Expert Report to the Land Court by Marcus Brown and Roderick Duncan

1. Experts Details

1.1 Names

This joint expert report has been prepared by Marcus Brown and Roderick Duncan, and is presented to the Land Court in accordance with paragraphs 8 and 9 of the Order dated 27 May 2013.

Statements attributable to Marcus Brown are denoted as **MB.**

Statements attributable to Roderick Duncan are denoted as **RD**.

1.2 Previous Expert Reports

This joint expert report is supported by, and rely upon, the following expert reports:

(a) Expert Report of Mr Marcus Brown, dated 30 May 2013; and

(b) Expert Report of Dr Roderick Duncan, dated 27 June 2013.

1.3 Dates of Meetings of Experts

The experts met 16 July 2013.

2. Discussion and Analysis

Our review of our respective individual statements identified a number of areas of potential disagreement. In considering these areas, we have grouped them as follows:

(a) Relevance or otherwise of a cost benefit analysis approach;

(b) Relevance or otherwise of an impact assessment approach; and

(c) The potential for crowding out effects of the Alpha Coal mine in other sectors.

2.1 Relevance or Otherwise of a Cost Benefit Analysis Approach

RD contends that:

(a) The purpose of an economic analysis of a mining project is to determine whether the relevant community, which would be Queensland residents in this case, is better or worse off if a mine proceeds.

(b) The Queensland Treasury under its Project Assurance Framework has suggested that only a cost benefit analysis would generate the values to determine whether the mine economically advantages or disadvantages the residents of Queensland.

(c) The Commonwealth Treasury, through its Office of Better Practice Regulation, likewise advises that a cost benefit analysis is required if a determination is to made about the impact of a decision on the wider community.

(d) The result of a more limited impact analysis gives little information about the wider gain or loss to a community from a decision. Using a more limited analysis therefore is not to make a decision based on the impact on “total quality of life” of Queensland residents.

Brown contends that:

(a) The purpose of the EIS process is to understand the implications of a major private sector investment in a major project. In this case the major project is the Alpha Coal Mine. The focus of the assessment is to understand what changes may occur in the economic environment (as established in the baseline assessment component of the economic impact assessment).

(b) The outputs from a cost benefit analysis, which include net present value, internal rate of return and benefit cost ratio provide little guidance as to what the changes in the economic environment might be. For example, if the project has a benefit cost ratio of 1.5, that means that the present value of benefits exceeds the present value of costs by a factor of 50%. Hence, when the benefit cost ratio exceeds one the project is deemed economically viable. However, this indicator provides no guidance to the assessment manager and policy makers as to what are the impacts of the project. This is why EIS Terms of Reference have an impact focus: to identify what might be the changes as a result of investment in the development.

(c) I note that RD cites a number of state and Australian Government guidelines pertaining to cost benefit analysis. These guidelines also point out that the context in which they apply is in determining either the desirability of a specific public sector investment or the implications of a change in public policy.

(d) In the context of the Alpha Coal mine there is no public sector investment per se, and the public policy environment with regards to the expansion of coal mining in Queensland is well established.

(e) As I noted in my first individual statement, cost benefit analysis is a normative assessment technique. Were a cost benefit analysis to be undertaken as part of the EIS process it would be the only normative assessment with all other assessments being positivistic (i.e. impact related).

2.2 Relevance or Otherwise of an Impact Assessment Approach

MB contends that:

(a) An impact assessment approach is appropriate in considering the scale stimulus created by a major private sector investment in the development and operation of the Alpha Coal Mine.

(b) The Terms of Reference for the Alpha Coal Mine clearly indicate the information required by the Coordinator General for the consideration of the economic impacts of the Alpha Coal mine.

(c) The Terms of Reference for the Alpha Coal Mine are similar to the Terms of Reference for of other mining projects and the 'Generic Terms of Reference for Environmental Impact Statement' that are the basis for all Environmental Impact Statements in Queensland.

(d) The approach adopted in assessing the economic impacts of the Alpha Coal project is a standard approach to economic impact assessment of Queensland mining projects.

(e) The intent of the economic impact assessment is to understand the changes the project may have on the economic environment of the regional/state economies assessed, and the extent to which the capacity of those economies may need to be augmented through either mitigation strategies on behalf of the proponent or changes in government policy (e.g. skills & training programs, labour supply programs, etc).

(f) Hence, the Queensland assessment process seeks to identify impacts (both direct and indirect as specified in the EIS Terms of Reference) and potential measures to manage those impacts (good or bad), but leaves the balancing of those impacts against each other for the assessment manager.

(g) The EIS provides extensive information across a range of issues and disciplines to allow the assessment manager to consider all various aspects of the project with a view to coming to a determination with regards to either approval, approval with conditions or refusal.

RD contends that:

(a) While I believe cost benefit analysis is a far more reliable method if the aim of an analysis is to determine the impact of a decision on a community, a carefully constructed and realistic economic impact analysis can produce an acceptable, if unreliable, prediction of the economic consequences of a decision for a community.

(b) An economic impact analysis should include all economic consequences of a project, whether those consequences are positive or negative. The appropriate calculation should then be whether - on net - the positive economic impacts of the mine outweigh the negative economic impacts of the mine. The analysis presented in this EIS contains no large negative consequences at all flowing from the mine.

(c) The economic impact analysis under the EIS has several deficiencies, which make the analysis a poor estimate of the impact of the Alpha mine on the welfare of Queensland residents. I detail some of the deficiencies below.

(d) The economic impact analysis has assumed that labour for the mine is costless. The assumption of perfect supply elasticity for labour means that the additional workers for the Alpha mine can be supplied with zero cost for any other industry or firm in Queensland. I believe this assumption is unrealistic - unless the Hancock analysis were to argue that all of the labour needed for the Alpha mine was otherwise unemployed. This issue of “crowding out” is taken up in more detail in Section 4.3.

(e) The economic impact analysis has made no attempt to discuss the impact of the Alpha mine on unemployment in the region, in Queensland or in Australia as a whole.

(f) Unless otherwise unemployed, the labour employed in the Alpha mine has to come from somewhere. In most economic analysis, one would not count labour employed as a benefit for the project as the labour employed in the Alpha mine is labour lost to other industries in Queensland.

(g) The economic impact analysis has assumed that the materials for the mine are costless. The assumption of perfect elasticity of supply for materials means that the additional materials for the Alpha mine can be supplied with zero cost for any other industry or firm in Queensland. This assumes that the orders of materials for Alpha mine can be met without delaying materials for any other project in Queensland. In most economic analysis, one would not count the materials consumed in building the Alpha mine as a benefit, as those materials are (1) lost to other uses in Queensland and (2) have been produced using Queensland factors of production.

(h) Further the economic impact analysis has assumed that the orders for materials for the Alpha mine will generate a secondary (indirect) benefit for Queensland industry. Generally in economics there will be no indirect benefit for a change in demand unless there is excess capacity in the industry whose product is being consumed. There is no basis given for this assumption in the analysis.

(i) The export revenues of the Alpha mine are counted as a benefit without consideration of which community those revenues will flow to. The profits of the Alpha mine flowing to Australian residents may e counted as a benefit to Australia. If the revenues of the Alpha mine are to flow to a company located in India, are we to count those revenues as a benefit to Queensland residents?

(j) The economic impact analysis has no consideration for the various risks facing the project. In modern project evaluation, it is standard practice to consider alternative scenarios which may arise in the 40 year future of the mine.

2.3 The potential for crowding out effects of the Alpha Coal mine on other sectors.

MB contends that:

(a) The potential for crowding out effects as a result of the Alpha Coal mine on other sectors depends largely on cyclical factors. The crowding out effect is largely associated with the potential for the project to compete with other sectors for resources. Hence, the extent of crowding out will be dependent on the relative scarcity of those resources at any given time.

(b) Resource sector development in Australia has been characterised by a series of investment cycles, whereby a number of projects are developed at around the same time. The confluence of a large number of projects can create significant competition for resources. Having said this, it is important to be clear as to whether the decline in other sectors during these resource sector cycles is necessarily attributable to those investment cycles or other factors.

(c) It is my view that the decline in non-mining sectors over the last five years is likely more attributable to broader global factors than to the mining industry per se. A situation whereby the mining industry may have taken up the slack created by the decline in non-mining sectors may be more coincidence than causality.

(d) Australia is a trading nation and our living standards are dependent on the Australian economy engaging in international trade. An implication of this status is

that the Australian economy is susceptible to changes in the global economic environment.

(e) It is my view that based on available economic data that broader global factors have been primarily attributable to the poor performance of Australian non-mining sectors over the last five years and that there is currently considerable latent capacity in both the Queensland and Australian economies that would mitigate the risk of the Alpha Coal project crowding out other sectors.

(f) This is not to say that this risk was not considered in the EIS. The issue of localised inflation relates to potential for rising input price pressures (resulting from increased competition for inputs) and is identified as a potential issue in the Social Impact Management Plan (SIMP). The SIMP identifies potential mitigation measures to reduce the risk and scale of this potential impact.

(g) I note that RD seeks to draw some inferences relating to the connection between declining manufacturing employment and rising mining employment for the period 2007-08 to 2011-12 in paragraphs 5.7 and 5.8 of his first individual statement. The analysis is based on data from ABS Catalogue No. 8155.0-Australian Industry 2011-12, which provides only a limited snapshot of employment trends by industry. The start date for the data series provided by RD is 2007-08, which coincides with the commencement of the Global Financial Crisis (at the time referred to as the sub-prime mortgage crisis). This major financial crisis is widely attributed with precipitating declines in manufacturing employment throughout developed economies[1]. This trend was also experienced in Australia, however unlike many other developed economies Australia did not fall into recession; rather, through a combination of stimulus measures and a growing mining sector, the Australian economy was able to avoid recession. Hence, it is my view that the data series presented by RD is too short to draw any meaningful inferences.

(h) Figure 1 below provides a more extended time series of similar data reported by RD in his first individual statement and reports employment trends for a range of sectors[2]. I have highlighted the May 2004 to May 2008 period. The importance of 2004 is that it is the year generally taken to represent the start of the most 'mining boom', while 2008 represents the start of the Global Financial Crisis.

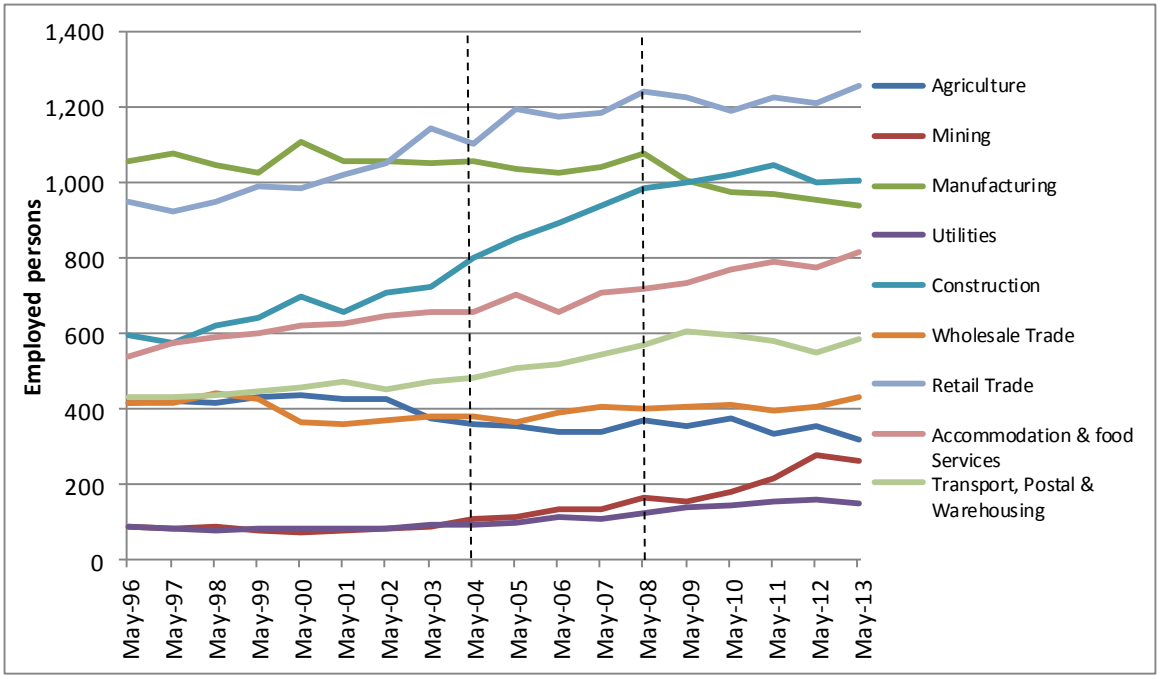
(i) 2008 represents a clear 'change point' in the Australian economy, whereby a number sectors, including mining, experienced reductions in employment. I do not believe that the reduction in manufacturing employment post 2008 is entirely attributable to the growth in mining employment. Indeed in the period between the commencement of the mining boom and the GFC (2004-2008) employment in manufacturing stabilised and increased slightly. Post GFC manufacturing

[1] Department of Innovation, Industry Science & Research (July 2010)

[2] Sectors not reported are higher order service sectors which accounted for approximately 45% of total employment at the start of the data series but growing to approximately 50% of total employment by the end of the data series.

employment has experienced a decline consistent with the experience in other developed economies[3].

Figure 1: Employment by industry, May 1996-May 2013



Source: ABS (2013) Catalogue 6291.0-Labourforce Australia

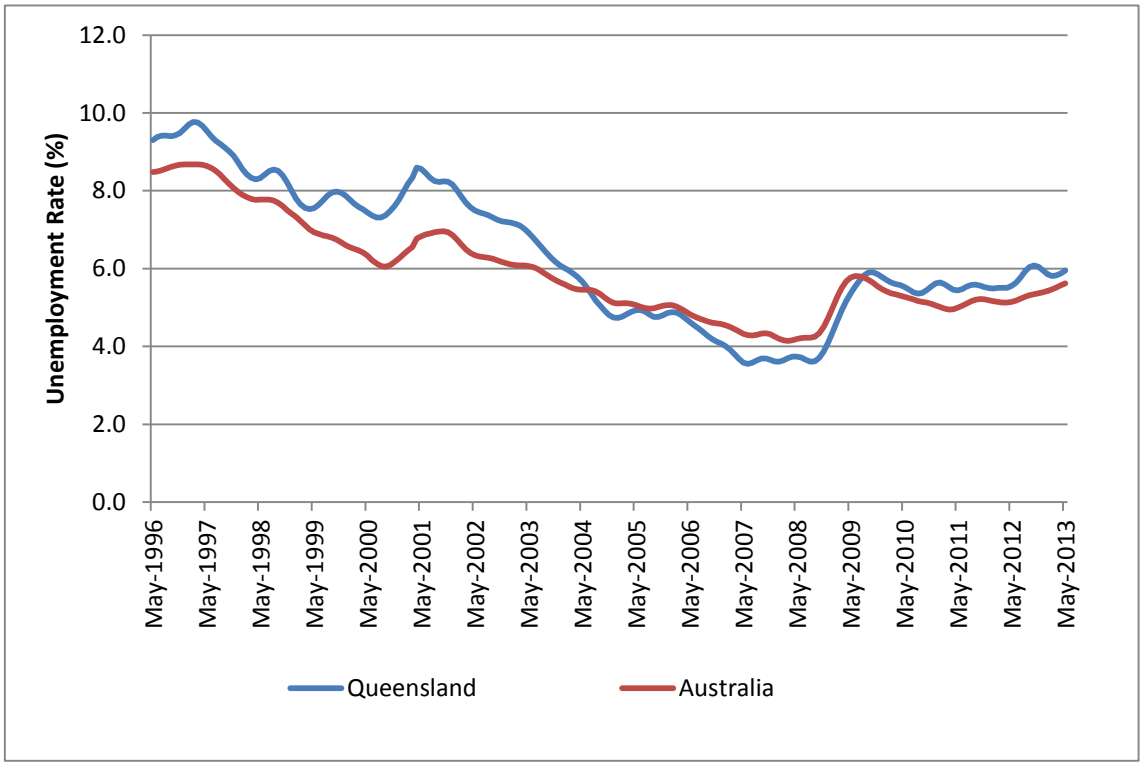
Note: data series reports May data because May 2013 is the most recent for which data was available at time of writing.

(j) As stated above, based on information available it is my view that there is currently significant latent capacity within the Australian economy. The labour market provides a useful proxy for understanding capacity pressures.

(k) Figure 2 below indicates that there was a 'step-wise' change in the unemployment rate within Queensland and Australia in late 2008/early 2009 coinciding with the impact of the Global Financial Crisis. This represents a significant slackening in labour market conditions post 2008. Also of concern, is the apparent upward trend in the unemployment rate in both Queensland and Australia over the past two years.

[3] Department of Innovation, Industry Science & Research (July 2010)

Figure 2: Unemployment rate, Queensland & Australia



Source: ABS (2013) Catalogue No. 6202.0-Labour Force, Australia

(l) With regards to supplier markets a useful indicator is the capacity utilisation results from the National Australia Bank's (NAB) Quarterly Business Survey (June 2013). The results of the NAB survey indicate that capacity utilisation is currently running at its lowest level since the GFC. In their Monthly Business Survey (June 2013), NAB points out that capacity utilisation in the mining industry is currently sitting at about 75.3%, which is the lowest utilisation rate since October 2002 for that sector. The only sector that is currently running at a lower capacity utilisation rate than the mining sector is the manufacturing sector at a capacity utilisation rate of 73.4%. To provide some context the economy-wide capacity utilisation rate experienced during the recession of the early 1990s was in the order of 76%.

Figure 3: Australian industry capacity utilisation

Source: National Australia Bank (2013) Quarterly Business Survey, June 2013

(m) To summarise, based on available information that there is significant latent capacity within the Australian economy in terms of labour market utilisation and industry capacity utilisation. The potential for the project to crowd out other sectors is most prevalent when the economy is running at full capacity. A rising unemployment rate and historically low levels of industry capacity utilisation do not suggest that the economy is running at or close to capacity. As such, the risk of the Alpha Coal mine crowding out other sectors through competition for inputs is very low.

RD contends that:

(a) The skilled labour required for mining operations is not a type of labour in abundance in Australia, or those workers would not be earning the average annual income of over $100,000 that the ABS records workers in the sector as earning.

(b) Additional skilled labour required for mining operations in the Alpha mine can not be generated in the short-term, but only with long-term investment in education and training, or by taking those workers from other mines in Queensland or from other industries in Queensland.

(c) The workers needed in the mining sector are not the same workers needed in sector such as retailing or wholesale trading, otherwise the gaps in worker's incomes between the mining sector and the other sectors would not be as large as they currently are.

(d) The negative impact of a boom in one traded goods sector, such as mining, on another traded goods sector, such as manufacturing, is a generally accepted result in economics. This negative impact is so well accepted that it has its own name, the "Dutch disease". The opinion of Marcus Brown that the mining boom has had no impact on the manufacturing sector runs counter to most economic analysis,

including the recently released Grattan Institute report[4], which has a section titled "The mining boom has squeezed other tradable industries hard".

3. Expert's Statement

We confirm the following:

(e) the factual matters stated in this report are, as far as the experts know, true;

(f) the experts have made all enquiries that they consider appropriate;

(g) the opinions stated in this report are genuinely held by all experts;

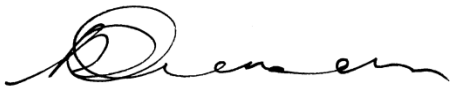
(h) the report contains reference to all matters the experts consider significant; and

(i) the experts understand their duty to the court and have complied with the duty.

Mr Marcus Brown

1 August2013

Dr Roderick Duncan



1 August 2013

[4] Minifie, J., et al. (2013) "The mining boom: impacts and prospects", Grattan Institute.