Hancock Galilee Pty Ltd v Coast and Country Association of Queensland Inc. & Ors

Statement to the Land Court of Queensland

Proceedings MRA713-13 & EPA714-13 (Kevin's Corner coal mine)

Expert report

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Introduction

3. I have been asked by Environmental Defenders Office (Qld) Inc., to act on behalf of Coast and Country Association of Queensland Inc., to act as an independent expert witness in relation to economic issues associated with the proposed Kevin's Corner coal mine, by letter dated 14 March 2014. Specifically, I have been asked:

    A. whether there is sufficient economic information to form an adequate basis for approval of the mine having regard in particular to potential economic impacts and the reasons for your view;
    B. whether, having reviewed all of the EIS documents, you agree with the conclusion of Coordinator-General's assessment in relation to economics and the reasons for your view;
    C. whether, having regard to all of the available material, there are issues that should be examined in more detail or additional lines of inquiry in relation to economics that should be explored before approval is granted and the reasons for your view;
    D. whether, having regard to all of the available material, the cumulative economic impacts have been adequately addressed by the Applicant.

4. This letter is attached as an appendix.

My Qualifications

5. I am the Research Director of The Australia Institute, an independent research organisation based in Canberra, ACT. I have worked as an economist since 2007. I have a Bachelor of Commerce majoring in economics from the University of Melbourne. My full CV is attached as an appendix.

Summary of my opinion

6. The Environmental Impact Statement (EIS) submitted for the Kevin's Corner project is not suitable for decision making purposes. It is based largely on Input-Output (IO) modelling, which provides overstated estimates of the project's impacts on output and employment, but does not weigh the costs and benefits of the project. IO modelling does not assess if a project is in the best interests of the community.

7. Cost benefit analysis (CBA) should have been conducted to assess if the project should go ahead. The Terms of Reference (ToR) did not specify the methodology to be used in the economic assessment. A range of economic tools could have been used to fulfil the ToR. In my opinion CBA is the best economic tool for project evaluation. It is the preferred assessment method of the Queensland Government, the Department of Infrastructure and Planning and the Australian Coal Association Research Program.

8. While the ToR do not expressly require CBA, nor do they preclude it. There are several parts of the EIS which exceed the ToR, while some ToR are not fulfilled. I do not consider general compliance with the ToR a sufficient reason for not employing the most appropriate tool of project evaluation.

9. An important reason to conduct CBA on the Kevin's Corner project is to provide some indication of the financial strength of the project. There is widespread pessimism over the financial viability of Galilee Basin Coal Projects. A CBA could help decision makers understand what conditions are required for the project to actually proceed and deliver benefits – eg what coal prices, exchange rates and cost levels are needed for the project to proceed as planned.

10. IO models assume that projects are financially viable. The Kevin's Corner EIS estimates apparently large increases in output and employment, but without explaining to decision makers that the size of these benefits has no reflection on the likelihood of them actually being delivered.

11. Approving a financially marginal project can impose costs on the local and state communities.

    A. At a local level landholders can be bought out, leaving little incentive to invest in agricultural productivity. If bought out landholders leave the area, local communities and agricultural enterprises can be affected. An example is provided of this situation around Dunedoo, NSW (see page 8).
    B. At a state level, Galilee Basin projects are proposed to be subsidised at taxpayers' expense. This reduces the money available for social services such as education and health and imposes a serious opportunity cost on the community.

12. Much information required for a CBA is included in the EIS economic assessment. Little more data is required to be able to perform CBA to a good level. There is useful data on:

    A. Financial costs – although some seem understated, particularly rehabilitation;
    B. Financial benefits – although coal price assumptions are unclear;
    C. Environmental costs – although the valuation has not been conducted to a standard that would help with decision making; and
    D. Costs to agriculture.

13. The IO model in the Kevin's Corner EIS suffers from the limitations of most IO models, particularly the assumption that there are unlimited resources in the economy. This is not realistic. The Kevin's Corner project will compete with other mining projects and other industries for resources. IO models ignore this reality and so overstate the impacts of the project in general and ignore negative impacts on other industries. Overstating positive impacts and ignoring negative impacts means an unrealistic impression of the project is presented. For this reason the Productivity Commission has remarked that these models are often "abused".

14. The expert for the mine, Mr Marcus Brown, claims in his expert witness statement that due to a recent increase in unemployment, these criticisms of IO models should not apply in this case. I disagree with Mr Brown and ABS data shows that mining employment remains high and the industry has the lowest level of underemployment of all industry classifications.

15. Mr Brown also claims that negative impacts on other industries will not eventuate. He says that mining investment stimulates employment in manufacturing. I disagree. ABS data shows that manufacturing employment has been stagnant or declining despite huge increases in mining investment.

16. Similarly, Queensland agricultural employment has declined through periods of record mining investment, while agricultural employment in non-mining states has increased.

17. Both Mr Brown and I examine the Kevin's Corner project in the context of the wider Queensland economy. We find that it is small in terms of its contribution to output, employment and state revenue.

18. The Kevin's Corner project and other Galilee Basin projects have the potential to increase supply of thermal coal to seaborne markets by almost 20 per cent. This would depress coal prices and result in the closure of other mines, with many likely to be in Australia.

Background facts and assumptions

19. References are footnoted through this report with a full reference list as an appendix.

20. Most of this report responds to the question in my letter of engagement - "whether there is sufficient economic information to form an adequate basis for approval of the mine having regard in particular to potential economic impacts and the reasons for your view".

Economic information in the Environmental Impact Statement and basis for approval

21. The Environmental Impact Statement (EIS) submitted for the Kevin's Corner project is based on Input-Output modelling (IO modelling) and various other pieces of economic information. This modelling and other information is not, in my opinion, adequate to support approval of the project.

22. From an economic perspective, a project should be approved if it improves the welfare of the relevant community, in this case the community of Queensland. In other words, does the project make Queensland better off? A project improves the welfare of the community if the costs it imposes on the community are more than offset by the benefits that it provides. IO modelling does not provide this information

23. The economic tool best suited to project evaluation is cost benefit analysis (CBA). CBA is the preferred methodology of federal and state governments, including Queensland. The Department of Infrastructure and Planning's Project Assurance Framework, states:

> *"The primary method of economic evaluation of public sector policies and projects is cost-benefit analysis. Input-output methodology (or the use of multipliers) is not a preferred methodology for economic evaluations."*[1]

24. The Queensland Government's support for CBA is evident from the Treasurer's Budget Speech this year:

> *"As promised at the election, all major projects now undergo a cost benefit analysis. No longer do we have dams without pipes, pipes without dams, nurses without pay and trains without seats!"*[2]

[1] (Qld DIP 2011) p18
[2] (Nicholls, 2014) p4

25. Recent research on economic assessment of coal projects in Queensland and New South Wales, commissioned by the Australian Coal Association Research Program says that one of the "*key aspects of economic assessment that can improve confidence in the inputs to the decision-making process*" is:

> *"Inclusion of a **comprehensive CBA**, with proper identification of non-market impacts…"*[3]

26. I agree with Mr Brown's statement in his expert report in the Alpha Case that:

> *"Cost benefit analyses are best described as being evaluative in that they weigh up the benefits and dis-benefits of a subject proposal in its entirety to determine whether (in economic terms) the project should be proceed [sic]."*[4]

27. Mr Brown pointed out in his report for the Alpha Case that CBA is not common for assessment of coal mines in Queensland[5] and was not specified in the ToR for the EIS. He is correct. While CBA is compulsory for most coal mines in New South Wales, ToR for most coal mine assessments in Queensland do not include CBA. Even though Government guidelines, the Treasurer and the coal industry all support use of CBA, coal projects are not required to use it in Queensland. Mr Brown offers a potential explanation in his Alpha expert report:

> *"The Queensland Government has adopted a supportive position towards the development of the coal Industry…Hence, Queensland Governments of both political persuasions have adopted policy positions that mineral and energy resources are appropriate to be exploited subject to acceptable mitigation of impacts and payment of Queensland Government mining royalties. This may be the reason for the specification in the Terms of Reference of an impact assessment, rather than evaluation framework."*[6]

28. Mr Brown may be correct. The Queensland Government may be supportive of coal developments regardless of the costs or benefits they result in to the Queensland community. From an economic perspective, however, this is not good policy. Governments should pursue policies based on how they improve the economic welfare of the community, rather than favour a particular sector. One step towards achieving such policies would be to apply CBA to projects and policies which have the potential to impact on the welfare of the community of Queensland.

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[3] (Hunter Research Foundation, 2014) p3, bold in original
[4] (Brown, 2013) Expert report by Marcus Brown to Alpha Case p10 para19
[5] (Brown, 2013) Expert report by Marcus Brown to Alpha Case
[6] (Brown 2013) Expert report by Marcus Brown to Alpha Case p11 para 22

29. The ToR for the Kevin's Corner project do not require CBA, but they do not preclude it. In my opinion CBA could be used to fulfil the following requirement:

> *"The potential impacts should consider local, regional, state and national perspectives as appropriate to the scale of the project.*
>
> *The analysis should describe both the potential and direct economic impacts including estimated costs, if material, on industry and the community…"*[7]

30. In my opinion, many economists would interpret this as a call for CBA from a range of perspectives. The word "impact" is used but this does not necessarily call for an IO model and not a CBA. There are many examples of 'economic impact assessments' that employ CBA.[8]

31. The ToR also do not require monetary evaluation of environmental impacts. Yet:

> *"Despite this, the economic impact assessment did provide an assessment of the economic value of the ecosystem services of vegetation communities (vegetation communities being the main provider of ecosystem services) directly impacted by the Project."* [9]

32. While Mr Brown exceeded the ToR in attempting to value environmental impacts, the ToR explicitly require:

> *"With regard to the region's key industries and factor prices, provide information on:*
>
> - *current input costs (wage rates, building costs, housing rent etc)*
> - *land values in the region by type of use."*[10]

33. Yet despite identifying agriculture as a key industry, the assessment provides no data on agricultural wages, service costs, freight costs, other input costs or land values.

34. In my opinion the economic assessment generally fulfils the ToR. It does not, however, provide an adequate basis for a decision as to whether the project should proceed or not.

[7] (Qld DIP, 2010) p51
[8] For example (Gillespie Economics, 2013, 2014; Marsden Jacobs Associates, 2013)
[9] Expert report by Marcus Brown to Kevin's Corner case p7 para B. ii.
[10] Coordinator-General February 2010 Terms of Reference for an environmental impact statement – Kevin's Corner Project, Section 5.1 Economy, p51

Economic assessment and project viability

35. There is a range of economic assessment tools used for analysis of major projects. To evaluate whether a project should go ahead, CBA is the preferred methodology as it assesses whether a project makes the community better off. Other tools include:
    A. Cost effectiveness analysis, which takes a given policy outcome and assesses the most cost effective way to achieve it.
    B. Multi-criteria analysis, which selects different desired or undesired criteria, assigns scoring systems to them and adds up a project's 'score' on these criteria.

36. The potential effect of a project on other parts of the economy can also be estimated through several methodologies. IO modelling was used in the EIS. Other assessments in Queensland commonly use Computable General Equilibrium (CGE) models. CGE models are more sophisticated than IO models and overcome many of their shortcomings, discussed from page 13 below.

37. The advantage of CBA is that all costs and benefits are expressed in dollar terms and can be compared directly. Where values such as environmental impacts are not usually expressed in dollar terms, analysts can use various environmental evaluation tools, or alternatively leave these items unvalued and make it clear to decision makers that these items need to be considered qualitatively along with the final net benefit calculation in the CBA.

38. In addition to this, a well-conducted CBA can give decision makers insight into the costs and benefits faced by proponents. With an understanding of a project's financial viability or otherwise, decision makers can also assess the likelihood of costs and benefits to the community actually occurring. If a project like a coal mine is financially marginal, it will be unlikely to provide consistent jobs and royalties to the community, but may impose additional costs through the need for government subsidisation or inability to pay for end of life costs.

39. Most CBA of coal projects in Australia begins by assessing the costs involved with mining, processing and transporting the coal and estimating revenues from sale of coal. Consideration is then made of other costs and benefits and the extent to which they accrue to the relevant community. NSW Treasury's *Guideline for the use of Cost Benefit Analysis in mining and coal seam gas proposals* emphasise this:

"In the first instance, it will generally be most practical to assess all major costs and benefits to whoever they accrue and then adjust to estimate the proportion of these attributable to residents of the State."[11]

40. Through this analysis, decision makers can assess the financial strength of the project and the extent to which this depends on key variables such as coal prices, operating costs and capital costs.

41. None of this information is presented in the EIS. This information is particularly important for Galilee Basin coal projects as:

    A. There is widespread concern over their financial viability; and
    B. There are potential costs involved in approving a financially marginal project.

Financial viability of Kevin's Corner and other Galilee Basin projects

42. Concerns over Galilee Basin coal projects' viability have been widely discussed in financial media:

    "Development of the Galilee Basin looks increasingly remote, Macquarie Group Ltd., Australia's biggest investment bank, said in a May 1 research note. Prospects for project paybacks look extremely poor, the bank said. Further delays are likely unless "deep pocket" backers are able to ignore conventional economics."[12]

43. Detailed studies of other Galilee Basin projects have concluded that they are "beyond speculative"[13] and:

    "The magnitude of financial capital and infrastructure required, coupled with a depressed thermal coal market outlook make opening up the Galilee basin a challenging and high risk proposition."[14]

44. The marginal financial nature of Galilee Basin projects and the inability of IO to assist decision makers in deciding if projects will bring benefits is demonstrated by Bandanna Energy, which, as Mr Brown points out in his expert report,[15] has recently gone into administration. Two of Bandanna's key assets are the South Galilee Basin Coal Project and the Springsure Creek Coal Project. Each of these projects was assessed with IO modelling.

[11] (NSW Treasury, 2012) p5
[12] (Scharples, 2013)
[13] (Buckley & Sanzillo, 2013a) p4
[14] (Buckley & Sanzillo, 2013b) p9
[15] Expert report by Marcus Brown to Kevin's Corner case p20 para (i)

45. The South Galilee Basin Project's economic assessment concluded that it would employ 1,909 people and increase annual output by $1.2 billion from 2019 to 2047. In fact, the project is likely to employ zero people, produce zero output and has lost money for shareholders.[16]

46. Similarly, the economic assessment of the Springsure Creek Project forecast an increase in annual output of $1.9 billion and 3,236 jobs, but now looks unlikely to proceed. The IO model provides no indication that the seemingly large economic impacts it estimates do not reflect the viability of the project or how likely it is that the estimated impacts ever occur.

Costs of approving a financially marginal project

47. Granting approval of a project that is uncertain to proceed can have impacts at a local and state level. At a local level, landholders who would be affected by the mine have little incentive to invest in the productivity of their land given the uncertainty of its future. Landholders may be bought out and leave the district, with considerable impacts on the local community.

48. An example of this is the community of Dunnedo in New South Wales. The proposed Cobbora mine was approved by state authorities, despite NSW Treasury estimating the project would lose $1.5 billion.[17] The mine has not proceeded to date. Many farming properties were bought up for the mine area, with the original landholders leaving the district and the area now not being managed as intensively, resulting in less agricultural activity:

> *"The Cobbora community estimates about "80 families" sold up and left the community to make way for the mine, resulting in significant economic and social consequences for the district taking in Dunedoo."*[18]

49. In addition to effects on agriculture, approving a marginal project could result in volatility in the local housing market. The EIS notes that there has already been speculation driving shifts in local housing prices.[19] With a project approval it is likely, in my opinion, that this speculation and volatility would continue.

50. At a state level, a major risk of approving a marginal project is that it would require public subsidy in order to proceed. The Queensland Government is aware of the

[16] (Aurecon Hatch, 2012) see p39-40
[17] (NSW Treasury, 2013) see p9-11
[18] (Bartley, 2013)
[19] (Economic Associates, 2011) p75

financial challenges faced by Kevin's Corner and other Galilee projects and has said it will "do what it takes" to develop these projects including significant public subsidy.[20] Plans exist to waive royalties and/or to subsidise the development of necessary infrastructure.[21]

51. Queensland has a long history of subsidising the coal industry – around $8 billion over the last six budgets.[22] However, this comes at a heavy cost to the Queensland community, as Queensland Treasury makes clear:

> *"There is a real opportunity cost for governments in undertaking the initial capital expenditure. Governments face budget constraints and spending on mining related infrastructure means less infrastructure spending in other areas, including social infrastructure such as hospitals and schools."*[23]

52. The EIS provides decision makers with no information about the viability of the project, whether it will require subsidies, under what conditions subsidies may be required or their likely extent. Given the costs that such subsidies impose through reduced spending on areas such as health and education, the financial viability of the project should be of concern to decision makers and the costs of potential subsidies weighed with other costs and benefits.

Costs and benefits in the economic assessment

53. Even though many of the important elements in a CBA are already identified and valued in the assessment, the EIS does not include CBA. With only a few extra pieces of information a CBA could have been compiled. Given the large scope of the project and the EIS, this small addition could have provided economic assessment with great value for decision making. Below I discuss some of the information in the EIS that could have helped with this assessment.

Financial costs

54. Estimates of many items of capital and operating expenditure are included in sections 5.1.2 and 5.1.3. Most CBA of coal projects in New South Wales do not go into this level of detail on particular cost items, but make their assessment based on aggregated operating and capital cost estimates, sometimes compared with publicly available industry averages.[24] Given the level of detail already provided in the EIS on costs, it

[20] (Remeikis, 2014)
[21] (Queensland Government, 2013; Seeney, 2014)
[22] (Peel, Campbell, & Denniss, 2014)
[23] (Queensland Treasury, 2013) p15
[24] For a good example of CBA of a coal project giving consideration of capital and operating costs, some insight into financial viability as well as wider benefits and costs to the state, see (DAE, 2013)

would not require much more data for the analysts to be able to undertake CBA. Some issues that would be required include:

A. Transport costs – not included and likely to be significant given the location of the project.
B. Ensuring the estimates are realistic. One cost which seems obviously understated is mine rehabilitation. Only $3.4 million is budgeted over the life of the mine for rehabilitating an area of tens of square kilometres.[25]

Financial Benefits

55. Some information on revenues is also provided in the EIS. Section 5.2 Value of Coal Exports says:

"The Kevin's Corner Coal Project will produce approximately 856 million tonnes (Mt) of coal for export from Queensland throughout the life of the mine, the value of these exports to the Queensland economy will be approximately $67.8 billion. Once fully operational the coal mine, will produce between 25 Mtpa and 30 Mtpa of coal exports, equating to a value of $2.7 billion per annum."

56. These estimates could form the basis of revenue calculations, once some issues were resolved:

A. It is not clear where the 856 million tonne estimate comes from. The 2011 EIS Volume 1 Section 3 Project Description Table 2-2 (page 32) estimates run of mine coal over the life of the project of 926 million tonnes. Section 2.5.2 (page 54) an average yield of 0.75, which would result in 694 million tonnes of product coal.

B. It is not clear what range of coal prices is expected. $67.8 billion divided by 856 million tonnes suggests a price per tonne of $79/tonne. However, $2.7 billion divided by 25 million or 30 million tonnes gives $108/t and $90/t. These assumptions should be clearly stated.

Environmental costs

57. As mentioned above, part of the EIS, section 5.3.1, attempts to estimate the economic value of ecological impacts of the project. Much useful information for CBA has been collected, in excess of the ToR, although the final attempt at evaluation is clumsy as:

[25] See Hancock Galilee (2011) Kevin's Corner EIS economic appendix Table 5.14 and 5.15 and EIS Volume 1 Section 2 Project Description figure 2.7

A. Only impacts on vegetation are considered. Mr Brown says that this is because:

"Vegetation communities [are] the main provider of ecosystem services."[26]

This would seem to ignore impacts on groundwater and surface water, which I understand are claimed to be significant. There is also no consideration of impacts of rail construction, transport impacts such as coal dust and shipping in the Great Barrier Reef. Discussion of greenhouse emissions should also be provided. I suggest it is beyond the expertise of both myself and Mr Brown to decide what are the main ecosystems services provided by the site without other expert advice, which the EIS economic assessment does not seem to have sought.

B. Mr Brown says the evaluation was based on:

"A number of studies were reviewed with what was considered the most relevant cited."[27]

In fact the EIS reviewed only two studies, neither of which appear in the EIS reference list. I believe they refer to:

I. A study on community values for wetlands impacted by sugar cane production in a coastal area north of Townsville.[28]
II. A study on "a typical area of Perth urban bushland" from Western Australia.[29]

I disagree that these studies are relevant to the Kevin's Corner project, which is in an area that is neither coastal nor urban. These studies are valuation studies of very different ecological areas, in totally different economic environments using different evaluation methodologies.

C. These studies are based on surveys of the public, who have limited information about the ecological services that these areas provide. While these studies may provide insight into the intrinsic values people place on the ecosystems in question, and the use they gain from them, there is no attempt to quantify or evaluate the ecological services that they provide.

58. Because the economic assessment does not identify the full range of environmental impacts and does not base its valuation on primary research or appropriate secondary research, the EIS values for environmental impacts should not be relied on. The attempt

[26] Expert report by Marcus Brown to Kevin's Corner case p7 para B ii
[27] Expert report by Marcus Brown to Kevin's Corner case p7 para B iii
[28] (Mallawaarachchi, Blamey, Morrison, Johnson, & Bennett, 2001) incorrectly cited in the EIS as The Sugar CRC (2002), see p74
[29] (Pepper, McCann, & Burton, 2005)

to conduct this valuation shows, however, that such an exercise is possible and can play an important part in economic assessment. Environmental valuation studies and the debate they can inspire have played a role in several important environmental decisions in Australia, such as the Warkworth court case in NSW and the decision to preserve Coronation Hill from Uranium mining in the Northern Territory.[30]

Costs to Agriculture

59. Section 5.3.2 of the EIS economic assessment estimates an opportunity cost of the project through lost cattle grazing of $0.3 to $0.9 million per annum, or a present value of $4.6 to $15.6 million. While there are no references provided to support the calculations, the approach seems reasonable. The results could easily be checked with reference to the value of grazing land in the area, as the value of the land should, in economic theory at least, represent the present value of the future income stream it would provide. This cost would be included in a CBA of the project, either as a land acquisition cost or as foregone agricultural income.

60. Impacts which are more likely to be of concern to the agricultural industry relate not to the value of foregone production, but to impacts on input costs such as labour and services. I am surprised to read in Mr Brown's expert report that he believes:

> *"There is no basis that the demand for labour from agricultural and manufacturing sectors would decline as a result of the Project."*[31]

61. This seems to contradict the EIS economic assessment, which states:

> *"Due to the nature of the Kevin's Corner Project, the project creates significant demand for skilled blue collar workers. As such, this will cause inflationary wage prices within these sectors. As a result, competing sectors such as agriculture and population servicing sectors (e.g. automotive industry, general industry etc) are also likely to experience higher incomes."*[32]

62. It is usual to assume in economics that when something costs more, less of it will be used. In this case, skilled labour and services such as mechanics, truck drivers, engineers, etc, will cost more if the project proceeds. The logical conclusion is that other sectors – ie other mines, agriculture and manufacturing – will use less of them.

[30] see (Cook, 1991) for general discussion of Coronation Hill and (Preston, 2013) for the Warkworth judgment which goes into considerable detail on environmental valuation.
[31] Expert report by Marcus Brown to Kevin's Corner case, page 10 para b (ii)
[32] (Economic Associates, 2011) p75

63. The reason the EIS does not show this impact on agriculture and other industries is that IO modelling is unable to consider negative impacts on sectors which are affected by the project in question. As one critic of using IO models as an evaluative tool put it:

> *"[IO models] always produce a positive gain to the economy, however disastrous the event*."[33]

Why IO models are not suitable for project evaluation and overstate impacts

64. IO models have well known shortcomings, as is noted in the EIS:

> *"The input-output approach has a number of limitations, which may result in overestimation of impacts."*[34]

65. Perhaps the key shortcoming is that they lack 'constraints':

> *"The absence of capacity constraints such that the supply of each good is perfectly elastic, implying that each industry can supply whatever quantity is demanded of it and there are no budget constraints."*[35]

66. What this means is that the model assumes there is an unlimited supply of resources in the economy. Unlimited skilled labour, unlimited arable land, unlimited water, etc. Having no budget constraints assumes that firms and households can spend as much as they need to supply or consume what the model scenario requires. The Productivity Commission explains that IO models assume that:

> *"there is unlimited labour and capital available at fixed prices — so that, any change in the demand for productive factors will not induce any change in their cost."*[36]

67. This assumption and the overstatement in impacts that result from it mean that IO modelling is subject to "well recognised abuses". According to the Productivity Commission:

> *"Abuse primarily relates to overstating the economic importance of specific sectoral or regional activities. It is likely that if all such analyses were to be aggregated, they would sum to much more than the total for the Australian economy. Claims that jobs 'gained' directly from the cause being promoted will lead to cascading gains in the wider economy often fail to give any consideration to the restrictive nature of the*

[33] (Abelson, 2011) p54
[34] (Economic Associates, 2011) p38
[35] (Economic Associates, 2011) p38
[36] (Gretton, 2013) p4

assumptions required for input-output multiplier exercises to be valid. In particular, these applications fail to consider the opportunity cost of both spending measures and alternate uses of resources, and may misinform policy-makers."[37]

68. It is interesting to compare the results of the Kevin's Corner EIS economic assessment, based on IO modelling, with the results of the China First EIS economic assessment based on more sophisticated CGE modelling which does not assume unlimited resources. The table below shows the estimated change in employment for the bulk of the China First project's operating phase:

Table 1: Estimated Change in full-time-equivalent employment in Queensland from China First project 2019-2037

Agriculture	- 120
Mining	788
Manufacturing	- 1,666
Electricity and water	20
Construction	- 65
Trade	1,763
Transport and storage	643
Business, finance and insurance services	607
Public administration, defense, health and education	1,698
Recreation and other services	255
Ownership of dwellings	32
Total	3,955

Source: (AEC group, 2010) Table ES.7

69. Note in the table above that the impacts on employment in agriculture, manufacturing and construction predicted by China First's analysts are negative. Because mining projects like China First and Kevin's Corner compete with these industries for skilled labour, if the project proceeds they are competing for the same pool of workers, pushing up wages and reducing the numbers employed in these other industries. As the IO model for Kevin's Corner assumes there is unlimited skilled labour in the economy it does not model these impacts and overstates the impacts of the project.

70. Another effect not considered by the IO model is the impact of a mining project on other mining projects. The China First project expects to employ 1,710 workers.[38] Note in the table above that mining employment is predicted to increase by only 788 positions. The reason that the China First analysts expect mining employment to

[37] (Gretton, 2013) p1
[38] (AEC group, 2010) page(vi)

increase by only 788 while the project would employ 1,710 workers is that the project competes for scarce resources with other mining projects. As a result of a mine the size of China First, other mining projects will be abandoned, curtailed or delayed due to the competition for resources and effects on the coal price. The China First analysts expect, therefore that while their project would 'create' 1,710 mining positions, it would also 'destroy' 922 positions in other mines. This effect is not considered by the Kevin's Corner IO model and therefore overstates the employment impact of the project.

Extent of IO inaccuracy

71. The extent to which an IO model overstates the impacts of a project depends on how intensively the resources of the economy are being used. If labour, capital and other inputs are being intensively utilised, IO models heavily overstate impacts. If there are many resources left idle or being underutilised, then the overstatement will be less severe.

72. I disagree with Mr Brown's opinion that the shortcomings of the IO model are not relevant because of recent changes in Queensland unemployment, national unemployment and an unreferenced measure of industry capacity by the National Australia Bank.[39] Mr Brown says that IO models are appropriate when:

> *"the Queensland and Australian economies are not close to full employment or industry capacity utilisation."*[40]

73. He says that because unemployment has risen to 6 per cent and reported industry capacity is at 80 per cent that there is "significant capacity …to accommodate future demand growth."[41] There are two problems with Mr Brown's reasoning:

    A. He does not discuss what "full employment" means.
    B. He does not consider capacity in relevant industries.

Full employment

74. Mr Brown suggests that as unemployment has risen above 6 per cent that the economy is not close to full employment. Exactly what constitutes full employment is a topic of considerable debate among economists. There will always be some unemployment as people move between jobs. Beyond this 'frictional' unemployment economists have different opinions over what level of unemployment can be achieved without problems with inflation:

[39] I assume Mr Brown is referring to the National Australia Bank's monthly business survey.
[40] Expert report by Marcus Brown to Kevin's Corner case, page 16 para (vi)
[41] Expert report by Marcus Brown to Kevin's Corner case, page 11 para (vi)

"Recent RBA decisions regarding loosening and tightening monetary policy are consistent with the view that a 5 per cent unemployment rate is a good guide."[42]

75. While recent increases in unemployment are clearly a concern to economists and policy makers, it is not appropriate, in my view, to equate the assumptions of unlimited resources in an IO model with an economy with 6 per cent unemployment. Just because there has been a small increase in unemployment does not mean that the resources that would be used for the Kevin's Corner project are completely without opportunity cost. The increase in unemployment may reduce the extent to which the IO models results are overstated, but does not eliminate the shortcomings and abuses of these models.

76. Similarly, industry capacity utilisation never reaches 100 per cent. There is always some level of unused capacity. Current levels of capacity utilisation reported by National Australia Bank's monthly business survey are not significantly different from long term averages.

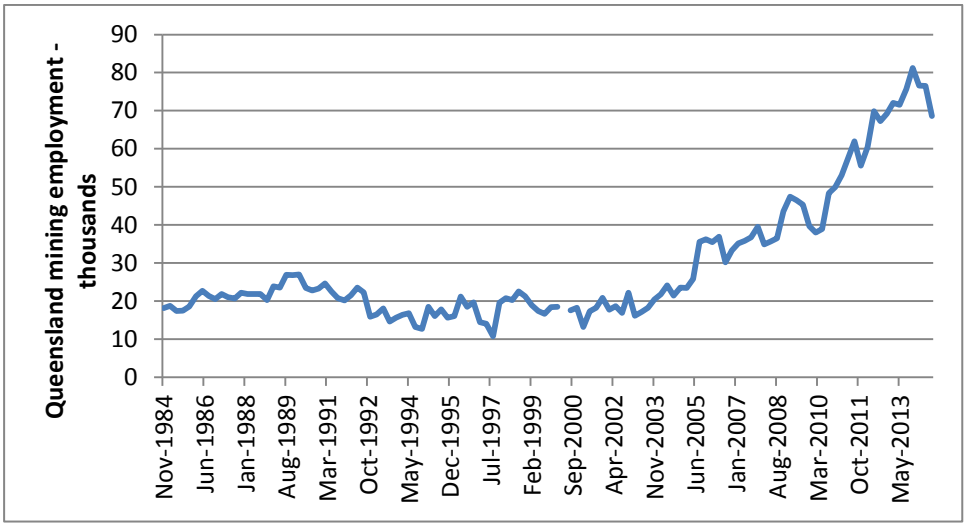
77. Furthermore, the project is planned to last for three decades. The EIS models the project under the assumption of unlimited skilled labour for the entire project life. Mr Brown's opinion that the current unemployment rate means that this assumption holds at present does not mean that it will hold until 2043. Assuming that it will is inappropriate in my opinion.

Employment and underemployment in mining labour

78. Mr Brown bases his opinion that there is considerable capacity in the economy on economy-wide unemployment. It would be more appropriate to consider ABS statistics on employment by industry to present the court with an understanding of trends in the relevant industries. In the figure below we see that Queensland mining employment has experienced unprecedented growth in the last ten years:

[42] (Freebairn, 2012) p15

Figure 1: Queensland mining employment



Source: ABS 6291.0.55.003 Labour Force, Australia, Detailed, Quarterly

79. The data shows that while mining employment has fallen sharply in the last few quarters, it remains at levels higher than at any time before May 2012. Mining employment was able to rise sharply not because of widespread unemployment, but by recruiting workers from other industries. This is made clear in Reserve Bank research which shows that mining recruits more from within its industry and from other industries than any other sector:

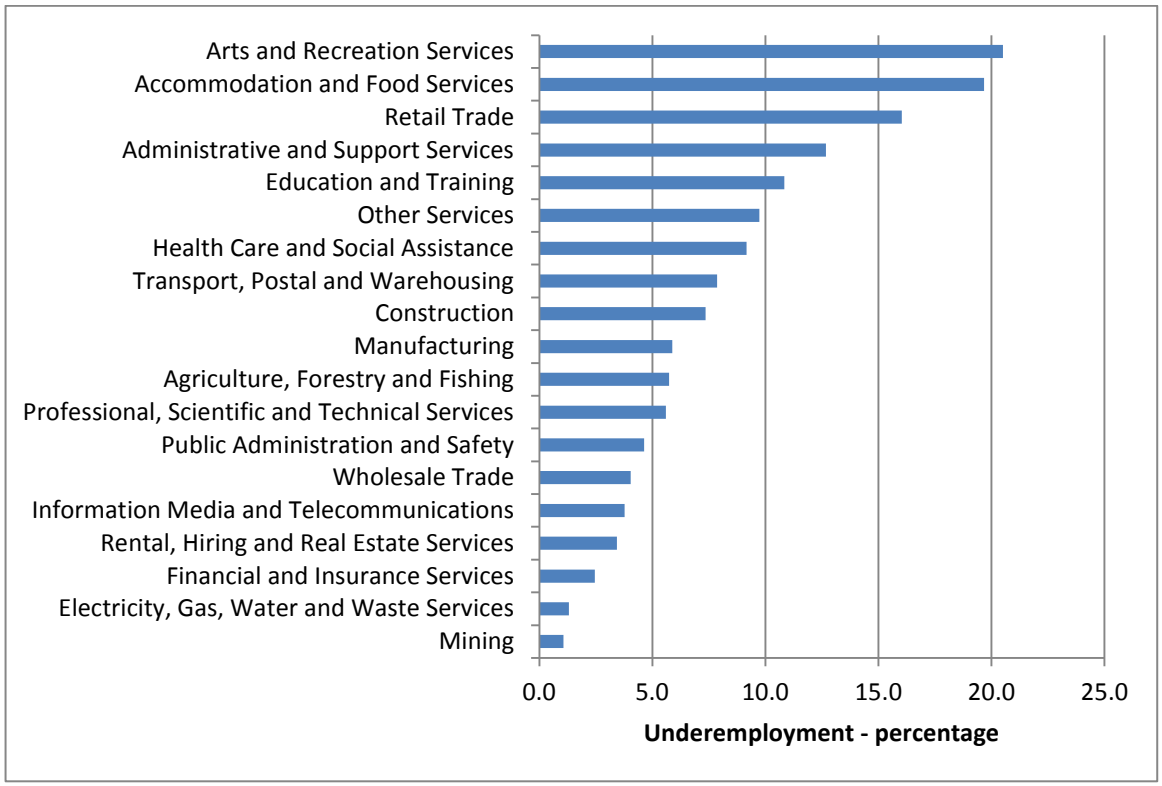
Figure 2: Worker turnover - selected industries

Source: (D'Arcy, Gustafsson, Lewis, & Wiltshire, 2012) p6

80. The figure above shows that the vast majority of mining workers who have been with their current employers less than 12 months came from within the mining industry (grey section) or from other industries (green section). Even though relatively few actually come from outside of employment (pink section), IO models assume that all recruits come from outside of employment.

81. Given that Queensland mining employment remains at historic highs and that many recent lay-offs have other industries to return to, it is not surprising that underemployment in the mining industry is low, as shown in the figure below:

Figure 3: Underemployment by industry



Source: ABS 6291.0.55.003 Labour Force, Australia, Detailed, Quarterly

82. The chart above shows that mining has the lowest level of underemployment of all industries. This would seem to contradict Mr Brown's opinion that there is so much spare capacity in the economy that it is appropriate to assume resources are unlimited.

83. The key point is that the Kevin's Corner project could be "accommodated"[43] by the Queensland economy. If it is ever "accommodated", however, most of the resources it will use would otherwise be used in other mining projects and other industries. The EIS economic assessment does not recognise this and therefore overstates the impacts of the project. Mr Brown's opinion that because of a recent increase in unemployment

[43] Expert report by Marcus Brown to Kevin's Corner case, p11 para (vi)

there is now excess capacity in the economy is simplistic and not based on detailed analysis.

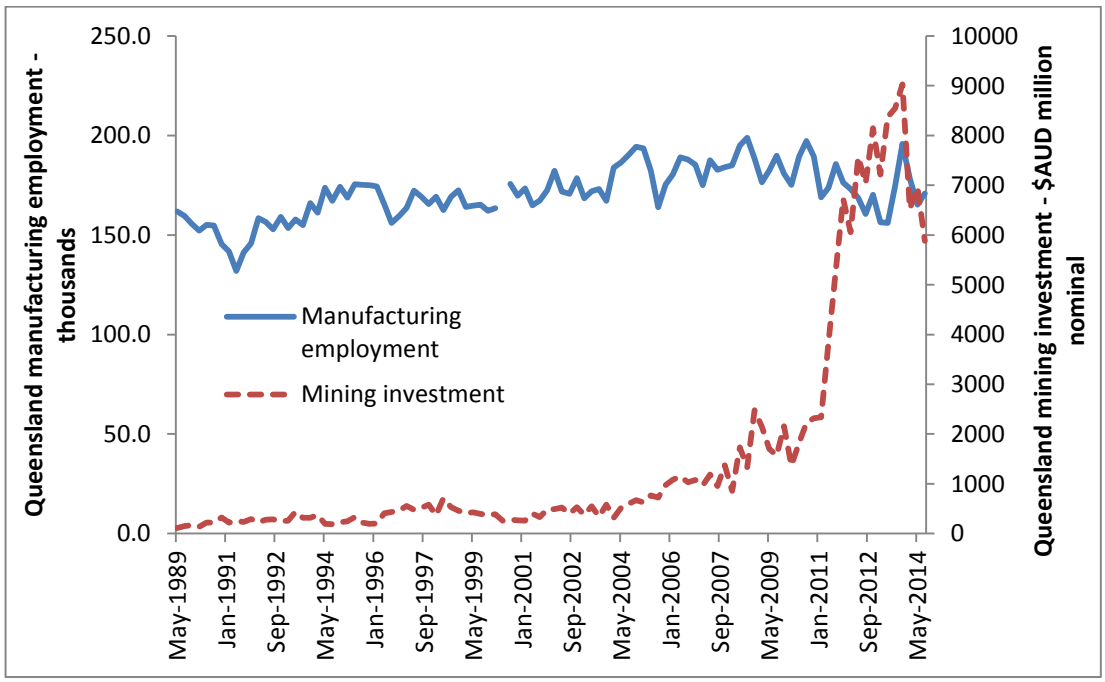
84. **Impacts on agriculture and manufacturing – real-world data**

85. Mr Brown's assertion that the project will not affect agriculture and will stimulate manufacturing employment is not supported by real-world data. Mr Brown's view on manufacturing is that:

> *"The mining industry consumes a significant amount of manufactured goods, particularly in the form of machinery and equipment.*
>
> *…With this in mind, it is my view that the Project will result in an increase in demand for manufactures, and hence stimulate employment within a number of sectors in the manufacturing industry (as shown in Tables 5.6 and 5.16 in Economic Impact Assessment report)."*[44]

86. Mr Brown's view and the results of the EIS are contradicted by ABS data on Queensland manufacturing employment and mining investment. Manufacturing employment has oscillated around the same level since 1989, unaffected by the huge increases in mining investment since 2011, as shown in the figure below:

Figure 4: Queensland manufacturing employment and mining investment



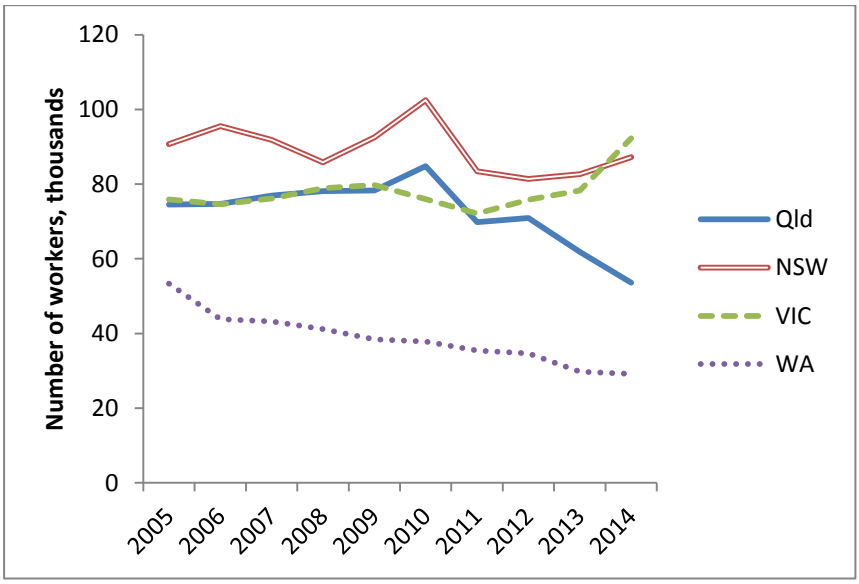
Sources: ABS 6291.0.55.003 Labour Force, Australia, Detailed, Quarterly and ABS 5625.0 Private New Capital Expenditure and Expected Expenditure, Australia

[44] Expert report by Marcus Brown to Kevin's Corner case, p10 para (4.3(b)(ii) and (iii))

87. The chart above shows that despite a huge increase in mining investment, many times historical levels, manufacturing employment has not experienced any stimulus. If anything it has trended down more steeply since the boom in mining investment began, suggesting that the negative impacts of the mining boom on the manufacturing sector outweigh the increase in demand for mining machinery, etc.

88. Agriculture shows similar trends since the mining investment boom in 2011. ABS data shows that the states with the largest mining industries, Queensland and Western Australia, have seen significant declines in agricultural employment, while states with smaller mining industries have not experienced this decline, as shown in the figure below:

Figure 5: Employment in agriculture 2005-2014, selected states



Source: ABS (2014) 6291.0.55.003 Labour Force, Australia, Detailed, Quarterly, presented in (Campbell, 2014)

89. The figure above shows that since 2011, when Queensland mining investment increased rapidly, Queensland has lost 15,000 agricultural jobs, while NSW and Victoria have seen increases. WA has also experienced prolonged decline. Competition with the mining industry for land, water, labour and services are just some of the factors which influence agricultural employment, but this chart suggests the impact can be significant and does not support the EIS's conclusion that mining projects result in a modest positive force for agricultural employment.

90. The trends shown in ABS data lend weight to predictions by the Reserve bank that the effects of the mining boom could lead to declines of 20-30 per cent in agricultural and manufacturing employment. [45]

[45] (Downes, Hanslow, & Tulip, 2014) see page 28, Figure 20,

91. Mr Brown's expert witness statement contains a section discussion placing the Kevin's Corner project in the context of the wider Queensland economy. This section shows that the project would result in only very small increases in Queensland's overall economic output – in the order of 0.14 to 0.31 per cent. Mr Brown uses this context to show that negative impacts of the project would be small in the context of the Queensland economy:

> *"As such, an increase in input demand as generated by the Project represents a marginal change to the Queensland and Australian economic environments, and as such is unlikely to have any materially negative impact on overall employment levels."*[46]

92. This raises two points:

    A. Elsewhere Mr Brown claims there will be no negative impacts of the project, but here he suggests there will be but they are unlikely to be material.[47]

    B. In the context of the Queensland or national economy, the positive impacts of the project are also likely to be immaterial.

93. To further place the project in the context of the Queensland mining industry and Queensland economy I note:

    A. The mine expects to employ 2,000 people in its operational stage.[48] This represents:
        I. 2.8 per cent of Queensland mining employment; and
        II. 0.085 per cent of Queensland employment

    B. The results of the EIS IO model, which I consider unreliable, estimate the downstream impacts of the mine operations on employment at around 6,400 full time equivalent positions. This represents 0.27 per cent of Queensland employment, around a quarter of one per cent.

94. It is contradictory that Mr Brown considers that the project will be a marginal development in terms of the Queensland economy, but yet:

[46] Expert report by Marcus Brown to Kevin's Corner case, p11 and 12, paras (i) – (iii)
[47] See for example Expert report by Marcus Brown to Kevin's Corner case, p11 para (ix)
[48] Hancock Galilee (2011) EIS volume 1, section 2, Project description, p 31

"The Project if developed as planned will make a major contribution to the Queensland economy in terms of royalties paid to the Queensland Government."[49]

95. Mr Brown estimates these royalties at between $145 million and $168 million per annum, based on a production rate of 30 million tonnes per year and coal prices between $AUD69 and $AUD80 per tonne. He seems to ignore the project description, which says the project will typically produce 26 to 27 million tonnes per year, rather than the peak capacity of 30 million tonnes.[50] Regardless, this represents:

    A. 7.0 to 8.1 per cent of the current level of coal royalties ($2.078 billion); and

    B. 0.30 to 0.33 per cent of Queensland government annual revenue ($50.12 billion).[51]

96. Mr Brown is not consistent in that he estimates the project's peak impact on Queensland's economic output at 0.31 per cent and describes this as "marginal", but describes an increase in royalties of 0.31 per cent as "a major contribution".

97. The role of coal in the Queensland economy is often overestimated. A survey by The Australia Institute found that:

    A. On average, Queensland residents think coal employs 13 per cent of the Queensland workforce, while the actual level is 1.2 per cent; and

    B. On average, Queensland residents think coal accounts for 19 per cent of State Government revenues, while the actual level is 4 per cent.

98. The economy of Queensland, like most modern economies, is actually based on service industries, which employ three quarters of the workforce and make up two thirds of the state's output.[52]

99. To summarise, if it is viable and proceeds as proposed, the Kevin's Corner project represents a small increase in economic output, employment and government revenue for Queensland. Negative impacts on employment in other industries will therefore also be small when seen in the context of the state economy. This does not mean that these effects do not exist, or that they are not important at a local level or for particular industry segments.

[49] Expert report by Marcus Brown to Kevin's Corner case, p15 para (viii)
[50] Hancock Galilee (2011) EIS volume 1, section 2, Project description, page 31
[51] (Queensland Treasury, 2014)
[52] (Campbell, 2014)

Kevin's Corner in the context of seaborne coal markets

100. Despite being relatively small in the context of the Queensland economy, the Kevin's Corner project represents a surprisingly large increase in supply of thermal coal to the world seaborne market. The Bureau of Resource and Energy Economics estimates the amount of thermal coal traded internationally at 989 million tonnes in 2012-13.[53] The Kevin's Corner project represents, therefore, an increase of 2.7 per cent in the world supply. This would place downward pressure on coal prices.

101. While the downward pressure the Kevin's Corner project would place on coal prices would be small, the effect of several Galilee Basin projects exporting into world markets could be large. Table X-5 of Mr Brown's expert witness statement describes Galilee Basin projects with the potential to export 160 million tonnes per year. Including the 27 million tonnes the Kevin's Corner project could produce, this represents an increase of nearly 20 per cent of the seaborne thermal coal supply.

102. If these developments all proceeded, it is likely that there would be a significant impact on coal prices. This would likely contribute to the closure of coal mines elsewhere, including other parts of Queensland and the Hunter Valley, which produces largely thermal coal and has many mines which are relatively costly to operate.

Conclusion

103. In my opinion the economic assessment of the Kevin's Corner EIS is not suitable for decision making purposes. It contains no attempt to weigh the costs and benefits of the project and assess whether the project is in the best interests of Queensland.

104. The economic assessment is based on Input-output modelling which is not a decision making tool as it does not weigh the costs and benefits of the project to the community. Furthermore, it is almost certain to overstate the impacts of the project due to its lack of capacity constraints and other shortcomings.

105. Cost benefit analysis should have been conducted, in line with Queensland Government guidelines and commitments. It was not precluded by the ToR and the assessment includes various items beyond these requirements. With little extra data, basic cost benefit analysis could have been conducted.

106. Cost benefit analysis, if well conducted, could provide some insight into the financial viability of the project. Based only on input-output modelling and other pieces of economic information, the assessment provides decision makers with no

[53] (BREE, 2013)

understanding as to whether the project is financially viable and if it would go ahead if granted approval.

107. This should be of concern to decision makers, given the widespread concerns among banks and economists about financial viability of Galilee Basin projects. With the Government saying it will subsidise these developments, proper cost benefit analysis becomes all the more important.

108. In closing, I refer to the questions I have been asked to address in my letter of engagement. The bulk of the report above responded to the question:

> *"whether there is sufficient economic information to form an adequate basis for approval of the mine having regard in particular to potential economic impacts and the reasons for your view."*

109. The second question in my letter of engagement was:

> *"whether, having reviewed all of the EIS documents, you agree with the conclusion of Coordinator-General's assessment in relation to economics and the reasons for your view."*

110. In response to this second question, the Coordinator-General's assessment contains very little discussion of economics and makes no reference to the economic assessment discussed in this report. In the Coordinator-General's assessment *Section 6 Social and local economic impacts* (p122-133) only the social impact assessment is addressed, much of which is outside my area of expertise.

111. *Section 2.3 Project Rationale* of the Coordinator-General's report (p10) mentions operational and construction jobs, capital expenditure and other potential economic benefits. All of these benefits are contingent on the project being financially viable, which the EIS provides no information on. There is little quantification and no discussion of net benefits – the weighing of costs and benefits – either through formal cost benefit analysis or through qualitative weighing of costs and benefits. Costs of the project are not mentioned at all – for example public subsidies, royalty waivers, infrastructure contributions, impacts on other industries, or environmental costs.

112. As the Coordinator-General seems to assume the project will be viable throughout its 30 year life and does not appear to consider any potential economic costs, I do not agree with his/her conclusions.

113. The third question in my letter of engagement was:

"whether, having regard to all of the available material, there are issues that should be examined in more detail or additional lines of inquiry in relation to economics that should be explored before approval is granted and the reasons for your view."

114. In response to the third question, as discussed at length, cost benefit analysis of the Kevin's Corner project and associated Galilee Basin coal and infrastructure projects should be conducted. Particularly as public subsidy is being considered by the Queensland Government, the market conditions that would support these projects and enable them to repay subsidies, pay royalties and provide employment should be thoroughly examined.

115. Finally, my letter of engagement asked:

"whether, having regard to all of the available material, the cumulative economic impacts have been adequately addressed by the Applicant."

116. In response to this final question, as discussed above, the development of several Galilee Basin projects could have major impacts on coal markets globally and input markets in Queensland. None of these issues have been addressed in the EIS or other planning documents to my knowledge.

117. I do not believe any readily ascertainable additional facts would assist me in reaching a more reliable conclusion.

Expert's statement

118. I confirm the following:
    A. The factual matters stated in this report are, as far as I know, true;
    B. I have made all enquiries I consider appropriate;
    C. These opinions are genuinely held by me;
    D. The report contains reference to all matters I consider significant;
    E. I understand my duty to the court and have complied with this duty;
    F. I have read and understood the Land Court Rules 2000 on expert evidence;
    G. I have not received or accepted instructions to adopt or reject a particular opinion in relation to an issue in dispute in the proceeding.

Roderick E.S. Campbell,
22 December 2014

Appendix I – References

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Appendix II – Letter of engagement

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14 March 2014

Roderick Campbell
The Australia Institute
Canberra City ACT 2601

Sent by email: rod@tai.org.au

Dear Mr Campbell

Coast and Country Association of Queensland Inc. & Ors ats Hancock Galilee Pty Ltd, Land Court of Queensland Proceeding MRA713-13 & EPA714-13

We confirm that we act for Coast and Country Association of Queensland Inc. (**CCAQ**) as an objector in the Queensland Land Court proceedings MRA713-13 & EPA714-13 (**Proceedings**). The North Queensland Conservation Council (**NQCC**) is also an objector in these Proceedings.

There is some overlap between CCAQ's and NQCC's objections to the applications for a mining lease and an environmental authority for the Kevin's Corner Project regarding economic issues. Both CCAQ and NQCC will also find it difficult to obtain separate experts due to their extremely limited financial resources. Therefore, in the interests of the efficient running of the matter, CCAQ and NQCC seek to mutually engage you to give expert evidence on the issue of economics in these Proceedings.

To avoid any potential conflicts that may arise as a result of this arrangement:

1. CCAQ and NQCC acknowledge that any confidential information provided to you may be shared with both CCAQ and NQCC;
2. the primary point of contact for this matter will be EDO Qld, and we will provide you with your briefing material;
3. if at any point there are conflicting instructions between CCAQ and NQCC you may cease acting for one party and choose to continue acting for the other; and
4. if at any point one party withdraws from the matter, you may choose to continue acting for the remaining party.

1. **Engagement**

1.1 On behalf of CCAQ and NQCC, we wish to engage you to act as an independent expert witness in relation to the economic issues in the Proceedings.

1.2 As yet our client has no budget for expert fees so, as discussed, any preliminary work by yourself will be on pro-bono or speculative basis.

1.3 Please provide us your preliminary oral opinion as soon as possible.

2. Instructions

2.1 You are instructed to review this letter and accompanying documents and prepare a report setting out your opinion as to:

(1) whether there is sufficient economic information to form an adequate basis for approval of the mine having regard in particular to potential economic impacts and the reasons for your view;

(2) whether, having reviewed all of the EIS documents, you agree with the conclusion of Coordinator-General's assessment in relation to economics and the reasons for your view;

(3) whether, having regard to all of the available material, there are issues that should be examined in more detail or additional lines of inquiry in relation to economics that should be explored before approval is granted and the reasons for your view;

(4) whether, having regard to all of the available material, the cumulative economic impacts have been adequately addressed by the Applicant.

3. Background information

3.1 The Kevin's Corner Project (**the Project**) is a proposed open-cut and underground coal mine north west of the township of Alpha, approximately 340km south west of Mackay in the Galilee Basin, Queensland. The mining lease application is for 40 years with an annual extraction rate of around 45 million tonnes per annum Run of Mine (**ROM**) coal.

3.2 The Project is situated in the Galilee Basin in the catchment of the Burdekin River which flows into wetlands and the Great Barrier Reef, and the area of the Project and its surroundings is predominantly used for agriculture, particularly grazing.

3.3 The thermal coal deposits for the Project are estimated to be 4.269 billion tonnes, within Mining Lease Application 70425 (**MLA**), which comprises approximately 37,380 hectares.

3.4 Hancock Galilee Pty Ltd (**Applicant**) applied for an environmental authority (mining lease) (**EA**) under the *Environmental Protection Act 1994* (Qld) (**EP Act**) and a mining lease (**ML**) under the *Mineral Resources Act 1989* (Qld) (**MR Act**) for the Project on or about 18 December 2009.

3.5 The Coordinator-General declared the Project a significant project for which an environmental impact state (**EIS**) was required under the *State Development and Public Works Organisation Act 1971* (Qld) (**SDPWO Act**) on 11 September 2009.

3.6 The Applicant undertook public consultation on an EIS in October 2011, a supplementary EIS (**SEIS**) in November 2012, an addendum to the supplementary EIS in November 2011 and provided additional supplementary documentation to the Coordinator-General's report in early 2013, for approval under the SDPWO Act (together, the **EIS documents**).

3.7 The Coordinator-General's report on the Project under the SDPWO Act was delivered on 30 May 2013. The Coordinator-General recommended that the mine be approved subject to conditions.

3.8 We submitted on behalf of CCAQ an objection to the applications for a mining lease and an environmental authority on 6 December 2013.

3.9 An objection to the applications for a mining lease and an environmental authority were submitted by NQCC on about 5 December 2013.

4. **Brief of Material**

4.1 We will share the electronic brief with you via Dropbox, please advise whether you require hardcopies.

4.2 We draw your attention to the following documents, which are of general relevance to the Project:

(1) Initial Advice Statement to the Coordinator General (Application) (07/2009) (Document 1 of Index B of the Brief)

(2) Final Terms of Reference for EIS (09/02/2010) (Document 2 of Index B of the Brief)

(3) EIS Volume 1 (31/10/2011)

- Section 00 Executive Summary (Document 3 of Index B of the Brief)
- Section 01 Introduction (Document 4 of Index B of the Brief)
- Section 02 Description of the Project (Document 5 of Index B of the Brief)

(4) EIS Volume 2 (31/10/2011)

- Appendix W Environmental Management Plan (Document 6 of Index B of the Brief)
- Appendix X Cumulative Impacts (Document 19 of Index C of the Brief)

(5) SEIS Volume 2 (03/11/2012)

- Appendix O Interim Cumulative Impacts Assessment Report (Document 26 of Index C of the Brief)

(6) Coordinator General's Assessment Report (30/05/2013) (Document 7 of Index B of the Brief)

4.3 Additionally, we enclose the following documents, which are relevant to economics:

(1) EIS Volume 1 (31/10/2011)

- Section 23 Economics (Document 1 of Index E of the Brief)

- Section 29 Social Impact Management Plan (Document 3 of Index E of the Brief)

(2) EIS Volume 2

- Appendix V Economics (Sept 2011) (Document 2 of Index E of the Brief)

4.4 We have included all EIS Documents relevant to economic issues. We do not assume that all documents included in the index will be relevant to your report, but have included them for the sake of completeness, and we would appreciate it if you could consider the documentation enclosed with a view to identifying any additional documentation or other expert opinions you may require.

5. Timing

5.1 At this stage the Land Court has deferred the making of an Order setting out complete directions through to trial, and under the current Court Order the process will not be determined until 11 April 2014.

5.2 We received a request for particulars from the applicant on 20 January 2014

5.3 An Order for directions was made by the Land Court on 14 February 2014.

5.4 Under the current Court Order we/ CCAQ and NQCC are required to respond to the applicants request by 4 April 2014.

5.5 At this stage, can you please review the enclosed materials and provide us your opinion prior to **Friday 28 March 2014** to assist us in the preparation of CCAQ's response to the request for particulars.

6. Your duty to the Land Court

6.1 We enclose as **Annexure A** rule 23 of the *Land Court Rules 2000* and rules 426, 428 and 429B of the *Uniform Civil Procedure Rules 1999* which govern experts in the Land Court.

6.2 In particular we note that rule 426 of the *Uniform Civil Procedure Rules 1999* provides that you have a duty to assist the Land Court which overrides any obligations you may have to CCAQ and NQCC as your clients.

6.3 We also emphasise that we and our client don't seek to influence your views in any way and we ask for your independent opinion to assist the Land Court. Consequently, please note that any statements of fact or opinion in this letter of instructions, the above documents, or anything given or said to you by us relevant to the issues in your report do not constrain you in any way and are not intended to influence your views. We ask you to form your own opinion about the relevant facts and circumstances for the purposes of your report.

6.4 We recommend that any joint report or separate expert report you prepare should contain:

(1) an acknowledgement of having been instructed on an expert's duty in accordance with rule 426 of the *Uniform Civil Procedure Rules 1999* and having understood and discharged that duty; and

(2) a statement verifying that no instructions were given or accepted to adopt, or reject, any particular opinion in preparing the report.

7. **Format of your report**

7.1 Suggestions for the format of your report are set out in **Annexure B**, "Format of your report".

7.2 Your report must include:

(1) your qualifications;

(2) all material facts, whether written or oral, on which your report is based;

(3) references to any literature or other material you relied on to prepare the report;

(4) for any inspection, examination or experiment you conducted, initiated, or relied on to prepare your report—

i. a description of what was done; and

ii. whether the inspection, examination or experiment was done by the expert or under the expert's supervision; and

iii. the name and qualifications of any other person involved; and

iv. the result;

(5) if there is a range of opinion on matters dealt with in your report, a summary of the range of opinion, and the reasons why you adopted a particular opinion;

(6) a summary of the conclusions you reached; and

(7) a statement about whether access to any readily ascertainable additional facts would assist you in reaching a more reliable conclusion.

7.3 You should attach to the report:

(1) a copy of your Curriculum Vitae; and

(2) a copy of this letter.

7.4 Please number all pages and paragraphs of your report. You may wish to include an index.

7.5 If your report includes any photographs, measurements, graphs or illustrations these should be firmly attached to the report, and clearly identified and numbered.

7.6 You are required to include a summary of your opinion.

7.7 Your report should contain:

(1) an acknowledgement of having been instructed on an expert's duty in accordance with rule 426 of the *Uniform Civil Procedure Rules 1999* and having understood and discharged that duty; and

(2) a statement verifying that no instructions were given or accepted to adopt, or reject, any particular opinion in preparing the report.

8. **Change of opinion**

8.1 If for some reason, you change your opinion after delivering your report, please advise us as soon as possible. If that change is material, a supplementary report will need to be prepared, which explains the reasons for the change in your opinion.

9. **Confidentiality and privilege**

9.1 In accepting this engagement, you agree that:

(1) this letter and all future communications (whether electronically maintained or not) between us are confidential. These communications may be subject to client legal privilege;

(2) you must take **all** steps necessary to preserve the confidentiality of our communications and of any material or documents created or obtained by you in the course of preparing your report;

(3) you must not disclose the information contained in our communications or obtained or prepared by you in the course of preparing your report without obtaining consent from us;

(4) you must not provide any other person with documents which come into your possession during the course of preparing this report, whether created by you or provided to you by us or our clients, without obtaining consent from us.

9.2 The duty of confidentiality continues beyond the conclusion of your instructions.

9.3 If you are ever obliged by law to produce documents containing any of this confidential information (whether by subpoena, notice of non-party discovery or otherwise) please contact us immediately so that we may take steps to claim client legal privilege.

9.4 You should ensure that you retain copies of all drafts of your report together with all documents that you rely on in preparing your report. We will inform you when you are no longer required to retain them.

9.5 If requested, you must return to us all documents and other material (including copies) containing confidential information. Where any confidential information is in electronic form, we may require you to delete this information instead.

9.6 Any internal working documents and draft reports prepared by you may not be privileged from disclosure and may be required to be produced to the opposing parties in the litigation, and to the Court.

9.7 You may be cross-examined about any changes between your working documents and your report. The Court will be interested to understand the reason or reasons for any changes, and you should be prepared to, and able to, explain them.

10. **Document management**

10.1 Please ensure that all documents created pursuant to this retainer are marked "Privileged and Confidential: prepared for the purpose of the Queensland Land Court objection hearing to the Kevin's Corner Mine".

11. **Court appearance**

11.1 At the hearing of this objection, you may be required to attend Court and give evidence. You must be personally involved and knowledgeable in all aspects of the preparation of the report.

11.2 If you are required to attend Court to give evidence, we will contact you to discuss your availability and make the necessary arrangements.

If you have any questions regarding your engagement or require further information, please do not hesitate to call us on 3211 4466.

Yours faithfully

Environmental Defenders Office (Qld) Inc

Sean Ryan

Senior Solicitor

Appendix III - CV

Roderick E. S. Campbell

Email: roderick@ecolarge.com
Post: 62 Patterson St, Middle Park, Victoria, 3206
Phone: 0438-503-249
D.O.B.: March 21st, 1978

Employment

Research Director (Nov 2014 - ongoing) **August 2013 -**
Economist (Aug 2013 – Nov 2014) **Present**
The Australia Institute
Australia's most influential progressive think-tank, based in Canberra

The Australia Institute researches a wide range of political and economic issues, including public finance and fiscal policy, equity and the environment. I was appointed Research Director in November 2014 and am responsible for coordinating the Institute's team of six researchers in addition to my own research, which focuses on the economics of the coal industry.
Recent highlights:

- Expert witness appearances – I have appeared twice in the NSW Land and Environment court called by the Environmental Defenders Office NSW (EDO). My appearances required:
    - Thorough understanding of non-market valuation and environmental economic literature
    - Strong background in economics of climate change
    - Strong public speaking skills
- Article published in *Australian Environmental Review* on the economics of environmental offsets.
- Multiple reports on the Australian coal industry, with media appearances on TV, radio and print.

Director and Economist **2008 – Present**
Economists at Large (www.ecolarge.com all reports available on website)
Melbourne-based network of "economists without borders" providing consulting services to NGOs, development agencies and community-based organisations. Current projects and past achievements include

Assessment of Victorian brown coal export potential. I was the main author of an assessment of the financial and economic viability of proposals to export brown coal from the Latrobe Valley, which required

- Understanding of commodity markets for different ranks of coal, gas and related commodities
- Understanding of carbon pricing
- Knowledge of minerals exploration and mining regulation

Economics of hunting in Africa. I have authored several influential reports on hunting tourism and the species conservation in Africa:

- *Horn of Contention* – economics of trade in rhino horns and the potential conservation implications of trade liberalisation.
- *The $200 million question* – assessment of the value of trophy hunting to African economies and communities.
- *Mane assumptions* – critique of hunting industry sponsored research on the value

of lion safaris to east African conservation and economies.

Evaluation of livestock-focussed disaster recovery packages. Ongoing project for World Society for Protection of Animals and their Livestock in Disasters project, requiring

- Experience in bioeconomic modelling
- Understanding of the economic and agronomic role of livestock in developing countries
- Knowledge of economic literature relating to disaster recovery

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Freelance development consultant **2007 - 2008**

Including projects with WWF, European Commission, ACIAR

- Model of environmental service values in the Mekong Basin. Required a thorough understanding of environmental service valuation and benefit transfer protocols
- Financial modelling and project evaluation of EC-funded Sustainable Rattan Harvest Project in Laos, Cambodia and Vietnam. Included fieldwork in project areas and financial data analysis

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Transport coordinator **Jul-Sep 2008**

Lenovo (computer manufacturer)

At the Beijing Olympics I managed transport for the Lenovo corporate hospitality programme.

- Coordinated a pool of 15 vehicles and 26 staff, in Chinese (Mandarin).
- Recruitment and training for Chinese drivers working with corporate guests.
- Negotiated purchase and hire of equipment and represented Lenovo in meetings with transport companies and the Beijing Organising Committee of the Olympic Games (BOCOG).

Media analyst **2006-2007**

Cubit Media Research

Cubit provides media analysis services to clients in IT, telecommunications, government and others.

- Monitored multiple media sources, managed databases and produced client-specific reports
- Worked with native speaking analysts to develop services for Chinese and Japanese media projects
- Production of reports for clients using SQL/Access, Excel and Word.

Australian Youth Ambassador for Development
Australian Centre for International Agricultural Research (ACIAR) **2005 - 2006**

Agricultural development program in China, as an AusAID Youth Ambassador and independent consultant

- Established and coordinated an on-farm research programme. 20 farmers hosted experiments by ACIAR researchers in two contrasting field areas in Eastern Gansu Province.
- Conducted survey of farming practices and farmer attitudes towards tillage research, including survey development, data collection and presentation of results for communities and academic staff

Education

University of Melbourne **1996-2002**

B.Commerce (Economics) & B.Arts (Honours Economic Geography)

My honours thesis addressed payment for environmental service schemes in China, specifically the "Grain for Green" soil erosion control policy. Data collected during a field trip to Shaanxi Province.

Kyoto University

Economics exchange **2001**

I took three subjects for local students, environmental economics, Japanese economy and organisational behaviour, all taught in Japanese.

Other information and interests

Languages: Chinese, Japanese, Portuguese, basic Lao, basic Spanish.

Licences: Driving (car), boat (recreational), first aid level 2

Memberships: Economic Society of Australia, Young Economists Network Victoria, Asialink

Other interests: Kiteboarding, crosswords and music.

Referees

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