

From 1960 and to present day, the region has experienced sharp population growth. Wild caves were re-discovered, and indiscriminate visitation resulted in the degradation of some of the more easily accessible sites. Cave hazards to underprepared visitors include insufficient light sources or running out of batteries, disorientation, steep vertical drop offs, insufficient climbing skills and experience, squeezes and restricted spaces, snakes, occasional high CO₂ levels from decaying organic matter and tree roots, rockfalls from walking or climbing in unstable areas and cold temperatures can lead to hypothermia.

In the late 1980's the caving clubs brought to the attention of the State Government that the caves were suffering irreparable human impact. Between 1975 and 1995 there were also 25 significant caving accidents recorded, including in the tourist caves, adventure and wild caves. They included falls to rock fall entrapment, cavers missing overnight, getting lost and running out of light sources.

In 1989 the Leeuwin-Naturaliste Management Plan was formulated by the Department of Conservation and Land Management. Through this the Cave Management Advisory Committee (CMAC) was formed with representatives from National Parks, Speleological and other stakeholder groups. A permit system for visitors to wild caves commenced. This was to improve visitor safety and to improve cave conservation. This was achieved by providing information and education, by restricting access, regulating visitor numbers, providing signage, and conducting courses to ensure that only approved and skilled leaders lead trips. The permit system raises revenue on a user pays basis for staff, rehabilitation, research, monitoring and maintaining infrastructure.

The permit system also obtains information on cave users and site history. Each cave site was classified according to its own merits:

- Calgardup and Giants caves were retained as tourist caves and staffed to provide a point of contact for visitors to enable a more natural, self-guided experience with minimal

infrastructure. The permit system was then administered from Calgardup Cave.

- Adventure caves – horizontal and vertical entries with gating and some infrastructure and track marking
- Restricted wild caves – with no infrastructure except some gating and some caves requiring a higher level of permission from a Caves Access Committee.

Between 1999 to present day, there have not been any significant caving accidents in the wild and adventure caves. This has been put down to the successful implementation of the permit system. Cave Rescue Planning was briefly undertaken in 1999/2000 but due to changes of personnel perhaps this lost momentum. It had been a misconception on everyone's part for a long time that if there was a cave accident scenario that the SES would come to the rescue. So, in 2016 Leon Gardiner, District Officer SES with the Department Fire and Emergency Services, Lower South West Region was invited to go caving with Parks and Wildlife staff. It was in the depths of an Adventure Cave where the realisation dawned that it would take a combined effort of all agencies: The Police as incident controllers, the SES as the rescue agency with manpower and resources, St John Ambulance for the medical support and transport, the caving clubs for their many years of expertise, the various caves managers and commercial operators for site knowledge and personnel with relevant skills. Through the combined effort in expertise and resources, a successful cave rescue can eventuate, resulting in the highest probability in saving lives and protecting the delicate and unique cave environments with irreparable damage from such an exercise.

Cave Rescue in the Leeuwin-Naturaliste Ridge: Pre 2016

Historically, WA cavers have held a strong distrust of the State Emergency Service and their capacity to undertake a well planned and executed cave rescue. Further to that; the State Emergency Service has held a strong distrust of cavers and their capacity to contribute in a well planned and executed cave rescue.

These positions are not unique around the world. During the 1980's in British Columbia, Canada, the Royal Canadian Mounted Police (RCMP) and the Civil Rescue service had the statutory authority to undertake cave rescue. In 1984 there was a cave rescue in a technical vertical cave. Initially the RCMP held the cavers at arm's length and denied their offers to assist. Eventually, however cavers were granted

access, they proved their value and in 1992 a memorandum of understanding was signed that recognized the value of cavers in cave rescue.

Similarly in the mid 1980's there was a cave rescue in New Zealand, anecdotally; the police did not allow the cavers to assist in a cave that was well known to them. The responding authority, LandSAR, was making little progress in the rescue. Cavers knew of a second entrance to the cave that had been buried some period before, they dug it out, entered the cave, rescued the stranded person and the rest is history. Now the NZ Speleological Society and LandSAR organise a major cave rescue practice every 2 years, to assist in the training of cave rescue and in the refinement of the management of long and complex cave rescues.

Over the years there have been numerous conversations between cavers and land managers regarding the issue of cave rescue. Fortunately the timing and appetite for change enabled an opportunity for Department of Fire & Emergency Services (DFES) District Officer Leon Gardiner to be escorted underground, by staff of and the Caves Manager - Carolina Paice from the Department of Biodiversity, Conservation and Attractions Parks & Wildlife Service (DBCA P&W).

The reconnaissance tour was undertaken in mid-2016, whereby DFES were afforded the opportunity to visit several cave sites along the ridge, subsequently highlighting the potential difficulties of a cave rescue and the inherent challenges associated with the environment and the contrast between existing SES vertical rescue skills and what may be required in a cave rescue.

Post this tour, a Cave Rescue Working Group was formed following a meeting of relevant stakeholders; the task of the group was to work on developing a Cave Rescue Response Plan that would promote and enable collaborative response efforts in the event of a cave rescue.

Following on from the establishment of the working group, DBCA and local caving clubs (Cavers Leeuwin Inc. and West Australian Speleological Group) and the SES participated in cave familiarisation training and have successfully conducted a cave rescue drill; with representatives from DBCA, DFES, SES and caving clubs participating.

The task of developing a multi-agency response plan is not without its challenges. However, the collaborative actions of the working group and other relevant stakeholders have enabled the initial plan to be ready for endorsement at the end of 2017.

The Response Plan

The aim of the plan is to provide and support a strong cave rescue response capability within the City of Busselton, Shire of Augusta Margaret River and the Leeuwin-Naturaliste National Park. The scope of the plan covers the Leeuwin-Naturaliste Ridge and all the caves within this geographical area.

The plan set out a number of objectives based on outcomes from the working group, these are:

1. To provide a set of response arrangements for the response to Cave Rescue incidents along the Leeuwin-Naturaliste Ridge.
2. To detail logistical arrangements including contacts and response resources.
3. To detail triggers for escalation of response efforts in response to a Cave Rescue.
4. To provide arrangements for incident management, including facilities, competent personnel and inter-agency cooperative arrangements.

In order to better understand how to respond or resource a cave rescue incident, we had to first understand the users and environment we would need to be operating in. As part of the working group, we developed a number of varied approaches and categories of users; this included how we would categorise and classify a rescue, to enable a better understanding of the level of resourcing required to support the incident. These included:

- Nature of Injuries
- Show Cave vs Adventure Cave
- Restricted Access Cave
- Vertical or Horizontal Access
- Walk In or Walk Out
- Level of Assistance Required by Stranded Party
- External Assistance Required
- Duration of Incident

As a result of the enhanced understanding of the complexities involved in a cave rescue, we were left investigating how we could best facilitate a coordinated response across multiple agencies. Given the large distances and challenges associated with communications (both mobile and radio) along the ridge; we felt it was important to identify areas that could facilitate the staging of resources, prior to arriving at the incident; these were to be known as rendezvous points.

The intent was to strategically locate these along the ridge, relative to the cave ID and naming convention that Parks & Wildlife utilise to identify the sites.

Each of the rendezvous points was tested for mobile and radio communications, size of area to support multiple vehicles and visibility and ease of access. The rendezvous points form part of the plan, allowing responding agencies and personnel to be able to identify the respective rendezvous points associated with the location of the incident. Furthermore; GIS products were created to enable visual representation of rendezvous points and most appropriate radio communications channels commensurate to each cave zone on the ridge.

The plan is intended for endorsement by DFES, DBCA, WA Police, West Australian Speleological Group, Cavers Leeuwin Inc. and Speleological Research Group of WA. The endorsement is aimed at a regional level and is intended as a response plan for this level, as opposed to a state level application at this point in time. The endorsements are aimed to be reviewed on an annual basis to ensure accuracy and currency of information contained within.

To view a copy of the document, click this link http://ackma.org/Proceedings/proceed/22/22pdf/LeeuwinNaturalisteRidge_Cave_Rescue_Response_Plan_DRAFT.pdf

Conclusion

The process of development has taken those involved on a journey of collaboration and education of capability and enhanced understanding of the needs of cave rescue and the benefits of multi-agency response to achieve the best outcome for all involved.

Moving forward from the endorsement of the plan, we see a growth in cave rescue exercising; both

desktop and practical deployment, with an aim to conduct a realistic response and rescue at least annually. The working group recognises the importance of working with land managers to mitigate the acute impacts on the cave environment, and will work on development of a strategy to support this with the appropriate user groups.

In addition to this, DFES will be working with relevant stakeholders to develop a cross agency cave rescue training and education process that will focus on cave conservation, rescue techniques and interoperability scenarios. The concept being that this training will work for SES volunteers, cavers and other agency staff.

It is recognised that the plan will continue to develop over time and in order for it to be a functional plan; it must remain contemporary and be structured to support its use by all involved in the response to cave rescue.

As an appendix to this article, a copy of the plan in draft form is provided as a reference point to what is the final plan. The final endorsed version will be made available to relevant agencies as part of the process.

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