NHVSS CHALLENGES TIMOR LIMESTONE QUARRY APPROVAL in the LAND and ENVIRONMENT COURT

NHVSS v. UPPER HUNTER SHIRE COUNCIL and STONECO. No.2 [2010] NSWLEC 104

Garry K. Smith & Jodie Rutledge

Legal team representing NVHSS

Brief Background

The Timor limestone quarry, located in the upper Hunter Valley north-west of Newcastle, was first proposed in November 2008. It attracted over 30 objections from local residents and other community members concerned about the likely environmental and social impact from the development. The quarry owners (Stoneco Pty Ltd) were proposing to operate the quarry 6 days a week, over a 30 year period, extracting up to 100,000 tonnes per year, removing approximately 2.4 million tonnes of limestone in total. The extracted material is to be transported by truck over 35km of narrow winding local roads to a crushing plant located close to the New England Highway. Despite NHVSS raising considerable environmental concerns, the Upper Hunter Shire Council (UHSC) approved the development, and consequently in July 2009, NHVSS lodged a class 1 Appeal with the NSW Land & Environment Court (L&EC).

The NSW Environmental Defender's Office (EDO) agreed to act on behalf of NHVSS in appealing the Timor quarry approval, on the basis that it was 'important public interest litigation'. Barristers Patrick Larkin (ASF Fellow) and Chris Norton agreed to act on our behalf on a pro-bono basis. A number of experts from various fields also agreed to provide their services to compile reports and provide evidence in court at a very reduced cost.

During a 2 day site access trip in mid September 2009 under a court order, the legal teams, experts and NHVSS cavers Garry Smith & Jodie Rutledge, were able to inspect the karst area to be quarried in order to assist with the preparation of evidence required for the proceedings.

L&EC hearings were held during November 2009 and again in May 2010 with an initial judgement handed down 31st March 2010 and the final judgement handed down on 23rd June 2010.

Note: The court and most published literature refers to this development as a quarry, however due to the intended use of the extracted material (limestone), the development is regarded as a mine for the purposes of the Mining Act 1992.

Court and experts at the proposed mine site

Issues in the Court Appeal

NHVSS had numerous concerns with the quarry development as approved by UHSC and considered that the assessment of karst and other environmental issues in the Environmental Impact Statement (EIS) was grossly inadequate. Some of the issues raised in the L&EC during the appeal are:

- There was inadequate study concerning the likelihood of caves on the project site, even though substantial caves containing significant cave fauna occur on nearby properties.
- Any caves present on the project site, and the fauna they might contain, were likely to be significantly impacted upon by the quarry and as such, a precautionary approach should be adopted.
- The potential for damage to groundwater dependent ecosystems due to quarry run-off into the karst aquifer below and impact on vegetation communities was not properly considered in the EIS or dealt with adequately by the conditions of consent, approved by UHSC.
- NHVSS argued that the vegetation communities covering the project area were in fact an endangered ecological community (EEC) protected by both NSW and Federal legislation (the "White Box – Yellow Box – Blakely's Red Gum Grassy Woodland" which is listed as an 'Endangered Ecological Community' at Commonwealth and State level).
- The site contained habitat for the Squirrel Glider *(Petaurus norfolcensis)*, a State-listed threatened species which could be adversely impacted by damage to its habitat as a result of quarrying.

Grass Trees Xanthorrhoea glauca *on the mine project site*

Outcome of Court's judgment

In March 2010 the L&EC handed down an interim judgment in which it held that the proposal was appropriate for approval only if appropriate conditions could be drafted that addressed issues raised by the court - namely, issues surrounding a protocol to be followed in the event of intersection of caves during quarrying, the impact on cave fauna, impact on the EEC's and Squirrel Gliders, roads and bridges infrastructure needs and a plan for rehabilitation of the site.

Massive limestone outcrops extensively over the proposed mine site

The resumed hearing in May 2010 dealt with these conditions and ultimately the Court granted consent to the quarry in June 2010. However, the decision allowed mining to proceed, only after many prerequisite conditions are satisfied. The court also imposed many additional restrictions and monitoring protocols which were not considered in the original UHSC approval. Many of the court's newly imposed conditions focused on the protection of Timor karst values and biodiversity covering the project site during the life of the mine. The conditions of the resulting approval are far more stringent than those originally imposed by the UHSC. The overwhelming majority of imposed restrictions and ongoing monitoring would not have been in place had NHVSS not filed the appeal with the L&EC with the assistance of the NSW EDO. Our legal team has also indicated that the conditions imposed by the court will provide an important precedent for the types of conditions which may be imposed on similar quarries and mines in the future.

Presiding over the L&EC challenge was Hon. Justice Brian J. Preston and assisted by Acting Commissioner P. Adam. The final 85 page judgment was handed down by Justice Preston on the 23rd June 2010. Key conclusions in the judgment include:

- Agreement had been reached concerning a pre-blasting assessment protocol in which the recommendations of NHVSS's experts were adopted; and also in respect of a biodiversity management plan.
- The final conditions would ensure adequate offset was provided for the loss of the EEC.
- NHVSS's appeal should be upheld, as the Court was granting consent on a different basis that on which UHSC had granted it.

Among the stringent conditions, the quarry will not be able to start blasting for at least a year, as it is required to monitor for caves, voids, fissures and geodiversity of significance, and to sample for underground fauna species on and outside the site for at least one year before the first blast takes place.

Specific outcomes of the court's judgement

In recognition of the value of the biodiversity on the site and the endangered ecological communities which will be affected by quarrying, the operator/owner is required to conserve in perpetuity 66 hectares of land as a "biodiversity offset". This includes 6 ha of prime vegetation containing the endangered ecological

community White Box - Yellow Box - Blakely's - Red Gum Woodland, which the quarry owner is now required to purchase as an offset to compensate for the area to be destroyed by quarrying. During the first five years of operation, the quarry is required to plant and establish additional trees to compensate for destruction of portion of the endangered Squirrel Glider habitat. During the Court proceedings Stoneco also reduced the size of its proposed stockpile area to lessen impact on the Squirrel Glider habitat and karst. The court imposed restrictions on the project site so that stands of *Xanthorrhoea glauca* (grass trees) and *Figus ribiginosa* will be protected.

The quarry owner is required to submit a site "Rehabilitation Plan" which is to be agreed upon by the experts. Rehabilitation must be completed once the mining ceases in 30 years. Once rehabilitated, the 5.85 hectare quarry site is to be added to the conserved 66 hectares of offset land conserved in perpetuity.

There are 8 individual management plans which must be submitted to UHSC and approved before development commences. These include "Soil and Water", "Air Quality", "Biodiversity, Environmental", "Landscape", "Vegetation", "Rehabilitation" and the "Lower Chert Band". As part of the ongoing monitoring, boreholes are to be drilled into the alluvial and limestone aquifers, and monitored on a regular basis for the presence of groundwater dependant ecosystems (GDE) including stygofauna, which if discovered must be identified to species level. Additionally, any new species found are to be described to species level.

An independent panel of 5 experts must be established before quarrying commences and they will monitor the development over the life of the quarry. The nominated experts must, between them, have expertise in:- geology, geomorphology, hydrology, vertebrate palaeontology, cave biota and ecosystems.

The court's conditions stipulate that if any voids or caves larger than 0.5m in diameter are discovered during the mining operation, the operator must trigger the "Cave Discovery Protocol", which addresses many of NHVSS's primary concerns. Under the protocol, quarrying may cease whilst the cave's values are assessed and a decision is made as to whether the cave, or some of its contents, should be conserved. This is a very good outcome for NHVSS and the caving community at large, who are very concerned about the impact of quarrying on any limestone caves which may be present.

"A number of significant caves exist in similar limestone in the area, indicating that there may be caves on the site. The Court took a precautionary approach in this case and held that adaptive management principles must be applied. The result is that the quarry must monitor extensively for limestone caves and for any subterranean fauna species that might be living in the limestone for a year before it can commence blasting," said Ms Natasha Hammond-Deakin, a solicitor at the Environmental Defender's Office.

The Court allowed evidence from local residents during a one day sitting at the Scone court. This allowed those who had objected to the proposed mine during the UHSC - public exhibition period, to air their concerns and present evidence in court without the need to take on the responsibility of becoming a party to the proceedings with legal representation.

In handing down its conditions of approval, the court took into consideration the concerns of local residents by imposing restrictions which require the transport roads, passing lanes and bridges to be appropriately upgraded before quarrying commenced. Hence, for the project to commence requires construction of two new bridges to replace old structures, and a bridge bypass. Numerous other concerns of the residents were addressed in the conditions, including strict guidelines to mitigate environmental disturbance and included the monitoring of ground water, blasting, stormwater runoff, dust and noise for the duration of the mine.

You're probably wondering by now why I have not mentioned caves on the quarry site. The answer is rather complex. It all stems back to the fact that prior to this court appeal, members of NHVSS had never been granted access to the property, save for a few hours while the Council was assessing the development application. Most of the known caves on neighboring properties have been found over many years of searching and a considerable amount of digging due to how they were created. Renowned karst geomorphologist Dr. Armstrong Osborne investigated the Timor geology as a result of this court appeal. Armstrong determined that the caves on the west side of the Isis River are hypogene

caves – that is, caves formed by groundwater rising up through cracks in rocks under the influence of heat and pressure, dissolving out mazes and rounded chambers, rather than through direct passage of water from the surface. Therefore, the cave entrances at Timor generally only occurred when a chamber or passage collapses to form a soil filled doline, which after digging, allowed entry to the caves. This means that a significant cave can form with no direct entrance on the surface. As a result of a several hours site visit permitted by the quarry operator and a later 2 day inspection permitted under a Court order, we identified several small caves only a few metres in depth and a number of potential digs which could lead to caves. Despite this we had no concrete evidence (without digging), as to whether or not there are substantial caves in the massive limestone covering the project site.

Acknowledgements for outstanding support

Now that the dust has settled on the Court challenge against the approval of the Timor Limestone Mine, it is time to reflect on what has been achieved and to thank all the people who have been involved and given so freely of their time, knowledge and expertise. Also to thank the ASF executive, affiliated clubs and individual members for their support including those who provided financial donations toward this landmark court appeal.

We are also very much indebted to the following experts in their respective field who toiled tirelessly studying the area to mount a case and then follow it through with lengthy submissions and cross examination in the court. Our experts worked on a pro-bono basis or at minimal cost which made it possible for NHVSS and the ASF to mount the challenge. It was noted during one of the roundtable discussions that many of the experts involved had been a caver at some stage of their life or were still active caver. This is an outstanding achievement for ASF and the speleological community as a whole, to have so many outstanding experts in such diverse fields, pooling their knowledge and resources for a common goal.

The panel of experts who took up the cause included the following people:-
Patrick Larkin – (Barrister & ASF Fellow)
Chris Norton – (Barrister & ASF member)
Dr Armstrong Osborne – (karst geology and hydrology)
Dr Ann Marie Clements, Tony Rodd, Rebecca Burley, Lucy Jewell, all from Anne Clements & Associates (ecology and botany)
Dr Andrew Smith (ecology – flora and fauna)
Dr Peter Hancock (cave invertebrates)
Dr Pam Hazelton – (soil expert)
Neva Collings and Natasha Hammond-Deakin of the Environmental Defender's Office - our solicitors
Representing NHVSS were Jodie Rutledge and Garry K. Smith plus many others who assisted throughout the appeal.

Thank you also to Chris Norton for final review of this article before going to print.

NHVSS has in the past recdeivedand continues to receive the full support of Timor residents, which we very much appreciate. Without the support of the Vaughans, Moores, Eagles and Mr. J. McIntyre to name just a few, it would have been very difficult to gain an overall picture of the Timor Karst and vegetation in order to mount a case for the L&EC appeal.

In closing, NHVSS would especially like to thank our extremely professional legal team and expert consultants for their dedication in bringing about a suitable outcome. Words cannot express my/our (NHVSS's) appreciation and gratitude for all the hard work leading up to and during the court appeal. We certainly learnt a lot along the way and gained a much greater appreciation for the legal system. What really impressed us was the meticulous methodology with which each of the experts applied their science over the study area to arrive at their findings. A special thank you must go to Patrick, Chris and members of the EDO, for their tireless work and outstanding professional approach leading up to and during the court proceedings. We found it rather demanding just keeping on top of what was happening in the court room each day and can not imagine the constant mental strain placed upon both Patrick and Chris during these proceedings.

Further information on the timeline of events leading up to and during the court appeal can be found in "Newcaves Chronicles" 31 to 34, the official publication of the NHVSS Inc.

Geoff McDonnell at karst spring

Land and Environment Court of NSW Judicial Newsletter
27 April 2010, Volume 2 Issue 2
Pages 21 & 22
Threatened Species
Newcastle & Hunter Valley Speleological Society Inc v Upper Hunter Shire Council and Stoneco Pty Ltd

[2010] NSWLEC 48 (Preston CJ and Adam AC)
s 98(1) of the *Environmental Planning and Assessment Act* 1979.

Facts: the first respondent, Upper Hunter Shire Council ('the Council'), granted development consent to the second respondent, Stoneco Pty Ltd ('Stoneco') to establish a limestone quarry at Timor Creek, in the Isis River Valley. The applicant, Newcastle and Hunter Valley Speleological Society Inc (NHVSS), lodged an objection to the grant of consent during the exhibition period. Following the grant of consent, NHVSS appealed to this Court under Issues: there were three broad sets of issues raised in the appeal by NHVSS:

(1) surface ecology issues:

(a) whether the vegetation over the whole of the project site comprised the endangered ecological community ('EEC') of the White Box Yellow Box Blakely's Red Gum Woodland ('the White Box EEC') and the habitat of the threatened species *Petaurus norfolcensis* ('Squirrel Glider'); and

(b) whether the proposal was likely to have a significant effect on the White Box EEC and the Squirrel Glider so as to require a species impact statement ('SIS') to accompany the development application by reason of s 78A(8)(b) of the *Environmental Planning and Assessment Act* 1979.

(2) impacts on caves, other karst features and cave dwelling fauna:

(a) whether the limestone on the Project Site was likely to contain caves and other karst features; and

(b) whether the proposal was likely to cause serious or irreversible damage to these karst features and fauna.

(3) other issues raised by resident objectors:

(a) whether the proposal was consistent with the current zoning of the site and compatible with other land uses; and

(b) whether the conditions of consent could adequately address concerns relating to the provision of adequate road infrastructure and natural resource management requirements.

Held: upholding the appeal and granting consent:
(1) surface ecology issues:

(a) the vegetation on the Project Site comprised the White Box EEC and the habitat of the Squirrel Glider: at [78] and [119]-[121];

(b) in assessing whether there was likely to be a significant affect on the White Box EEC in this case, only three of the factors in the seven-part test in s 5A(2) of the *EPA Act* 1979 were applicable: ss 5A(2)(c), 5A(2)(d), and 5A(2)(g): at [87];

(c) the current formulation of s 5A(2)(c) differed materially to the previous formulation of the section (s 5A(c)) and the evaluative conclusions reached in cases considering the former section may not assist in making the evaluative judgment required under the current section: at [90], [100] – [101]. Section 5A(2)(c) required evaluation of the likelihood of removal or modification of an area of an EEC placing a "local occurrence" of the EEC at risk of extinction. The local occurrence of the White Box EEC included the whole of the 60 ha Project Site, however only 6 ha of vegetation would be cleared within that area. Hence the Court must evaluate whether the clearing of 6 ha within the 60 ha local occurrence of the White Box EEC was likely to place the whole of that local occurrence at risk of extinction: at [98];

(d) a mere quantitative comparison of the EEC to be removed or modified with the area of the local occurrence of the EEC, may not be sufficient by itself to evaluate the likelihood of removal or modification of the area of the EEC placing the local occurrence of the EEC at risk of extinction: at [104]. Other factors may need to be considered and a qualitative analysis undertaken;

(e) the proposed action would not result in the Project Site becoming fragmented or isolated from other areas of the White Box EEC habitat for the purposes of s 5A(2)(d). There was no evidence to suggest that the 6 ha "hole" in the local occurrence of the White Box EEC would result in adverse effects such as to place at risk the long term survival of the EEC: at [109]-[110];

(f) the modest scale of the clearing required by the proposal relative to the extent and distribution of the White Box EEC, would not be a basis for an overall assessment of significant impact such as to require completion of a SIS. The test in s 5A(2)(g) was therefore not triggered: at [112];

(g) the proposal was not likely to significantly affect the White Box EEC and a SIS was not required: at [118]; and

(h) with the reduction and modification of the stockpile and handling area, and the conditions that would apply to a consent, the impact on the Squirrel Glider population was not likely to be significant. A SIS was therefore not required: at [127].

(2) impacts on caves, other karst features and cave dwelling fauna:

(a) it was likely that there were small, interconnected voids and fissures in the limestone to be quarried: at [152]. The presence of large caves was unlikely;

(b) although there was an absence of site-specific information on biota in the limestone, the presence of biota in caves and groundwater in the near vicinity of the site and the increasing number of studies elsewhere that established

the presence of biota in the limestone and made it scientifically likely that some form of biota would be found within the limestone on site: at [177]; and

(c) it was beyond mere possibility that biota would be present and the scientific likelihood was sufficient to engage the precautionary principle. A step-wise or adaptive management approach was an appropriate response to the threat of environmental damage. This would involve the imposition of conditions of consent requiring monitoring linked to adaptive management: at [183]; and

(3) other issues:

(a) the proposal was consistent with the applicable zone objectives of the Rural "A" zone in Murrurundi Local Environmental Plan 2003: at [191]-[193]; and

(b) the proposed conditions of consent would sufficiently minimise and mitigate the adverse impacts of the proposal on surrounding land uses: at [192], [197]-[198].

Editor's comment

This article was previously published in the Australian Caver, the newsletter of the Australian Speleological Federation. I thank Garry for the offer to reproduce it in this journal. The Cave Discovery Protocol interests me. In my previous job, I reviewed many limestone quarry applications and one of the usual conditions was for quarry operators to advise authorities if they discovered any voids. This has been particularly successful where a positive relationship has been developed, such as with the Henschke family at Naracoorte, where we have retrieved many important megafauna fossils from several small caves discovered during operations. Through cooperation, we have managed to undertake research at these sites while quarry operations continue around us. At the other end of the spectrum is the Sellick's Hill issue where a significant cave was destroyed despite assurances it would be protected. A number of reports on this case have been published in the Cave Exploration Group of South Australia (CEGSA) newsletter, or for the extended version sit down with ACKMA Treasurer Grant Gartrell.

I sought a comment from the Stoneco, the operator of the Timor limestone quarry and I thank Andy Spate for the communication.

Mr Scott Murdoch has supplied the following statement to the ACKMA Journal.

Mr Scott Murdoch, Stoneco's owner/operator at Timor, confirmed that the company was pleased with the judgment of the NSW Land and Environment Court allowing the quarry to be approved albeit with many Consent conditions.

The Consent conditions include the development of;

- A Cave Discovery Protocol;
- A Groundwater Fauna Sampling Protocol;
- A Lower Chert Band Protection Protocol;
- A Pre-blasting Protocol; and
- Others for dust, noise, transport and so on.

Mr Murdoch feels the implementation by the Court for a Cave Discovery Protocol may prove a positive step towards managing karst features and balancing the commercial viability of limestone developments generally.

The foundation of this Protocol are the mechanisms to report and manage potential karst features, for scientific values ONLY, whilst allowing the continued operations of the quarry. It adopts a precautionary approach. Any features collected or recorded ultimately become the property of the scientific community.

Mr Murdoch points out that no caves have been discovered on the quarry site after in excess of 500 man hours of investigation by caving groups and independent consultants.

Mr Murdoch's family have operated limestone and dolomite mines throughout NSW for over 60 years and is a long standing member of the Limestone Association of Australia.

Limestone is a critical raw material for many agricultural and industry pursuits including cement, water purification, glass manufacture, pharmaceutical preparations and many, many others. The benefits from the utilisation of high grade limestone products is a well known. And the limestone mining industry is becoming increasingly environmentally aware and is developing environmental management practices worldwide.

The majority of limestone producers throughout Australia are family owned and operated businesses that live and directly support their local communities.

Mr Murdoch wishes to thank Dr Stephen Swabey for assistance through the Court approval process and Protocol development and Mr Andy Spate for help in establishing the baseline assessment of environmental factors.