Inquiry into the Recent Variations in Water Level in Thirlmere Lakes – Draft Report

Submission by Wollondilly Shire Council

18 July 2012

"If the loss of water from Thirlmere Lakes is natural and part of a cycle then we should all feel privileged to be here at this time in history to see it. - If the loss is man-made and permanent then we should be ashamed"

Mayor, Wollondilly Shire Council, 2010

Executive Summary

Water has disappeared from the five lakes in World Heritage listed Thirlmere Lakes National Park despite recent heavy rains. The Community of Wollondilly want to know why and are asking whether it is related to the long wall mining nearby, a natural event or a combination of both. They want to understand the future of the Lakes and want to avoid any environmental damage from long wall mining (LWM) in the future.

Wollondilly Council is invested with the responsibility to serve its community on matters which the community deem as relevant but within the Council’s scope of influence under various legislation and delegation. It is obligated to manage local environmental health and long term sustainability on behalf of its community and to manage the lands under its control sustainably. The concerns raised by the community to Council regarding the water losses in Thirlmere Lakes have highlighted the community’s expectation of Council to protect the local environment.

The Community has already experienced damage from long wall mining in the form of damage to housing, bridges, roads and other infrastructure, and this is acknowledged by the mining industry through the Mine Subsidence Board. But it has also experienced the less predictable damage to the environment such as the cracking of the Cataract and Georges Rivers and now possibly Thirlmere Lakes and Myrtle Creek in Tahmoor. It is therefore understandable that the community is extremely concerned when one of its historic, environmental and social assets is at risk and that the asset itself now may be lost.
Wollondilly Shire Council – Response to Draft Report into the recent Variations in Water Levels in Thirlmere Lakes

Council holds little influence in the management of the water losses at the Lakes other than that of a community and environmental advocate. It is not the effected property owner, It is not the approval agency for the long wall mining or bore approvals in the area nor is it the delegated regulator of such activities.

Council’s previous actions and this Submission are therefore based on the communities expectations of Council to hold to account the property owner, the approver and the regulator responsible for understanding and managing the water losses.

This submission shows that the community has felt it warranted to undertake the number of actions through Council in order to understand the water loss, including 5 resolutions, all of which were passed unanimously.

Background

Context

The community has expressed concerns to Council that the water loss in Thirlmere Lakes is attributable to LWM. The Draft Report suggests that, if nothing else, it is probably a contributor. Wollondilly Shires community has generally benefited from coal mining for decades and will for at least the next 30 years given the Bulli Seam Project approval, but it has also suffered social and environmental impacts from mining.

It is of extreme concern to the community of Wollondilly and the Council that long wall coal mining occurred within 700 metres of the Lakes and there is now a possibility that this mining interfered with aquifers which are part of the Lakes hydrology and geology.

Council’s Role as an Advocate for the Community and the Environment

Local Government is best positioned to gauge the communities aspirations and concerns. This is certainly the case with Thirlmere Lakes.

In 2010 the Community of Wollondilly Shire endorsed its Community Strategic Plan (CSP). This Plan addresses the five areas of Environment, Community, Governance, Economy and Infrastructure and reflects the community hopes (Outcomes) for the Shire for the next 30 years. Of particular interest for this submission is the Communities desired Outcomes for the environment, these are:

- A community that is surrounded by a built and natural environment that is valued and preserved
- A community that has opportunity to engage with and actively care about their natural environment
Wollondilly Shire Council – Response to Draft Report into the recent Variations in Water Levels in Thirlmere Lakes

Council must ensure that these outcomes are the aim of its activities as such this submission is compatible with achieving those outcomes.

Councils, through their community consultations represent the community interests. This results in the development of The Community Strategic Plan, Councils Planning Instruments, Controls, Policies, Guidelines and strategies such as the Wollondilly Biodiversity Strategy, Growth Strategy and the Wollondilly Economic Development Plan and therefore the community expectation of desired and appropriate development and environmental management. Councils actions must also support these strategies.

Concerns raised by the community

The Wollondilly community has concerns regarding the water losses at Thirlmere Lakes. These have been expressed by Council community consultative groups and through representations to Councillors and Senior Council Officers and have come from, not only environmental groups but also tourism operators, recreation groups, community groups and individuals. The community concerns include:

- Loss of biodiversity
- Loss of tourism attraction and associated community benefits
- Loss of water supply in local area
- Loss of cultural values
- Loss of heritage and social values
- Loss of accountability for those responsible

Councils Actions to Date on behalf of the community

Council has passed 5 resolutions, as a result of Notices of Motion, relating to Thirlmere Lakes, all of which were passed unanimously. These were:

1. That Wollondilly Council convene a public forum in regards to the loss of water at Thirlmere lakes with environmental experts, national parks, elected representatives and the community invited to the forum.

2. That Wollondilly Shire Council write to the respective Ministers for the NSW Department of Climate Change, NSW Department of Mineral Resources, the Commonwealth Department of Sustainability, Environment, Water, Population and Communities and the Greater Blue Mountains World Heritage Area Advisory Committee calling for an inquiry into why Thirlmere Lakes, which is part of the Blue Mountains World Heritage Area, has such historically low water levels, despite recent heavy rains.

3. That Council write to the Minister for Water requesting preliminary information followed by a meeting with the Local Member for Wollondilly and
Wollondilly Shire Council – Response to Draft Report into the recent Variations in Water Levels in Thirlmere Lakes

Minister for Water, The Honourable Phillip Costa and appropriate representatives of the Office of Water regarding the Terms of Reference and the investigation into the relationships between local aquifers and Thirlmere Lakes.

4. That the Wollondilly Healthy Catchments Committee expresses its concerns regarding the recent loss of water from Thirlmere Lakes and requests that Council develop a strategy to raise the issue with the community and the responsible Government Departments.

5. That Council:
1) Write to the State Member for Wollondilly and the NSW Minister for Environment regarding the communities concerns relating to the loss of water in Thirlmere Lakes and to ask for commitment from the new government to undertake an interdepartmental Inquiry into the water loss and to fulfill the election promise made by the member for Wollondilly to hold a public forum on the issue immediately, and

2) Write to the Federal Minister of the Environment, The Greater Blue Mountains World Heritage Area Advisory Committee, The Greater Blue Mountains World Heritage Area Management Committee and the World Heritage Committee (United Nations Education, Science and Cultural Organisation) expressing its concerns regarding the water loss in Thirlmere Lakes and requesting they respond and inform Council of any actions they are taking to manage or understand the water loss.

Councils recommendations to the Inquiry

The Council Submission to the Inquiry included 4 recommendations. These are:

1. That the inquiry conduct the investigation accepting community verbal evidence as equally relevant as scientific evidence and that this be facilitated through a public meeting

2. That the Inquiry include a conclusion as to the short, medium and long term prognosis for lakes water levels and its biodiversity

3. That the inquiry include a conclusion which will inform our community on the role of long wall mining in the water loss and the potential impacts of long wall mining on nearby waterways and potential safeguards which should be applied to protect them.

4. That the Inquiry make recommendations for regular contact by the OEH with Council regarding the situation at the Lakes and other relevant issues beyond the life of the Inquiry.
Response to Draft Report

Context of response

Council resources restrict the ability to comment on the detail of the Inquiries scientific references or findings therefore Councils response to the Inquiry Report is based on the points and recommendations raised in its Submission and Statement to the Inquiry and hold regard to the consequent community feedback. Council is also obligated to regard the Precautionary Principle in all its decisions therefore the principle is applied to its comments.

The Precautionary Principle

The precautionary principle in the context of environmental protection is essentially about the management of scientific risk. It is a fundamental component of the concept of ecologically sustainable development (ESD) and has been defined in Principle 15 of the Rio Declaration (1992):

> Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

Although the term "measures" is not entirely clear it has generally been accepted to include actions by regulators such as the use of statutory powers to refuse environmental approvals to proposed developments or activities.

Response to Report Findings

The Committee found that:
1. The lakes have fluctuated between dry and full conditions within European, Aboriginal and Geological time frames and that the present low levels are not unprecedented;

Response: The Draft Report acknowledges the interpretation of “full” and “dry” is ambiguous so the definitions used by the Committee should be put in the context of this finding including the definitions of dry and full and the number of lakes within the system that applies to.
2. That the only cause for lake fluctuations prior to European settlement was climatic;

Response: No comment

3. That while climate change was undoubtedly responsible for the majority of the change in the last 40 years there are probably other factors also involved in the present low levels;

Response: There is a lack of commitment to the Draft Report in this finding. The Draft Report specifically points to Long wall Mining and Bores as probable contributors (factors) of the water losses and dismisses other potential contributors yet that is not stated in the Finding.

4. There is no direct evidence that mining has breached geologic containment structures underneath the lakes, including the Bald Hill Claystone bed;

Response: This Finding indicates that the breaching of the Bald Hill claystone bed may still have occurred. The definition of “direct” which qualifies the term in the context of the Finding should be included.

5. There is substantive evidence of groundwater leakage from the lakes towards the east and east-northeast within the Hawkesbury Sandstone aquifers;

Response: This Finding should relate to the details of the Draft Report regarding long wall mining and bores as a likely impact or contributor to that leakage as identified in the Report details.

6. There is substantive evidence of the steepening of the hydraulic groundwater gradient and lowering of the groundwater table towards the east of the lakes over the last 50 years, which would have potentially increased the rate of groundwater flow towards the east;

Response: This Finding should relate to the details of the Draft Report regarding long wall mining and bores as a likely impact or contributor to that leakage as identified in the Report details.

7. There is some evidence to suggest that mining has contributed to changes in groundwater tables and groundwater gradients but it is not possible to disentangle groundwater changes due to mining, from those due to bores, which access the groundwater, and climate change.

Response: The Precautionary Principle should be invoked as a response to this Finding and recommendations should be made to ensure that the impacts of long wall mining and bores do not threaten this or other water systems.

8. That the Plan of Management for the lakes needs to be reviewed, and that there are gaps in ecological knowledge.
Response: Agree

Response to Report Recommendations

The Committee recommends that:
1. A socio-economic study of the lakes be commissioned, aimed to assess community values and community opportunities to realise all the potential values of the lakes in whichever hydrologic state they are in;

Response: Agree

In 2010 Council surveyed its residents in each of the Shires villages, including Thirlmere. This resulted in the Wollondilly Assets to Opportunities document, which is a snapshot of how each village community saw themselves, their local assets and their local concerns.

The survey conducted in Thirlmere gave some very relevant information to Council on many things but especially in relation to the Lakes.

Of the people surveyed in Thirlmere the Lakes were prominent in their responses.

- When asked what their town was known for – the Lakes were equal to the Rail Museum
- When asked what the most important Natural Asset was – Thirlmere Lakes was number one
- 81% believed that our natural assets should be protected
- 61% were concerned about the water loss in the Lakes with one quote being “Investigate the loss of water in Thirlmere Lakes- a beautiful area damaged”

- When asked what they were proud of they also told us that they felt “embarrassed, sad” or “ashamed” in regard to the state of the Thirlmere Lakes
- When asked about other issues or needs for Thirlmere they identified one of the issues as “the effects of long wall mining”
- When asked about what they thought Council could do to help with these issues, 2 of the top responses were “limiting mining” and “allowing independent investigation of Thirlmere Lakes”

Its this strong connection between the community and the Lakes which has prompted and steered Council in its response to the water losses, and our response has been strong and effective.
2. A consortium of suitably qualified researchers be invited to undertake a geomorphic study of the lakes, including seismic investigations, coring, and suite of studies, including but not limited to, palaeontologic, mineralogical and ecologic investigations;

Response: Agree. Council supports any investment in the understanding of the hydrology, geology and biodiversity of the Shire. These studies though do not address the immediate issues at the Lakes and the admission that these investigations are required should invoke the Precautionary Principle in the meantime.

3. That a hydro-meteorologic study be initiated to investigate the hydrogeomorphic relations within the catchment of Thirlmere Lakes and to gather the information required to develop a robust hydrology model;

Response: Agree. Council supports any investment in the understanding of the hydrology, geology and biodiversity of the Shire. These studies though do not address the immediate issues at the Lakes and the admission that these investigations are required should invoke the Precautionary Principle in the meantime.

4. That existing bores to the east of the lakes be monitored for water levels and flows and that groundwater hydraulic information be obtained in order to: a) develop a robust groundwater model for the lakes and immediate area, and b) to investigate the relation between longwall mining and groundwater in the region;

Response: Agree. Council supports any investment in the understanding of the hydrology, geology and biodiversity of the Shire. These studies though do not address the immediate issues at the Lakes and the admission that these investigations are required should invoke the Precautionary Principle in the meantime. This should apply to long wall mining activities in the Thirlmere area until the results of these studies are complete.

5. Review existing Thirlmere Lakes National Park management approaches and nominate the lakes for listing under the Ramsar Convention on Wetlands;
Wollondilly Shire Council – Response to Draft Report into the recent Variations in Water Levels in Thirlmere Lakes

Response: Agree. Council supports any investment in the understanding of the hydrology, geology and biodiversity of the Shire and supports a review of the Plan of Management. Council considers it should be a participant in the preparation of the reviewed Plan of Management. Council supports any actions which assist in the protection of its biodiversity assets.

6. Undertake ecological investigations to address gaps in the information about the lakes and their surrounds.

Response: Agree. Council supports any investment in the understanding of the hydrology, geology and biodiversity of the Shire.

In relation to remediation the Committee recommends that:

1. Notwithstanding the uncertainty of the role of mining in affecting lake levels indirectly through its impact on groundwater, there is value in investigating the opportunity of developing a “groundwater mound” to minimise groundwater loss to the east from the lakes if investigations prove it to be a viable remediation strategy.

Response: Council considers that a recommendation to consider remediation needs further investigation. On face value it appears that to remediate, what is described in the Draft Report as primarily a natural process, would be potentially further damaging to the natural processes. To recommend that a remediation be undertaken implies that external influences are at play and again this should invoke the Precautionary Principle with regard to those external influences which have been nominated as long wall mining and bores.

2. The groundwater mound could be formed readily via groundwater injection;

Response: Council considers that a recommendation to consider remediation needs further investigation. On face value it appears that to remediate, what is described in the Draft Report as primarily a natural process, would be potentially further damaging to the natural processes. To recommend that a remediation be undertaken implies that external influences are at play and again this should invoke the Precautionary Principle with regard to those external influences which have been nominated as long wall mining and bores.
Wollondilly Shire Council – Response to Draft Report into the recent Variations in Water Levels in Thirlmere Lakes

3. The water for the injection could be supplied from the treated water presently discharged by the mine into the Bargo River.
It is recommended that a Supervisory Committee be appointed to assist in the implementation and management of the programs of investigation and remediation.

Response: Council considers that a recommendation to consider remediation needs further investigation. On face value it appears that to remediate, what is described in the Draft Report as primarily a natural process, would be potentially further damaging to the natural processes. To recommend that a remediation be undertaken implies that external influences are at play and again this should invoke the Precautionary Principle with regard to those external influences which have been nominated as long wall mining and bores.

Other Points of comment

Acknowledgements

The Report makes acknowledgements but Council believes that the order of the acknowledgements should reflect the voluntary contributions of the community first and the contributions of delegated or contracted participants secondary.

The Inquiry Public Hearings and Meetings neglected to acknowledge the Traditional Owners, The Dharawal People. This acknowledgement would have be appropriate and respectful. This acknowledgement has also been neglected in the Report.

The Report does not appropriately acknowledge Councils role through its Healthy Catchments Committee and the elected representatives through Council resolutions, in raising and maintaining a campaign to find answers through an Inquiry about the water losses. Nor does it acknowledge Councils role in helping to keep the community informed on the issue.

Community engagement

Council is concerned that the consultation process undertaken by the Inquiry to prepare this Report has been tainted, if not compromising, through poor management. This has been in the form of:
- Too short a timeframe for the Inquiry to undertake meaningful consultation.

- Lack of resources for the Inquiry to engage a meaningful network of community information gathering.

- No "Introductory Community Meeting" to inform the community of the Inquiry and the opportunities to contribute.

- Insufficient local promotion of the Hearings and Community Meeting. Notification of the July 6 community meeting was only initially advised to those on the mailing list of the Inquiry and the flyer sent did not mention that the meeting was to present the Draft Report. Other advertising only occurred in the preceding weeks local papers where the inconspicuous advertisements were hidden in the back pages.

- Insufficient notice of the Hearings and Community Meeting. At best only 1 week notice was realistically given to the broader community of these events. This was reflected in the poor community attendance.

- Inappropriate times and venues of the Hearings.

- Poor Management of the Hearing at Tahmoor. The meeting had to start twice as it initially started half an hour earlier than advertised and then took a break when the Inquiry panels lunch arrived. Many community members then left supposedly assuming the meeting had finished.

- Poor representation by the Inquiry at Councils Community Forum. This Forum, organised by Council, attracted over 100 residents and was scheduled, at the Inquiry Chairpersons advice, to give the Inquiry another opportunity to present their Draft findings to the community. The Chairman of the Inquiry publically and arrogantly refused to discuss the Draft Report. Feedback to Council from community attendees indicated that there was a significant loss of credibility to the Inquiry as a result of this conduct.

- Interruptions to the availability of the Draft Report during its exhibition time. The Draft Report was taken from the website for over 3 days of the already short exhibition period apparently to allow the Minister to prepare a media release. After pressure at the community meeting another 3 days was added to the exhibition time but those was not communicated to anyone but those present on the night.

- Insufficient time to comment on the Draft Report, particularly for the general community to enable them to understand the complex and detailed data.
Wollondilly Shire Council – Response to Draft Report into the recent Variations in Water Levels in Thirlmere Lakes

- Lack of a “Plain English” summarised version available for the general public to encourage comment. The Draft Report is too technical in nature for scrutiny by the general public, especially given the timeframes to respond. The Inquiry has been remiss in its community engagement by not producing a document as a summary of the Draft Report which can be read, understood and responded to by the general community.

- Poor and uninformative website for Inquiry. The website contained little information and was not regularly updated.

- Poor and uninformative information minutes/reporting of Inquiries activities on the website.

Report Issues

Council is concerned that direct community feedback and media indicate that there is a perception in the community that the Inquiries independence is in question. This has been regarding the independence of the Committee members in relation to previous engagement by the mining industry as well as the Inquiry relying significantly on reports commissioned by Xstrata during the Inquiry. As with the poor community engagement, the community perception that the Draft Report is bias or irrelevant, whether accurate or not, undermines the credibility of the Draft Report to the community.

Conclusions

Were Council recommendations met?

The Lakes are regarded by the community as their personal space and a local treasure.

Recommendation 1

That the Inquiry conduct the investigation accepting community verbal evidence as equally relevant as scientific evidence and that this be facilitated through a public meeting

Council considers that this recommendation has only been partially met. The Draft Report makes many references to the information provided by the community but as previously stated there is a question on the management of the community engagement process which was flawed. Council believes that an opportunity has been missed by the inquiry to extract as much information from the Community as may have been possible. The poor notification of
public meetings, the poor promotion of the call for resident information and the poor attitude of the Committee in public forums have compromised the benefits of community information therefore leaving questions as to the effectiveness of that engagement. Council acknowledges that the Inquiry held 3 public meetings albeit that one was held in Sydney indicating it was not targeted to local residents, but the attendance was poor at all of these. The frustration of the community engagement and the poor management of that engagement was evident at the Community meeting held by the Inquiry at Thirlmere on 6th July where community concerns about the process were strongly and bluntly expressed.

*The Community want and need to know why the Lakes have lost water and whether that loss is temporary or permanent.*

**Recommendation 2**

- That the Inquiry include a conclusion as to the short, medium and long term prognosis for lakes water levels and its biodiversity

Council considers that this has not been met. Despite the abundance of information within the Draft Report there is a reluctance to give a meaningful prognosis for the Lakes. Understandably in a scientific context there are standards and processes which should occur before giving an opinion but the Community do not place their daily lifestyles, their businesses nor their emotions on hold waiting for scientific processes to come to a conclusion. Suggesting that the Lakes may or may not fill and suggesting they may only fill if this happens or that is done but not if this happens or not if that continues only manages to frustrate the Community. The Draft Report should, in simple language, make the prognosis on the Lakes long, medium and short term future. The Community does not expect this to be binding, as many factors may change, but it also wants to have some guide to the role the Lakes will have on their lives in the future.

*Wollondilly Shire Council nor our community want to be asking the same questions in another decade about another area potentially effected by LWM activity.*

**Recommendation 3**

*That the inquiry include a conclusion which will inform our community on the role of long wall mining in the water loss and the potential*
impacts of long wall mining on nearby waterways and potential safeguards which should be applied to protect them.

Council considers that this recommendation has not been met. The Draft Report is minimal in its references to the possible impacts of long wall mining as a contributor and associates long wall mining with water bores as potentially having equal impacts. Council considers that there should be a greater reference to the impacts of long wall mining on the Lakes and that there should be recommendations which invoke the Precautionary Principle regarding the impacts on watercourses and water bodies, including aquifers and that these recommendations should result in a determination of a precautionary buffer zone between watercourses/ water bodies and long wall mining.

Apart from the environment, the Wollondilly Community are the biggest stakeholders.

Recommendation 4

That the Inquiry make recommendations for regular contact by OEH with Council regarding the situation at the Lakes and other relevant issues beyond the life of the Inquiry.

Council considers that this recommendation has only partially been met. The development of a Supervisory Committee to assist in the implementation of the programs of investigation and remediation is appropriate. Council considers that the Supervisory Committee should include representatives from the Aboriginal Community, Council and environmental groups. This will allow the Supervisory Committee to be mindful of community issues and concerns as well as tapping in on their specific skills and expertise.

Concluding statement

Council acknowledges the work of those involved in preparing the Draft Report but believes that it fails in providing the answers the community are seeking. As stated by one community member

"The report is full of information but has no result"