

***Re Xstrata Coal Pty. Ltd. and Others:
a Talking Point Case***

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On 15 February 2007, Koppenol P. handed down his decision in the Land and Resources Tribunal¹ on an application for grant of additional surface area for an existing mining lease (coal) and environmental authority by Xstrata Coal Queensland Pty. Ltd. (“Xstrata”), including objections by the Queensland Conservation Council (“QCC”) and the Mackay Conservation Group (“the MCG”).²

Because of the case note writer’s involvement in the case³, personal comment will be kept to a minimum. The case has, however, made news and is interesting in a number of respects. The case involved, as far as the objections were concerned, an attempt to convince the Tribunal that it should recommend, either, in respect of the additional surface area of the mining lease⁴ or the related environmental authority⁵⁶, conditions requiring the applicant coal miner

¹ The decision is cited as *Re Xstrata Coal Queensland Pty. Ltd. & Others* [2007] QLRT 33 and may be found at this link: http://www.lrt.qld.gov.au/LRT/PDF/Xstrata_a33.pdf.

² Key documents in the case, including all the expert witness reports adduced by QCC, may be found at this link: <http://www.envlaw.com.au/newlands.html>.

³ The writer was senior counsel for QCC in the hearing of the objections.

⁴ The criteria to be considered by the Tribunal in respect of mining lease applications are as set out in subs.269(4) *Mineral Resources Act* 1989 (“the MRA”) include:

“ (4) The tribunal, when making a recommendation to the Minister that an application for a mining lease be granted in whole or in part, shall take into account and consider whether—

...

- (a) the operations to be carried on under the authority of the proposed mining lease will conform with sound land use management; and
- (j) there will be any adverse environmental impact caused by those operations and, if so, the extent thereof; and
- (k) the public right and interest will be prejudiced; and
- (l) any good reason has been shown for a refusal to grant the mining lease; and
- (m) taking into consideration the current and prospective uses of that land, the proposed mining operation is an appropriate land use.”

⁵ The criteria to be applied pursuant to s.223 *Environmental Protection Act* 1994 (“the EPA”) are set out in the section as follows:

“223 Matters to be considered for objections decision

In making the objections decision for the application, the tribunal must consider the following—

- (a) the application documents for the application;
- (b) any relevant EPP requirement;
- (c) the standard criteria;
- (d) to the extent the application relates to mining activities in a wild river area— the wild river declaration for the area;
- (e) each current objection;
- (f) any suitability report obtained for the application;
- (g) the status of any application under the Mineral Resources Act for each relevant mining tenement.”

⁶ The standard criteria as defined in the EPA include the following:

““*standard criteria* means—

- (a) the principles of ecologically sustainable development as set out in the ‘National Strategy for Ecologically Sustainable Development’; and

to avoid, reduce or offset carbon dioxide emissions associated with the mining, transport or use of the coal.

On the first day of the hearing, QCC brought an application that it had foreshadowed some days earlier, namely, to amend its particulars of the conditions which it was seeking from the quite onerous 100% of emissions⁷ to a much lesser percentage of 10%. Perhaps, surprisingly, this much more lenient approach to the conditions sought to be imposed was opposed by Xstrata and the Queensland Environmental Protection Agency (“the EPA”) on the grounds that they were not prepared to meet such a lesser case. President Koppenol refused the request to amend the particulars. The fact of the non-amended particulars was given as a basis for restricting the cross-examination by QCC and to prevent QCC from making submissions (on such evidence as had been received)⁸ in support of any conditions other than those particularized.⁹ Koppenol P. explained his ruling in paragraph 9 of the reasons as follows:¹⁰

“Queensland Conservation Council Inc (QCC) later particularised its objection so as to require the applicant to avoid, reduce or offset 100% of the GHG emissions. At the start of the hearing (and perhaps after realising that such a figure would render the mine unviable), it sought to amend that 100% figure for the downstream stage to only 10%. I refused the amendment because the applicant, on notice to QCC, had prepared its case on the basis of the 100% figure and would be prejudiced by the late amendment. Although QCC led various evidence at the hearing, it did not make final submissions that any particular condition should be imposed on the grant of the application.”¹¹

...

- (e) the character, resilience and values of the receiving environment; and
- (f) all submissions made by the applicant and submitters; and
- (g) the best practice environmental management for activities under any relevant instrument, or proposed instrument, as follows—
 - (i) an environmental authority;

...

- (h) the financial implications of the requirements under an instrument, or proposed instrument, mentioned in paragraph (g) as they would relate to the type of activity or industry carried out, or proposed to be carried out, under the instrument; and
- (i) the public interest;

...”

⁷ Although thought to be 100% at the time particulars were provided, the amount of carbon dioxide equivalents in the particularised conditions, on the undisputed evidence of both Xstrata and QCC expert witnesses, actually amounted to a larger percentage, approximately 110%.

⁸ For a discussion of the effect of particulars on the orders that a court may make on the evidence before it, see *Mummery v Irvings* (1956) 96 CLR 99, at 110 and *Dare v Pulham* (1982) 148 CLR 658 at 664.

⁹ In these rulings, the President applied a reading of the Court of Appeal decision in *ACI Operations v Quandamooka Land Council* [2001] QCA 119; (2002) 1 Qd R 347.

¹⁰ The decision was handed down on 15 February 2007.

¹¹ The statement as to QCC making no submissions appears not to be entirely accurate. QCC tendered a 38 page set of written submissions arguing that, on the evidence before the Tribunal, the Tribunal should recommend conditions broadly in accord with the amended particulars leave for which had been refused on the opening day. The President, although he physically received and retained the document, appears to have ruled that such submissions could not be made.

Although the ruling on particulars had a large influence on the subsequent course of the hearing, it has been the Tribunal's conclusions about human induced climate change which have excited public comment. In paragraph 12 of the decision as originally published, the President criticized the evidence of Emeritus Professor Ian Lowe of Griffith University.¹² The criticism appears to focus on Professor Lowe's comparison of life time emissions of greenhouse gases from the proposed mine extension with the annual global emissions of greenhouse gases from all other sources. At paragraph 12, the reasons stated:

"Emeritus Professor Ian Lowe AO gave evidence that the proposed mine would contribute to the cumulative impacts of global warming and climate change. He was the only QCC witness to address the key issue of causation (GHG emissions:climate change). However, Professor Lowe's assessment of the mine's GHG emissions (which he said he was putting "in context") sought to compare its *minelife* emissions with global *annual* emissions. That was said to give a figure of 0.24% of current annual global release of GHGs. But when the mine's *annual* output of CO₂-e (5.6Mt over 15 years ÷ 15 for the annual figure) is compared with global *annual* output of CO₂-e (34,000 Mt), the correct figure is not 0.24% but (as I calculate it) 0.001098%. In other words, Professor Lowe's figure was 218 times too high. Professor Lowe ultimately accepted in cross-examination that the mine's annual contribution to annual global GHG emissions was "very small". Dr Jonathan Stanford (an expert witness for the applicants) said that such a very small figure would make *no difference* to the rate of global warming—an assessment which I accept."¹³

Professor Lowe commented on the decision and sought to correct the Tribunal's mathematics, when quoted in the Australian newspaper on the following day. The article reads as follows:¹⁴

"Professor Lowe said last night that the arithmetic was wrong.

"Even if you accept his calculations, it makes a difference of 15, not 218," Professor Lowe said. "The more worrying thing is he seems to have accepted the denial view of climate change rather than the considered conservative view of the intergovernmental panel.""

It is not often that Courts or Tribunals respond to public comment. However, by 19 February 2007, the reasons were amended. They now read:¹⁵

¹² Professor Lowe, whose report was called *A brief summary of the science of global warming and climate change* was not required for cross-examination by Xstrata. He was cross-examined at some length by counsel for the EPA.

¹³ Emphasis added and footnote deleted.

¹⁴ The byline of the article by Greg Roberts is dated 16 February 2007. The cited text was downloaded on 6 March 2007. The article may be accessed at this link:
<http://www.theaustralian.news.com.au/story/0,20867,21234236-2702,00.html> .

¹⁵ Reasons, paragraph 12: emphasis added and footnote deleted.

“Emeritus Professor Ian Lowe AO gave evidence that the proposed mine would contribute to the cumulative impacts of global warming and climate change. He was the only QCC witness to address the key issue of causation (GHG emissions:climate change). However, Professor Lowe’s assessment of the mine’s GHG emissions (which he said he was putting “in context”) sought to compare its *minelife* emissions with global *annual* emissions. That was said to give a figure of 0.24% of current annual global release of GHGs. But when the mine’s *annual* output of CO₂-e (5.6Mt) is compared with global *annual* output of CO₂-e (34,000 Mt), the correct figure is not 0.24% but (as I calculate it) 0.016%. In other words, Professor Lowe’s figure was 15 times too high. Professor Lowe ultimately accepted in cross-examination that the mine’s annual contribution to annual global GHG emissions was “very small”. Dr Jonathan Stanford (an expert witness for the applicants) said that such a very small figure would make *no difference* to the rate of global warming—an assessment which I accept.”¹⁶

The third matter of interest from the decision is the President of the Tribunal’s view on human induced climate change and the means by which he arrived at that conclusion for the purpose of the hearing.

Mr. Jon Norling, an economist, provided a report which, *inter alia*, sought to apply conclusions of the Stern Review¹⁷ to Queensland industries and the Queensland economy. Mr. Norling was cross-examined about the validity of the manner in which he drew upon the Stern Report and applied it.¹⁸ He was not challenged, however, about the validity of the Stern Report, itself, and the conclusions contained in that report. No other witness criticized the methodology or conclusions of Stern.¹⁹

Against this evidentiary context, Koppenol P., subsequent to the close of the hearing, came upon some published critiques of the Stern Report.²⁰ Despite

¹⁶ The opening paragraph of Mr. Stanford’s *curriculum vitae* tendered to the Tribunal reads as follows:

“Jon Stanford, Director of Insight Economics and now a Partner in Deloitte, was born and educated in England. His qualifications include a MBA from London Business School and Master’s and Bachelor’s degrees in Economics from Manchester University.”

Later, the curriculum vitae states:

“Over the last decade, Jon has built up a strong practice in the economics and public policy aspects of climate change.”

¹⁷ *The Report of the Stern Review on the Economics of Climate Change*, Her Majesty’s Treasury, October, 2006. The report may be accessed at this link: http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm.

¹⁸ President Koppenol drew unfavourable conclusions of Mr. Norling’s evidence based on this cross-examination. See the reasons at paragraph 13.

¹⁹ Xstrata’s principal economist witness, Mr. Stanford, said, apparently approvingly, in his report to the Tribunal:

“Governments around the world have accepted that a global solution to climate change is required ... It is notable that the major report on the economics of climate change by Sir Nicholas Stern, published in October 2006, emphasises throughout the global nature of the nature of the problem and the necessity to adopt a global approach to dealing with it.”

²⁰ At paragraph 16, the President said:

opposition from QCC, the Tribunal had access to the papers and seems to have relied upon them for his conclusions in the case.

The President also had access, without opposition from the parties,²¹ to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change's *Summary for policymakers* released on 2 February 2007.²² It appears that the President did not so much rely on the document for his conclusions as on his own critiquing of the report. At paragraphs 17-18, the President published his critique as follows:

"It relevantly concluded that is very likely that human-induced GHGs are causing global warming, and that most of the observed increases in globally averaged temperatures since the mid-20th century are very likely due to the observed increase in anthropogenic (human-caused) GHG concentrations. However, a close examination of the global mean temperature chart (Fig SPM-3), which was said to support that view, reveals that the last 106 years had 3 periods of cooling (1900-1910, 1944-1976, 1998-2006) and 2 periods of warming (1910-1944, 1976-1998) and that temperatures rose only 0.5°C from 1900 to 2006. The largest temperature change in the 20th century was a 0.75°C rise between 1976 and 1998, But the fact that very similar rises have previously occurred (1852-1878, 0.65°C and 1910-1944, 0.65°C) was not specifically mentioned or causally explained in the Summary. Also not mentioned or causally explained is the fact that temperatures have actually fallen 0.05°C over the last 8 years.

[18] If a comparison is made of temperatures over the last 55 years (1951-2006), as the IPCC presumably did in reaching its conclusion, the chart shows that average temperatures increased from 13.85°C (1951) to 14.45°C (2006)—an increase of 0.6°C. As "most" of that increase is said by the IPCC to be due to increases in GHGs, it follows that the temperature increase of concern is about 0.45°C (0.45°C being 75% of or "most" of 0.6°C). With all respect, a temperature increase of only about 0.45°C *over 55 years* seems a surprisingly low figure upon which to base the IPCC's concerns about its inducing many serious changes in the global climate system during the 21st century."

Having dismissed the conclusions of the authors of the IPCC Summary document on this analysis of the *Summary* document, the Tribunal moved to its conclusion. In terms of "the cause and effect of global warming", the conclusion was as follows:

"However, the Stern review has been severely criticised on both scientific and economic grounds. Papers recently published by Professor Sir Robert carter *et al* and Professor Sir Ian Byatt *et al* concluded that Stern's claim that the scientific evidence for GHG-induced serious global warming and climate change was overwhelming was just an assertion and was wrong ..."

²¹ Reasons, paragraph 19.

²² Reasons, paragraph 17. The web citation for the *Summary for Policymakers* document is <http://www.ipcc.ch/SPM2feb07.pdf>.

“QCC submitted that I should have regard to ESD principles “to mitigate the serious environmental degradation caused by global warming”. The difficulty with that submission is that, whilst I have considered the ESD principles and QCC’s detailed submissions concerning their operation, it is based upon an assumption concerning the cause and effect of global warming. In the present case, I am not satisfied that that assumption (relevantly, a demonstrated causal link between this mine’s GHG emissions and any discernable harm—let alone any “serious environmental degradation”—caused by global warming and climate change) has been shown by QCC to be valid.”²³

The relative contributions to the Tribunal’s conclusions of the evidence received by the Tribunal on the one hand and the President’s reading and critiquing of published documents after the conclusion of the hearing on the other may be a fertile area for comment. For example, Professor Lowe, whose evidence was not challenged by Xstrata said, at paragraph 18 of his report:

“When I wrote *Living in the Greenhouse* in 1989, it was clear that human activity was changing the composition of the atmosphere and clear that the climate was changing, but most scientists thought it was not provable that the climate change was being caused by the enhanced greenhouse effect. Since then, there has been an immense scientific effort to analyse climate change and develop sophisticated computer models which test theories about the link between greenhouse gas levels and climate. The IPCC has now released three assessments in 1990, 1996 and 2001, with the fourth Assessment Report due to be released very soon. The IPCC is made up of hundreds of the world’s most distinguished atmospheric chemists, physicists and climatologists. Its work is overseen by the United Nations and the World Meteorological Organisation. The assessments show the steady strengthening of scientific confidence that we are seeing real changes in the Earth’s climate driven by human activity, principally the release of carbon dioxide and other greenhouse gases (especially methane) as a consequence of energy use.”

As well as being unconvinced on this point by Professor Lowe (whose short biography included references to his status as Emeritus Professor and, previously, as Head of Science, both at Griffith University and whose formal qualifications included a BSc (Hons.) from University of New South Wales and D.Phil. from York University), the Tribunal seems to have been unconvinced by the economist, Mr. Stanford (whose evidence he had accepted on scientific matters, previously, at paragraph 12 of the reasons).²⁴ In his report, at page 3, Mr. Stanford had provided the following evidence:

²³ Emphasis added.

²⁴ Both the original and revised versions of paragraph 12 of the reasons are set out above.

“There is now strong evidence to suggest that the world is growing warmer and that this is related, at least in part, to anthropogenic causes. The emission of greenhouse gases, particularly carbon dioxide (CO₂), has increased significantly since the beginning of the industrial revolution and, as the overwhelming majority of climate scientists suggest, this has created an ‘enhanced greenhouse effect’. There is broad agreement that the way to address the problem is to reduce net emissions of greenhouse gases so as to stabilize and later reduce carbon concentrations in the atmosphere. On the basis of what may be practical, one widely discussed target is to stabilize the average increase in global temperatures at a level between two and three degrees Celsius higher than in the year 2000. However, even this target, which would require a reduction of emissions by around 60 per cent over 2000 levels by 2050, may give rise to significant climate change.”

The decision of the Tribunal has excited considerable debate among the scientific community. This example, taken from the blogosphere, is from an article by Tim Lambert, a computer scientist at University of New South Wales. At the end of an article²⁵ which discusses several aspects of the decision, Mr. Lambert says:²⁶

Yes, Koppenol dismissed the scientific consensus based on his own naive analysis of one graph in the SPM. It doesn't seem to have occurred to him that the scientists might have thought of his objections and have an answer. And he doesn't seem to have asked any scientists about his objections. So where has he gone wrong? Well, the temperature has a fair amount of year to year variation from things like volcanoes and El Nino events. By looking at the temperature in individual years you can create trends that are not meaningful. To get an idea of long term trends you need to look at how multi-year averages have changed. This was plotted on the SPM-3 graph, but Koppenol ignored it. And Koppenol doesn't seem to have understood the next graph, SPM-4 which shows why the IPCC scientists believe that humans are causing warming -- while natural factors can explain the warming in the first half of the twentieth century, they cannot explain the warming in the second half.”

Conclusion

The MRA and the EPA constitute legislation which lays down criteria for issue of licences for various forms of production and which allows public access to that process. Such legislation is a mature expression of democratic principles because it allows a direct contribution to policy debate for ordinary citizens. Such forms of access to the policy debate are, frequently, more effective and more influential than other forms such as writing to a member of Parliament or

²⁵ Headed: “*Bad Science from Queensland’s Land and Resources Tribunal*”.

²⁶ The article may be found at this link:
http://scienceblogs.com/deltoid/2007/02/bad_science_from_queenslands_1.php. The page contains numerous responses to Mr. Lambert’s article, giving an impression of the broader discussion raised by the decision.

taking part in talk back radio. The contribution of QCC to the debate on the best ways for Australia to respond to the problem of global warming seems to have fallen on infertile ground. However, ideas are insidious things which survive to wield influence even when thought to have died an early death. It remains to be seen whether QCC's idea of requiring coal miners to account for some of the greenhouse gas emissions arising as a result of the mining, transport and use of the product they mine manages to exert an influence. It also remains to be seen whether President Koppenol's analysis of the IPCC *Summary* report is the last word on that subject.