

EAST END MINE ACTION GROUP (Inc)

SUBMISSION TO

THE 2009 BIENNIAL ASSESSMENT OF THE NATIONAL WATER INITIATIVE

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The 2009 Biennial Assessment
 95 Northbourne Avenue
 CANBERRA ACT 2600

6 February 2009

Dear Sir/Madam,

The East End Mine Action Group Inc (EEMAG) hereby lodge our submission on the 2009 Biennial Assessment of Implementation of the National Water Initiative.

SUMMARY

EEMAG members are very grateful to the National Water Commission (NWC) for the opportunity to lodge a submission. Except for “consultation” with relevant Queensland regulating agencies where the professional views of our expert limestone hydrologists and delegates are basically ignored, this NWC forum is the ONLY process we have access to, to apply scrutiny of the MERIT or otherwise of strongly disputed technical decisions by Queensland Regulating Agencies on matters relating to Water Reform and the NWI.

The principles and objectives of Water Reform and the National Water Initiative encourage public perceptions that the Commonwealth and States really do act to manage Australia’s precious water resources in a socially just and environmentally sustainable way.

Unfortunately inadequacies / loopholes in the COAG Agreements on Water Reform / NWI permit mine dewatering to be exempt, and permit abuse of the fundamental human rights (to fairness and justice) of rural landholders by omitting to establish a competent authority (e.g. an independent merits review / appeals process) to ensure that decisions REALLY are framed using the “best scientific information available” (COAG 1994) and so that disputes over equity and disputes over science are effectively remedied, at a State (Queensland) level.

Legal advice is that Special “make good” Conditions attached to East End mining leases at Mt Larcom are worded so as to condone the bias of DNR&W and are not legally challengeable. We interpret that the Special Conditions are drafted to facilitate “minimum compliance” and thus do not act to PROPERLY secure landholders’ water supplies against being siphoned off by mine dewatering. Dispute Resolution between landholders and the mining company under this regime would be weighted in favour of the mining company. (*Barrister’s advice Attachment 1, refer P.16.*)

- We respectfully request NWC recommend to COAG the implementation of a competent authority to ensure “Water Justice” as an additional NWI objective;
- We request NWC to assist us to obtain an effective remedy to our 13 year old dispute with Queensland Regulating Agencies / the East End mine by requiring that the Calliope River WRP be framed using the best available science to manage the overused interconnected karst limestone aquifer system in the East End / Bracewell areas as a single resource and returned to environmentally sustainable levels of extraction before the East End mine is permitted to further expand. This public benefit

outcome would have to be coordinated with the East End mine's Environmental Authority which is currently being considered for an amendment by EPA, with a decision by 17 February 2009.

REGULATION OF EAST END MINE UNDER "MINIMUM COMPLIANCE" COMMITMENT, EXEMPTS MINE DEWATERING FROM WATER REFORM / NWI:

In our February 2007 Submission to NWC, we supplied documentation showing that Queensland Regulating Agencies are bound by a covert 1977 "deep structure commitment" to a "minimum compliance strategy" for the East End mine which makes it necessary for regulating agencies to defend earlier decisions, and to exclude many contingency options – except for those that are mutually agreed upon with the mine. In our experience the Regulating Agencies' impartiality / accountability - and thus administration of Water Reform and NWI are compromised by this commitment. (*Industry/Community Relationships in Critical Industrial Developments (Hoppe 2005), Refer P 9.19 Attachment 2*)

- "Minimum compliance" amounts to adversely affected landholders being regulated to subsidise the East End mine through failure to properly redress mine impacts under both regulation of mining and Water Reform / NWI – this is contrary to National Competition Policy.

Pre-mining, the East End/Bracewell areas were recognised as zones with significant sub-artesian supplies that supported environmentally sustainable small scale irrigation. District records show that in 1980/81 there were 20¹/₂ small scale irrigators and that in November 2001 only 6¹/₂ remained. ("Detailed District Irrigation Usage compared to Mine Pumpout Figures and Revised More Informative Table A" (November 2001) by P Brady included with our Feb 2007 Submission on NWI. Available on request.)

Based on EEMAG's experience, Water Reform / NWI permits one set of rules to be regulated on farmers and another set (exemption under "minimum compliance") for dewatering Cement Australia's East End limestone mine – **with adversely affected landholders denied access to an EFFECTIVE process to ensure fairness and justice, by all levels of Government.**

False benchmarking of the zone of mine-induced water depletion used to frame the East End mine's Environmental Authority (EA) exempts the mine from compliance with Water Reform / NWI (through omission under the EA's process for "standard criteria"). Thus BOTH the mine's EA and Calliope River WRP permit unlimited drawdown of the interconnected karst limestone aquifer system, causing widespread serious environmental harm, loss of security to landholders' water supplies and facilitates the unjust trade-off of the bulk of the district's water resources to mine dewatering as a waste product. Mine pit water has been discharged as waste on an uninterrupted basis since 1979. The mine is licensed to discharge up to 10 megalitres per day.

As well as false benchmarking, the science on which the mine's EA / Calliope River WRP is framed relies on misclassification of the aquifer system intercepted by the East End limestone mine pit as Darcian flow instead of an interconnected karst limestone aquifer system with conduit flows; (and other alleged inaccuracies including overstating drought effects in the rapid-response karst system). Karst limestone aquifers have interconnections between surface streams and groundwater and behave differently to Darcian flow aquifers. (*Refer dissenting reports by EEMAG Consultants, Attachments 6, 8, 9 and 10*)

FOI of Queensland Environmental Protection Agency (EPA) Memorandum of 21 October 2001 shows EPA fixed the East End mine's 2002 EMOS and EA on the 1996 false

benchmark that mine-induced water depletion had not migrated outside the East End working lease, with no significant increase in environmental harm. (Instead of using their own “Independent Expert” John Waterhouse’s (May 2001) findings that endorsed the mine’s modelling consultant Dr Frans Kalf’s (Feb 2000) findings of an off-lease mine impacted zone of 33 sq km). In this way EPA exempted mine dewatering from Queensland’s Water Act 2000 / Water Reform / NWI (and best practice environmental management, public interest etc). *(FOI of EPA Memo Attachment 3)(Extract from 1996 IAS attachment 4) (Copy of Kalf (2000) Map attachment 5)*

The above FOI shows EPA also exempted the East End mine from having to undertake a new Environmental Impact Statement (EIS) with a public objection process and hearings by the then Land & Resources Tribunal, and denied landholders an opportunity to object against the gross inadequacy of the 2002 EA (and since the processes are coordinated, against the inadequacy of Calliope River WRP which omits to consider groundwater and doesn’t require the overused / interconnected karst limestone aquifer system to be managed as a single resource and returned to environmentally sustainable levels of extraction); *(FOI of EPA Memo Attachment 3)*

Since the East End mine’s EA is framed without reference to the 33 sq km off-lease mine pit zone of influence (disputed as being more than twice that size by EEMAG and our consultants) the EA has NO conditions to minimize water depletion caused or likely to be caused by mine dewatering (i.e. NO conditions to return areas suffering overuse due to mine dewatering to environmentally sustainable levels of extraction) and does not define what impacts on the water table are acceptable. (Copy of East End mine EA available)

Queensland EPA say they do NOT accord loss of groundwater level an environmental value and thus do NOT regulate loss of water levels due to mining as an environmental impact. We consider EPA’s stance invalid and contrary to the objectives of Water Reform and NWI. We understand that in NSW losses in groundwater levels may be accorded an environmental value.

Queensland’s 2004 Environmental Protection Act legislation gives EPA officers discretionary power to amend an existing EA and then restricts public objections against the EA to only the amendment. That is, the EP Act forbids objections against inadequacies in an original EA (that could otherwise be shown to be quite unrepresentative of the mine’s impacts) when an amendment is approved by EPA. Contrary to advice from the Minister’s office dated 26 June 2008 that quote, “Interested persons have the opportunity to object to the mine or the conditions of the environmental authority when the application for environmental authority is first made. This includes rights of review and appeal to the court.” In the East End mine’s case there was NEVER any public objection process for the original EA.

EEMAG tested the 2004 EP Act legislation in the Land & Resources Tribunal (LRT) when EPA granted an amendment to the mine’s EA in 2005 for a new mining lease (for dumping of spoil) with the EA still falsely benchmarked. EEMAG objected to the gross inadequacies and inappropriateness of the mine’s original EA but our objections were struck out in the LRT without being heard. (Documentation available.)

- We interpret that EPA’s system is structured to regulate exemption of mine dewatering under “minimum compliance” whilst PRETENDING that the mine properly complies with the Water Act 2000 – Water Reform / NWI; best practice environmental management etc. We are fearful that this situation is intended to

continue. To date, the structure of Water Reform / NWI through Commonwealth approval of Calliope River WRP in 2006, has endorsed this situation.

Despite strong legal grounds, EEMAG's solicitor recommended against challenging the adequacy of the East End mine's 2002 EA in Court, because he considers that the State has made clear their intent, and from personal experience if EEMAG won, he considers that the Government would legislate away our victory. The validity of the advice is reflected by Queensland's response to the Supreme Court Appeal Extrata –v- Queensland Conservation Council (QCC), when the Court's 12 October 2007 judgement went in QCC's favour and a retrial was ordered. Four days later the Queensland Parliament legislated against a retrial.

EPA uses the falsely benchmarked CR Dudgeon August 1995 Study within the 1995/96 QCL Impact Assessment Study for environmental assessment (no off-lease de-watering impacts!) while DNR&W uses the Kalf (2000) 33 sq km zone of off-lease impacts for regulation of "make good" Conditions attached to the mining leases. (We understand that DNR&W may use their (Nov 2008) 50 sq km mine impacted zone in future.) (*Extract from 1996 IAS Attachment 4*)(*Extracts from DNR&W Nov 2008 Attachment 13*)

However these Special Conditions are only ineffectively enforced for landholders in the (2000) 33 sq km "mine impacted zone" accepted by Regulating Agencies / the East End mine; with many landholders experiencing quite prolonged delays and some inadequate provision of alternative supplies. This (2000) 33 sq km zone was evaluated by the mine consultants and Regulating Agency hydrologists using Darcian flow methodology for the karst limestone aquifer system, as well as other alleged errors. (*2000 Kalf Mine Impacted zone Attachment 5*)

Since there is no process for a merits review of DNR&W decisions / technical findings, landholders outside the mine impacted zone recognised by DNR&W/ East End mine (who consider they are suffering mine-induced water loss) are in "no man's land" and have no scope for redress, despite findings by independent hydrologists that they are indeed affected by mine dewatering the karst aquifer system. Independent experts (James (1997-2008), Volker (1998), Smith (2003) evaluated that mine dewatering had cumulatively caused loss of up to 20 metres in levels in an area of more than 60 sq km in East End / Bracewell areas, causing loss of approx 30 km perennial stream flow. (*Findings and maps included in Mt Larcom Community Restoration Project Report (2003), Groundwater Segment by DI Smith Attachment 6*)

Legal advice confirms that the drafting of the East End mine's Special Conditions condones the bias of the CEO of DNR&W and that the MERIT of DNR&W's decisions / technical findings are not legally challengeable, either under the Mining Lease, statute or common law. Legal advice of 2004 is that taking a case against the Company to the then Land & Resources Tribunal (LRT) does not amount to "an independent review" of DNR&M findings, since to take an action under Sec 363 (2)(h) of the *Mineral Resources Act 1989* we would have to sue the Company and prove the liability and quantum of our claim against the Company. This is entirely different to merely seeking a meritorious review of the decision of the CEO. The cost of such a case was quoted in 2004 as approx \$450,000.00 – \$550,000.00. It is well recognised that it is almost impossible for small landholders to compete with the legal power of mining companies. (*Barrister's advice Attachment 1, refer P.16, other legal advice available.*)

Judicial Review is not a merits review, and the Queensland Ombudsman by his own admission does not have the expertise to evaluate the merit of the various technical findings or the validity of discretionary decisions by Regulating Agencies.

The Attorney General and Minister for Justice by letter on 15 December 2008 stated “The Queensland Government has no plans to introduce a merits-based review tribunal at this time.” (*Letter from Attorney General Attachment 7*)

Note: The binding nature of Queensland’s 1977 commitment to “minimum compliance” for the East End mine is mirrored in public revelations regarding Mount Isa mine’s operations (allegedly causing elevated blood lead levels in children) disclosed in Queensland Hansard 13-15 May 2008, Page 1792, Para 6 quote: “*The Mount Isa Mines Limited Agreement Act 1985 facilitated a lower standard for lead emissions than that applicable to other parts of the state. It was enacted by the Bjelke-Petersen government in response to then mine owner MIM’s threat to move smelting operations offshore should higher and more expensive emissions standards be enacted.*”. (My bold) The East End mine was also a Special Agreement Act mine.

DISPUTE OVER SCIENCE – MISCLASSIFICATION OF THE INTERCONNECTED KARST LIMESTONE AQUIFER WITH CONDUIT FLOWS AS DARCIAN FLOW AND OTHER ALLEGED INACCURACIES.

Note: The Doctoral Thesis “Industry/Community Relationships in Critical Industrial Developments” (Hoppe 2005) (that reveals the commitment to “minimum compliance” referred to on P. 2) documents on Page 8.21 that the openness by Kantonal (Swiss) government agencies to local knowledge and experiences is very different to the attitudes of Queensland government authorities involved in the East End mine development. Queensland’s response to local wisdom and experiences is short and clear. Quote: “If information is not collected, analysed and interpreted by the agency or by its approved external experts, such data cannot be recognized by the department as scientifically legitimate and can therefore no be considered in the final decision-making process.” (*Attachment 2*)

From experience, the Regulating Agencies above position applies to “consultation” with EEMAG’s consultants as well, and we believe it is designed to accommodate “minimum compliance” where the Department acts to defend earlier decisions and where contingent decisions have to be mutually agreed upon with the mine (*Attachment 2, P. 9.23*).

Background:

In EEMAG’s 15 September 2005 Submission to the NWC we provided evidence that we had no access to a process to require Queensland to use the best available science for Calliope River WRP or for regulating the East End mine. We claimed that Queensland’s 2004 decision to exclude groundwater from Calliope River WRP was not based on the best available science, and did not recognise the fact that that East End / Bracewell subcatchment area is principally a interconnected karst limestone aquifer system with more than 60 sq km suffering serious overuse (shown by water monitoring data collected quarterly since 1977) In 1999 Queensland had advertised that Calliope’s draft plan WOULD include underground water.

We supplied FOI that Cabinet’s 1995 incentive package for the East End mine’s 1996 expansion predetermined that the mine’s environmental approvals (EA and EMOS) for lease renewal would be based on (inaccurate) 1996 IAS findings (that mine-induced water depletion had not migrated off-lease). We documented that in 2005 EEMAG wrote to the Minister for Natural Resources and Mines (c/c to NWC) requesting that Calliope WRP be amended to recognise the karst/limestone aquifer system in the East End/Bracewell subcatchment has connections between surface streams and groundwater and requested

Calliope WRP manage this system as a single resource and require the overused system to be returned to environmentally sustainable levels of extraction. (FOI available)

On 24 May 2005 the Minister responded ‘No information has been provided since the public notices to lead me to change the scope of the water to which the draft WRP applies.’

In a December 2005 letter to NWC we requested that the final tranche payment be withheld until Calliope WRP was framed on the best available science. Our request was declined.

In our 12 February 2007 Submission, we provided selections of the Doctoral Thesis that described the “minimum compliance” commitment to the East End mine, (referred to Page 2, para 1, and above).

We supplied evidence that Calliope River WRP sets defective baseline science that exempts the area suffering overuse caused by dewatering the East End mine from compliance with Water Reform /NWI; together with tables of findings in DNR&M’s May 2006 Draft “Review of Groundwater Issues at East End” in comparison with dissenting findings by EEMAG’s limestone hydrologists (that include DNR&W’s failure to recognise that East End / Bracewell limestone aquifer has numerous karst features) etc and alleging DNR&M’s Draft 2006 Report was framed to defend previous (inaccurate) findings that are relevant to science used for Calliope River WRP; One example, the 1996 IAS finding (that the mine pit zone of influence extends only approx 500 metres from the pit) which is used to frame the East End mine’s EA and exempt mine dewatering from Water Reform / NWI. These 1996 IAS findings are shown to be **WRONG** via DNR’s 1998 Position Paper Figure 9 “Mine Impacted Area 1991” which shows a mine impacted area of approx 20 sq km in 1991 – some 5 years earlier - when the East End aquifer, unlike Bracewell at that time, **failed to fully recover, despite being subjected to prime recharge conditions.** (*DNR 1998’s Figure 9 – Attachment 12*)

DNR&W subsequently discarded the May 2006 draft Review (begun in October 2005) and in late 2006 began another Review, with a Final Draft published in November 2008. DNR&W has undertaken 3 “Consultation” meetings with EEMAG Consultants and delegates and representatives from the East End mine. Although DNR&W funded participation of EEMAG’s consultants, DNR&W retains control the decision making and editorial process and consistently disregards the professional views of our consultants and on-the-ground local knowledge of EEMAG delegates, despite EEMAG’s repeated requests that the process be made equitable and accountable. (documents available)

EEMAG’s current internationally recognised consultants are:

- David Ingle (Dingle) Smith, Emeritus Faculty, Australian National University, formerly Senior Fellow, Centre of Resource and Environmental Studies ANU, an eminent limestone hydrologist and geomorphologist, who has extensive karst aquifer experience that includes dye tracing.
- Associate Professor Brian Finlayson (Principal Fellow, Department of Resource Management and Geography, Graduate School of Land and Environment, The University of Melbourne, an eminent limestone hydrologist and geomorphologist; Even DNR&W has recognised that, within the consultative phase Brian Finlayson demonstrated knowledge and expertise superior to that of any DNR&W participant.
- Consulting Engineering Geologist /Geotechnical Engineer Dr Peter James who has had a long-term involvement and is intimately familiar with the Mt Larcom hydrogeology.

The collective opinion of these experts is that the DNR&W approach to the science is conceptually flawed. DNR&W's Nov 2008 Final Draft continues to treat the aquifer system intercepted by the limestone mine as a simple Darcian flow aquifer and ignore that the complex bedrock geology and areas that exhibit significant karst development behave differently to Darcian flow. Detailed explanations of this and other shortcomings in DNR&W's work have been repeatedly supplied to DNR&W (including to the Minister) in writing, and verbally during technical "consultation" discussions, to no avail. In recent months DNR&W have admitted that other than for the East End aquifer their experts have had no experience of karst aquifers.

COMMENTS BY EEMAG'S CONSULTANTS ON DISSENT WITH DNR&W NOV 2008 FINAL DRAFT (THESE HAVE ALL BEEN PROVIDED TO DNR&W)

Assoc Prof Brian Finlayson comments to DNR&W dated 28 Dec 2008 Quote;

"I have perused this report and I see little point in now attempting yet another commentary on it. Any changes since the last version are only cosmetic and the basis and fundamental problems of this whole approach remain unchanged. Any information that has been provided in other reports or in comments and discussion on previous versions of this report that seriously challenge the methodological approach have simply been ignored.

The geological sequences surrounding the East End Mine are complex both lithologically and structurally yet the approach taken in this report is to ignore all those complexities and treat this material as a single unconfined Darcian aquifer. A major component of the lithology here is limestone (it is, after all, a limestone mine!) and we are being asked to accept that this limestone, which has been here for upwards of 300 million years, has not in all that time developed any of the usual features of limestone aquifers.

Included in this report is a chapter by Drew and Goldscheider from their book *Methods in Karst Hydrogeology* in which they summarise the methods that should be used in the investigation of the hydrogeology of karst aquifers. These two scientists are international leaders in this field yet no notice has been taken of their work in the investigation of this aquifer. Why has this chapter been included here? It should also be noted in this context that Dave Drew's PhD thesis on limestone hydrogeology was supervised by Dingle Smith whose opinions on this matter have also been sought, and ignored.

I could go on to elaborate many quirky inconsistencies in the present report but I will limit myself to just one. For some unknown reason, the limit of drawdown by the mine pumping has been taken to be the 40 metre contour and a series of maps based on this unsubstantiated assumption are given in Map 19. Note the map for June 2007. Elsewhere in this report it is stated that the drawdown by the mine is controlled by structural alignments that trend SE-NW yet here, in the June 2007 map only, there is a narrow band of drawdown heading directly east. I could go on in this vein.

The danger with this report, and others like it that have been produced in the past, is that because the groundwater contours have been drawn and the discussion centred around that view of this aquifer, other commentators get drawn into also discussing these contours and the patterns they show as if they are real. Another far more realistic view of this aquifer system could be constructed by carrying out the kinds of investigations advocated by Drew and Goldscheider (and thousands of other karst hydrogeologists.)

This report does not tell you how this aquifer behaves.” End of quote. (*Attachment 8*)

David Ingle Smith’s comments to DNR&W dated 11 January 2009, Quote P.1 Para 4

“Groundwater in the Mt Larcom Bracewell Area

Throughout my association with EEMAG all of the many documents I have written, many of which have been sent to your Department, have stressed that the groundwater hydrology of the region concerned should be placed within the context of a karst aquifer. For many years the government and Cement Australia dismissed the possibility that karst effects were even a possibility, more recently they have acknowledged that there may be karst influences...”

DI Smith, Quote P.2, para 4

“The other aspect on which I would like to comment relates to the groundwater monitoring program set up prior to the commencement of mining. There are two aspects of this that are particularly disturbing.

1. The fact, now acknowledged, that after more than twenty years it is considered that the methods used for water quality sampling were such that the data are valueless. This is discussed on p.76, where it is reported that the procedures used did not meet Australian Standards and the data are unsuitable for any form of detailed analysis. That this state of affairs was allowed to continue without comment from your Department for so long does not reflect well on any of those concerned; ie. the Dept of Natural Resources & Water, Cement Australia and its consultants..
2. It is acknowledged in this and earlier reports that water budgeting is critical to the assessment of possible impacts of the mine on the local groundwater. The key measurement in such a budget is the assessment of quality and quantity of the water that seeps into, and is pumped out of the mine. This should be apparent even to those with no detailed acquaintance with limestone groundwater. There are no long-term reliable records for this, and as far as I can see the recommendations still do not require such observations to be made. On several occasions I have tried to obtain these data from the mine or its consultants and there are no long-term records available. I have mentioned this major shortcoming in reports stretching back to the mid-1990s. The current report acknowledges this deficiency, see for example p.105 ‘Water Balance Studies’, This reports that a reduction of assumptions by a factor of five enabled a ‘reasonable balance to be achieved’. This is certainly not acceptable science!

There are many other aspects of the report that I could comment upon but I will limit this submission to those concerning the need to consider karst influences on groundwater in the area and the quite appalling history of water quality observations and the recognition of the need to adequately monitor drainage into the mine. “ End of quote. (*Attachment 9*)

Dr Peter James to DNR&W 5 January 2009; Quote from Page 5

“5 Response Summary

The few items discussed above are not in any way meant to be exhaustive, but are provided to demonstrate the manner in which the present draft report retains its technical errors, its misleading and/or biased statements, and its continued attempts to weave a veritable Gordian Knot of technical mistakes. This draft report is obviously intended to stand as the

Department's final word on the whole issue of groundwater depletion associated with the East End Mine operations.....

The response of this writer is that the draft report should be scrapped in its entirety, with the possible exceptions of some of the recommendations (p 107, 108). A completely new, comprehensive and objective report should then be initiated, utilising known geology, geohydrological characteristics and established geohydrological principles (including karst behaviour), together with historical aspects in their rightful context." End of quote.
(Attachment 10)

EXTRACTS OF EEMAG'S DISSENTING COMMENTS ON DNR&W'S NOVEMBER 2008 FINAL DRAFT (PROVIDED TO DNR&W)

EEMAG Inc by delegate A Lucke dated 15 January 2009; Quote:

"Background to the "consultative" process

The present DNR&W study originally set out to review their highly contentious May 2006 Draft Review. Ultimately the Department abandoned this intention in favour of a new review.

The following comments on the DNR&W Review are made under protest of circumstances where EEMAG and its consultants have been consulted (a welcome change) but not empowered while DNR&W as a party to the dispute retains editorial control over inputs and findings.

Under the Special Conditions of the lease, Cement Australia is required to collect and analyse the water monitoring data and the Department to provide a final determination. We note that since the second Frans Kalf draft model of late 1999 (that was unable to evolve and has been abandoned) and a review by Kalf in 2003, Dr Kalf has since declined further involvement and Cement Australia has not conducted any comprehensive hydrological assessment other than their usual basic annual water monitoring reports.

We note also that the drafting of the Special Conditions condones the bias of the CEO of DNR&W and, unlike a review by the company DNR&W's findings remain legally unchallengeable. These factors are not conducive to:

1. accountability
2. rigour and
3. preparation of a defensible report

EEMAG are also disconcerted that Cement Australia should feel so unthreatened by the hydrogeological review as to participate in technical discussions without the services of a hydrologist."

Continuing EEMAG's submission to DNR&W Page 4

Lower Bracewell limestone hydrographs lose contact and remain way above the Rainfall Deviation from the Mean.

(See second last paragraph Page 4, Quote

It is universally agreed that the East End aquifer is severely affected by mine dewatering.

It is accepted that the (current?) drought is easily the worst on record but DNR&W refuses to focus on the 1991-93 /95 timeframe when unprecedented impacts became entrenched at Bracewell in too brief a timeframe.. Beyond 1993 the Bracewell pattern of behaviour as clearly demonstrated by the Lower Bracewell hydrographs is mere repetition with the Bracewell limestone aquifer oscillating within the bottom half of a 10 m range while not conforming with the rainfall deviation from the mean. The challenge at Lower Bracewell is to get the research focussed on what caused stable levels of say 71.5 to 72 m AHD's prior to 1993-5 to slip about 5 m to another stable level around 67AHD. In March 2004 representative Lower Bracewell limestone bore 57105 peaked at around 70 AHD but the springs did not re-emerge. This can reasonably be interpreted that stable historic levels in Lower Bracewell constantly remained above the 70 AHD level. The unrecoverable upper 5 metres represents the mine's impact.

DNR&W consider drought, reduced recharge and pumping adequately explains chronic water loss in Lower Bracewell but then paradoxically provide no satisfactory explanation of why these multiple factors mitigate once the Lower Bracewell aquifer approaches 67AHD.

Clearly DNR&W's conceptual plan and / or their interpretative analysis is flawed and must be re-examined in much greater detail.

Map 19 The unacceptable use of the 40 m contour in isolation of other contours to define mining impacts.

Despite understating the extent of mine impacts and DNR&W conceding that inadequate monitoring further north of Hut Creek leaves them unable to express a formal opinion on this zone, DNR&W never-the less have produced findings confirming catastrophic mine impacts upon the East End aquifer and by implication, a bleak prognosis for the future. **However their interpretative analysis of the time spaced Map 19 series is fatally flawed.** (My bold)

The use of the 40 m contour in isolation shows just one thing and one thing only. It shows only the location of the 40m contour. No more, no less. Although it may indicate the progression of mine impacts it does not define the **extent** of mine impacts.

Throughout the 30 year period, the progression of the 40 m contour **underestimates** the **extent** of mine impacts at East End by failing to take into account the substantial migration of the 45, 50, 55, 60 and 65 m contours or to compute storage loss associated with that migration and their increased gradients.

As mine impacts have worsened, superimposing the 40 m contour over the deeper 25, 30 and 35 m contours **disguises** and **underestimates** the severity of the mine's impacts.

As a final example of the flawed interpretative analysis please refer to Map 19, 1991 timeframe and *see DNR Final Position Paper February 1998*. "Mine Impacted Area 1991 prefaced with NOTE: Bores outside impacted area have zero water level differences."

See text from DNR February 1998. 7. Current groundwater position, page 31

Pit Impact: Quote, "A comparison of early 1991 water supply levels with full supply levels that occurred in 1978 / 79 (Fig 9) can be achieved by plotting the differences between the water levels at these two times. This clearly demonstrates the location of storage depletion caused by pumping from the East End mine. Figure 9 indicates that the extent of the effect of

discharge towards the mine is restricted to the area around the mine and to the north of the mine.

DNR's 1998 assessment of the 1991 circumstances was based upon the practical reality of complete aquifer recovery at Bracewell and incomplete aquifer recovery at East End. DNR's 1998 assessment must therefore be adjudged as the ultimate word on the subject. The same criticisms of substantial understatements apply to all Map 19 content (in the DNR&W 2008 Report)

The use of the 40 m contour is isolation is an inappropriate methodology. Map 19 could be made more representative of the dewatering effects by inclusion of the points raised."
End of Quote (*Attachment 11*) (*DNR 1998's Figure 9- Attachment 12*)

(Extracts from DNR&W's "Review of groundwater in the Mt Larcom-Bracewell area, Final Draft, November 2008, Attachment 13)

LETTER FROM QUEENSLAND DNR&W DATED 19 DECEMBER 2008 TO DME.

EEMAG is delighted that their long campaign to influence DNR&W to openly state their interpretation of mine related impacts and to take a more robust stance on the need for complete revision of environmental licensing and structural reform of the mine's chronic environmental impacts relating to mine dewatering appears to be reflected in DNR&W's recommendations. We understand that DME forwarded the recommendations with a covering note drawing EPA's attention to DNR&W's comments on outstanding environmental issues. (*Copy of DNR&W letter Attachment 13*)

HOWEVER, EEMAG remains acutely aware that environmental issues are determined by EPA and that specifically designed 2004 EPA "minimum compliance" legislation allows EPA officers to amend an existing (inadequate) Environmental Authority whilst restricting public objections to just the amendment – allowing inadequacies in an original EA to escape effective challenge. EPA has "form" in this regard, having amended the East End mine's EA in 2001 despite it being thoroughly unrepresentative of the mine's impacts (it took retrospective legislation in 2003 to bring the decision into legal conformity) and in 2005 without taking into account the mine's worsening impacts and the unrepresentative nature of the mine's existing EA.

EEMAG sees the DNR&W letter as a mechanism that could hopefully bring some accountability to EPA's decision on the mine's current application for an amendment for grant of additional leases.

- HOWEVER despite EEMAG's gratitude and approval, we are concerned that DNR&W's letter to the Mines Department omits mention of karst limestone. This omission (and therefore the applied methodology in how to interpret aquifer behaviour) remains not only the major sticking point between experts but recognition of karst also remains absolutely fundamental to the aquifer's interconnected status under Water Reform / NWI.
- We remain concerned that multiple inaccuracies in DNR&W's Nov 2008 Final Draft Review could be accepted as established fact by any future Review /Report undertaken by the mine / regulating agencies, given that there is NO process to effectively challenge the merit of DNR&W's technical decisions and to require their findings to be accurate. We consider that there is evidence that this may have occurred for EPA's "Independent" (2001) assessment by John Waterhouse which was strongly

disputed by EEMAG and our Consultants. (*Refer Mt Larcom Community Restoration Project Report (2003), Chapter 2.2 Groundwater Resources by DI Smith, which comments on J Waterhouse's work in various sections - copy Attachment 6*)

- Dispute Resolution between landholders and the mining company under the commitment to “minimum compliance” would be weighted in favour of the company.

EEMAG is wary that, without a complete overhaul of the East End mine's EA and a requirement to properly comply with Water Reform and NWI objectives “minimum compliance” will be perpetuated.

As evidence: In an undated letter received on 23 April 2001, the Minister for Natural Resources and Mines advised EEMAG that “Following completion of the independent evaluation of the groundwater impacts at East End, being commissioned by the Environmental Protection Agency, Queensland Cement Limited will be expected to review its assistance to landowners to maintain compliance with the relevant Special Lease Conditions. Should a landowner dispute the extent of assistance, funds will be made available for mediation with the Company.” (*Attachment 13*)

The Minister's proposed mediation process was never implemented, no funds were made available to landholders disputing the extent of assistance and affected landholders continued to suffer delayed and inadequate provision of alternative water supplies (and consequent economic loss); the wording of the Special Conditions (that were substantially weakened at Lease Renewal in March 2003) prohibits grounds for any legal challenge while condoning the bias of DNR&W.

DNR&W LETTER DATED 23 JANUARY 2009 BY AUTHOR OF NOV 2008 “REVIEW OF GROUNDWATER IN THE MT LARCOM BRACEWELL AREA, FINAL DRAFT”

This letter defends the Nov 2008 Report's, Map 19's use of the 40 m contour in isolation of other contours to define mining impacts (referred to on P.10 of this submission), and clearly indicates that DNR&W will not change what is clearly a defective analysis. (*Attachment 14*)

EEMAG response dated 5 February 2009:

In the second paragraph on page 2 of his reply the DNR&W hydrologist says quote “...no direct comparison can be made between behaviour of the 40 metre contour showing boundaries of influence in the 2008 report with changes shown in the 1998 report which include impact of climate change and seasonal variation”

Comment: the DNR&W hydrologist and I (and virtually every other commentator) agree that the water monitoring data collected on 30 and 31 March and 1 April 1991 by University of New South Wales Water Research Laboratory and supplemented by remaining measurements taken by Irrigation and Water Supply Commission (now DNR&W) on 3 April 1991 when analysed, showed full recovery of the Bracewell aquifer to pre-mining levels.

DNR's 1998 Position Paper reached these very same conclusion.

DNR 1998 then used the same date, water monitoring measurements to conduct a valid comparison at East End. When tabulated, Table 9 revealed the recovery shortfall of individual bores within the East End aquifer against pre-mining full recovery levels. Figure 9 and the recovery shortfall was thus adjudged by practical example to be a mine impact. I.e. Full recovery at Bracewell / simultaneously, partial recovery only at East End.

The crucial point here is that at that precise snapshot in time when the water monitoring measurements were taken in 1991, THERE WAS LITTLE OR NO OPPORTUNITY FOR CLIMATE CHANGE OR SEASONAL VARIATION. Had there been, Bracewell would have been similarly affected when in fact, it is agreed and the evidence shows, that it was not.

There is NO NEED for “back up evidence or alternative data sets” as called for by the DNR&W hydrologist to support EEMAG’s statements. No one can do better than the existing evidence which by its very nature provides the ultimate word on the topic. (Copy available)

EEMAG again thanks the NWC for this opportunity to present our case, and again seek the NWC’s involvement to require an effectively to our situation.

Thanking you,

Yours sincerely,

Heather Lucke,
Secretary,
East End Mine Action Group Inc (EEMAG)

ATTACHMENTS

1. *Barrister’s Opinion Pages 1 and 16, full opinion available*
2. *Extracts from Doctoral Thesis “Industry/Community Relationships in Critical Industrial Developments” (Hoppe 2005), Pages 8.21, 9.19-9.23. Full Doctoral Thesis available, including on the internet*
3. *FOI of EPA Memorandum dated 21 October 2001*
4. *Extract from QCL Gladstone Expansion Impact Assessment Study, Refer Page 47, Current Situation After 15 Years of Mining Quote “Pumping from the mine has created a steep drawdown cone extending approximately 500 metres from the pit boundaries” i.e. that mine induced water depletion had not migrated outside the East End working lease*
5. *Kalf (2000) Map showing 33 sq km mine impacted zone*
6. *Mt Larcom Community Restoration Report Extract, Groundwater Resources Segment by DI Smith*
7. *Letter from Queensland Attorney General and Minister for Justice dated 15 December 2008*
8. *Associate Brian Finlayson’s response to DNR&W’s Nov 2008 Final Draft*
9. *David Ingle Smith’s response to DNR&W’s Nov 2008 Final Draft*
10. *Dr Peter James response to DNR&W’s Final Draft*
11. *EEMAG’s response to DNR&W’s Final Draft*
12. *DNR 1998 Position Paper – Figure 9.*
13. *Extracts from DNR&W’s November 2008 “Review of groundwater in the Mt Larcom-Bracewell area, Final draft.*
14. *Letter from DNR&W to DME dated 19 December 2008*
15. *Letter from Queensland Minister for Natural Resources & Mines(undated) received 23 April 2001*
16. *Letter from DNR&W dated 23 January 2009 by author of DNR&W Nov 2008 Final Draft*