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# **Biting the land that feeds you**

The economics of the New Acland coal  
mine

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## Summary

The New Acland coal mine is a controversial project 157km west of Brisbane, Queensland. It is located next to the township of Acland and 10km from the larger centre of Oakey. The mine is controversial because of its location in an agricultural area and the impacts it has on the local community, farms and health. These impacts include the majority of the Acland population moving away from the town, the acquisition of 160 agricultural properties and significant dust and noise pollution.

Rather than discussing these impacts, the mine's owners, the New Hope Group, emphasise the economics of the project, based on economic assessments they have commissioned. This paper looks at the economic assessments of the New Acland coal project and considers how the techniques used ignore the real costs and exaggerate the benefits of the project.

We identify three steps through which the assessments have delivered inaccurate and misleading information about the project: ignoring local impacts, emphasising 'indirect' jobs and avoiding cost-benefit analysis.

### **Step one – ignore local impacts**

Before the New Acland Project began in 2001, 64 families lived in the township of Acland. A study for Rio Tinto estimated the economic value of impacts on rural communities in the Hunter Valley at \$38 million per household displaced, but no value has been placed on those displaced by the New Acland Project. With a third expansion of the New Acland Project currently being considered there is only one remaining resident in Acland.

No economic assessment of the New Acland Project considers the impacts of the project on agriculture and the local businesses that depend on agriculture. Nor do the economic assessments mention noise, dust and mental health stresses and the impact these have on the health of local people, despite medical groups having expressed concern about health effects.

### **Step two – emphasise 'indirect' jobs**

Rather than direct impacts, which are overwhelmingly negative, New Hope emphasises the number of 'indirect' jobs it claims to be responsible for. Despite employing only around 300 people, the company claims the project would "create" up to 2,850 indirect jobs. To calculate this number they have used methods described as "biased" by the Australian Bureau of Statistics and "abused" by the Productivity Commission. They have also ignored the jobs destroyed in other industries as large amounts of land are taken over.

### **Step three – avoid cost-benefit analysis**

The economic assessments of the New Acland Project do not rely on standard cost-benefit analysis, despite this being the method favoured by the Queensland planning department. If cost-benefit analysis of the project was conducted, difficult issues such as local impacts and distribution of benefits would be addressed. Instead, the company relies on non-standard methods, such as 'Rapid Cost Benefit Analysis', which despite the name does not analyse any costs, nor quantify many benefits.

Based on the certain negative effects on the local community, but uncertain benefits to the wider economy, The Australia Institute concludes that the New Acland Project and its latest expansion proposal is likely to reduce economic wellbeing of the local community and Queensland and should not go ahead.

## Introduction

The New Acland coal mine is located on the Darling Downs, 30 kilometres west of Toowoomba and 157 kilometres west of Brisbane. It is next to the small township of Acland and 10km from Oakey, a town of 4,500 people. The surrounding district covers some of the most productive farmland in Australia, much of it categorised as Strategic Cropping Land or Priority Agricultural Land.<sup>1</sup> This area is widely regarded as being part of the nation's 'foodbowl', and is responsible for approximately one quarter of the state's agricultural production.<sup>2</sup> The town is well known for its grain production, cotton, oilseeds and other crops. Intensive cattle feedlots and grasslands supply two large meat processors and Oakey is also home to a number of dairies, as well as pig, poultry and egg production.<sup>3</sup>

This district also has a long history of coal mining. The underground Acland Number Two Colliery was one of Australia's longest continually operating underground coal mines, running from 1929 to 1984.<sup>4</sup> It and several other collieries operated in the Acland district, supplying local industries, railways and Toowoomba Hospital. Small scale, underground coal operations were a part of the local community.

Times have changed, however. The small town of Acland has been almost entirely bought up for the proposed expansion of the modern, open-cut New Acland Coal Project, owned by the New Hope Group. The town is now all but destroyed and the impact of noise and dust on the health of local people has attracted the attention of national medical groups.<sup>5</sup> Large areas of farmland have been bought by the mining company creating serious problems for the wider agricultural economy.

Despite these impacts, New Hope Group regularly claims that the project is boosting the local economy, both in submissions to planning authorities and in its ongoing public relations campaign. Most of these claims refer back to economic assessments commissioned by the company for its Stage Two expansion and proposed original Stage Three expansion.

The economic assessments of the New Acland coal project provide interesting examples of the misuse of economics. The assessments generally follow a well-established pattern for Australian project proponents generally and coal miners in particular:

- Step one – ignore impacts on local communities, industries, health and the environment
- Step two – emphasise 'indirect jobs' through the use of multiplier and input-output analysis
- Step three – avoid cost-benefit analysis.

While this pattern is well established, New Hope Group's assessments add some surprising new twists that should be of interest to observers of the project and economists more widely. In this paper we explain these three well-worn steps of misleading economic assessments and highlight some of the New Hope Group's innovations in this field.

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<sup>1</sup> DSDIP, 2013

<sup>2</sup> DSDIP, 2013

<sup>3</sup> Oakey Community Care Committee Inc, 2012

<sup>4</sup> DEHP, 2013

<sup>5</sup> DEA, 2013

## Step one – Ignore local impacts

The economic conclusions reached by the New Acland Project ignore some of the most obvious effects of the project:

- The town of Acland has been all but destroyed
- Agriculture and related industries have been negatively affected
- Health problems relating to dust and noise exist.

### Acland

Before the New Acland Project began in 2001, 64 families resided in the township of Acland.<sup>6</sup> It won the Queensland Tidy Town overall award in 1988-89 and was a regular winner of the 200 to 400 population category.<sup>7</sup> Since then, nearly all residents have been bought out or forced to leave due to the impacts of the mine. The town had a school, shop, garage, museum, Country Women's Association, engineering works, town hall and a fire depot – but now, in anticipation of the Stage Three mine expansion, all of these have closed or moved and Acland has only one remaining resident.<sup>8</sup>

The social fabric of Acland was recognised in the Economic Impact Statement (EIS)<sup>9</sup> from the mine proponents. The area was described as a:

*'close knit' and family oriented area in which local support networks are held in high regard. A strong sense of amenity is derived from the region's agricultural and rural lifestyle and consultation identified that community members are proud of their 'sense of community' and links to agricultural history. Important characteristics of the region include its open space, rural and natural landscapes and small towns.*

The EIS also stated that:

*Consultation with affected property owners and other stakeholders suggests that much of this community closeness has been lost in recent years due to the expansion of mining activities in the region. Some residents felt that local communities were 'dying' and that much of the rural lifestyle has been degraded.*

The economic models used by New Hope Group include no value for either the properties and homes acquired, nor the community that lived in them. The fact that Australians value the existence of rural communities is obvious to most people and not many would even need to consider this in economic terms. This value is obvious even to other coal industry economists. A study for Rio Tinto in the Hunter Valley estimated the economic value of impacts on rural communities at \$38 million per household displaced.<sup>10</sup> It seems disingenuous to talk about the project's "boost to the local economy"<sup>11</sup> when the most local-level economy no longer even exists.

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<sup>6</sup> Nason, 2008

<sup>7</sup> Keep Queensland Beautiful, 2013

<sup>8</sup> Nason, 2008

<sup>9</sup> New Hope Group, 2009a p16-15

<sup>10</sup> Gillespie Economics, 2009. Note that The Australia Institute and Economists at Large have been very critical of this study and the way it was carried out. While the conduct of the study and the exact values are contentious, the conclusion that Australians place a high value on rural communities is not contested. See Campbell, 2012; Preston, 2013

<sup>11</sup> New Hope Group, 2013a

## Impacts on agriculture and Oakey businesses

Another factor not considered in any aspect of the economic assessment of the New Acland Project is the impacts of the project on agriculture and the local businesses that depend on this farm-based activity. By ignoring these impacts, the EIS understated the real costs of the project.

The Acland coal mine proponents have bought out 160 properties, covering over 10,000 ha in the Acland region, both for the land it plans to mine and for surrounding buffer areas.<sup>12</sup> Most of these properties are now operating at a fraction of their former capacity. As discussed below, the economic model used by New Hope Group's consultants does not consider this impact and does not count the jobs that have been destroyed in the local economy.

According to local sources, many of these farms were high-value agricultural businesses, including pig farming, dairying, feedlots, grain farming and storage. While being managed by the New Acland Pastoral company (a subsidiary of the mine company), they are now largely used only for grazing, and even then at a fraction of former stocking rates. This decline in agricultural output, and livestock numbers in particular, were important factors leading to the closure of the Oakey saleyards in 2007 and other agribusinesses, retail outlets and services. The saleyards formerly conducted livestock sales twice weekly, bringing many people into Oakey who would otherwise do shopping and other business elsewhere.

## Dust, noise and health

The economic assessments of the New Acland Project fail to mention noise, dust and mental health stresses and the impact these have on the health of local people. This is a major omission – not only because the health of people living nearby should be of concern, but also because health impacts have a major economic cost. Studies in the United States have shown that the health impacts alone of coal mines and power stations can outweigh their economic benefits.<sup>13</sup>

The health impacts of the New Acland Project have been widely reported. Medical groups have taken particular interest in this project; concerned about its impacts on local people's health from pollution.<sup>14</sup> Formerly healthy residents now complain of 'severe lung problems',<sup>15</sup> and, despite infants suffering from coughing fits, dust monitoring consists only of 'gravimetric deposition', which means a plastic funnel sitting on top of a glass jar,<sup>16</sup> and some monitoring of larger dust particles (PM10). The reduced work productivity, health care costs and educational outcomes of these affected people should be considered in a thorough economic assessment.

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<sup>12</sup> New Hope Group, 2012a

<sup>13</sup> Hendryx & Ahern, 2009; Muller, Mendelsohn, & Nordhaus, 2011; Palmer et al., 2010

<sup>14</sup> DEA, 2013

<sup>15</sup> Nadin, 2011

<sup>16</sup> Cleary, 2012

## Step two – Emphasise ‘indirect’ jobs

Having ignored the direct impacts of the project on local communities, New Hope, like most industry proponents, prefers to emphasise the number of ‘indirect jobs’ it, and the coal industry more widely, is responsible for:

*The revised [New Acland] Project will boost current employment from 460 full time equivalent positions up to 570 full time equivalent positions. It is also expected to grow indirect employment from 2,300 to 2,850 jobs.<sup>17</sup>*

*The New Acland mine is one of the region’s biggest employers providing 300 direct jobs and thousands more indirectly.<sup>18</sup>*

*New Acland provides direct jobs for more than 300 locals, 160 contractors, and contributes to 2,300 more indirect jobs across the region.<sup>19</sup>*

*Operation [of the New Acland Project] will generate an additional 180 jobs in the Region and an additional 540 jobs in Australia annually.<sup>20</sup>*

*The coal industry in Queensland employs about 20,000 people directly. A further 70,000 indirect jobs are created through the industry’s activities.<sup>21</sup>*

*The [Queensland] resources sector [mainly coal and coal seam gas] was responsible for creating approximately 480,013 [full time equivalent] jobs (64,286 in direct employment and 415,727 in additional employment).<sup>22</sup>*

Aside from the inconsistencies between the various claims, the most interesting aspect of these figures is the sheer number of the ‘indirect jobs’. Indirect jobs refer to jobs in other industries that a particular industry – in this case the coal industry – claims to create due to its spending and activities. The implication is that unless the coal industry is able to proceed without hindrance, all of these other ‘indirect jobs’ will disappear.

This is contestable for several reasons:

Firstly, all industries are inter-related, so isolating what has really been ‘indirectly created’ by one industry is difficult. For example, identifying how many jobs the coal industry has ‘created’ in the construction industry compared to how many construction jobs have been transferred from other projects is almost impossible. As all industries contribute to jobs in other industries, if the number of indirect jobs ‘created’ by every industry were to be added up, the total number of jobs in the economy would be many times the number of employees in Australia.<sup>23</sup>

Secondly, the models involved, known as multiplier models or input-output models, make an assumption that there are no resource constraints on the economy. In other words, they assume there is an unlimited amount of land, water and skilled workers that a project can draw on, without taking any resources away from other industries. As The Australia Institute’s Dr Richard Denniss explained to the NSW Land and Environment Court:

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<sup>17</sup> New Hope Group, 2013b

<sup>18</sup> New Hope Group, 2012b

<sup>19</sup> New Hope Group, 2013a

<sup>20</sup> New Hope Group, 2009 p20-7

<sup>21</sup> New Hope Group & SKM, 2009 p3

<sup>22</sup> Lawrence Consulting, 2012 pii,

<sup>23</sup> Richardson & Denniss, 2011

*[These models] assume that there is an invisible pool of highly skilled workers who would remain unemployed in the absence of the [coal] project going ahead. In turn ... all of the wages spent by this 'ghost workforce' will result in an increase in retail or other spending.<sup>24</sup>*

The judge in this case concerning the expansion of the controversial Warkworth coal project in the Hunter Valley ruled:

*I accept Dr Denniss' evidence that the assumption of the input-output model that there is a ghost pool of highly skilled yet unemployed people in the Hunter region, from which labour for the extension of the existing mine would be drawn, is unrealistic.<sup>25</sup>*

For these reasons, this type of modelling and its results on indirect jobs has been called “biased” by the Australian Bureau of Statistics<sup>26</sup> and regularly “abused” by the Productivity Commission.<sup>27</sup>

In the case of the New Acland assessments, the belief is not just in a ghost workforce, but also in ‘ghost farms’. The economic assessment for the Stage Two New Acland mine estimated that there would be 19 new jobs indirectly created in agriculture in the region,<sup>28</sup> but did not consider how many jobs would actually be lost in agriculture because of the project. New Hope has bought up around 160 properties in the area,<sup>29</sup> which now run at a fraction of their former capacity. The assumption in New Hope’s model is that these farmers have moved to ghost farms.

Local people report that the reduction in livestock numbers caused by taking so many farms out of production has been a contributing factor in the closure of the Oakey saleyards, private abattoir, grain depot, rural merchandisers, Department of Primary Industry office and further downstream agricultural jobs. With the end of the twice-weekly livestock sales, fewer people come into Oakey and more retail spending is lost to other towns, hurting local retailers. Again, none of this is considered in the economic assessment of the New Acland Project. The economic assessment failed to consider the negative economic impacts on Oakey and surrounding districts.

Other coal mine assessments are more forthright about their effect on other industries. Consultants for Clive Palmer’s China First mine, proposed for the Galilee Basin, used more realistic modelling and estimated that their project would actually destroy 192 jobs in agriculture and 2,215 jobs in manufacturing.<sup>30</sup> More recently, consultants to Yancoal in NSW declared that projects like the Ashton South East Open Cut in the Hunter Valley are “not about job creation”.<sup>31</sup>

Another factor contributing to the overestimate provided by the New Acland Project on employment is the data used by the consultants:

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<sup>24</sup> Denniss, 2012 p17

<sup>25</sup> Preston, 2013 p159

<sup>26</sup> ABS, 2011

<sup>27</sup> Gretton, 2013

<sup>28</sup> New Hope Group & SKM, 2005

<sup>29</sup> New Hope Group, 2012a

<sup>30</sup> AEC group, 2010

<sup>31</sup> See NSW Land and Environment Court transcripts, Hunter Environment Lobby vs Minister for Planning and Infrastructure, p550



*The regional multipliers used in this study were sourced from the Queensland Treasury, which produced them in 1996. These are the most recent input-output tables published in Queensland. Even though the tables were produced some nine years ago, the same relationship between industries in the economy holds and the minimal changes that have occurred will not impact the estimates significantly.<sup>32</sup>*

The reason why organisations like Queensland Treasury and the ABS have stopped producing such data is:

*... considerable debate in the user community as to their suitability for the purposes to which they were most commonly applied, that is, to produce measures of the size and impact of a particular project to support bids for industry assistance of various forms.<sup>33</sup>*

In other words, project proponents use them to inflate their claims to push for rapid approval. The claim that this does not matter and that there has been no real change in the Queensland economy since 1996 is very surprising. In 1996 most people did not own a mobile phone, had never sent an email and had no idea there was about to be a mining boom. All these factors have changed the way industries work with each other, meaning the multipliers used in earlier decades are no longer relevant. This was also recently tested in the NSW Land and Environment Court, with the adjudicating judge stating that:

*... it cannot be assumed that the absolute amount of employment in coal mining and transport, and the relative level of employment between coal mining and transport, will remain stable at 2001 levels until 2030.<sup>34</sup>*

There is no doubt that while the New Acland Project may employ several hundred people, its effects on employment overall are dubious. Many workers are contractors whose job security is uncertain – their jobs can end suddenly if the coal price declines. Furthermore, the project destroys jobs in other sectors, a factor that is not considered by the consultants to New Hope Group or the Queensland Resources Council, but is plain to see in Acland and evident to many Oakey residents and surrounding farmers. The models used to make estimates of ‘indirect jobs’ are flawed. To consider their results to be meaningful requires a belief in ‘ghost workers’ and an assumption that nothing has changed in Queensland since 1996.

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<sup>32</sup> New Hope Group & SKM, 2005 p14-6

<sup>33</sup> ABS, 2011

<sup>34</sup> Preston, 2013 p159

## Step three – Avoid cost-benefit analysis

Cost-benefit analysis is recommended by the Queensland Government's Project Assurance Framework, and by all Australian Treasuries and finance departments.<sup>35</sup>

*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.*

*Cost-benefit analysis generally assesses the impact of a project on the economic welfare of the community, and is therefore a key element in any public sector cost-benefit analysis.*

*By comprehensively identifying and estimating as many costs and benefits of a project as can reasonably be measured, including those which can be thought of as social and environmental, it is possible to rank project options according to their net economic benefit.*

Despite this, it is rarely carried out by coal project proponents in Queensland – as distinct from New South Wales where it is compulsory.<sup>36</sup> This is not surprising, as to conduct a proper cost-benefit analysis coal companies would have to itemise the negative aspects of their projects. In hindsight, residents of Acland and Oakey would have benefited from this detail.

For example:

- Mining companies are generally majority foreign-owned, or at least headquartered out of the local district, so nearly all profits leave the area.<sup>37</sup>
- Coal mining and transport have a serious impact on human health, which results in economic costs to individuals and the health system.<sup>38</sup>
- Coal mining can have a serious impact on water and land, affecting other industries and the value of these assets.
- Coal mining, transport and use are major contributors to climate change, which has major economic costs.

Coal project proponents are worried that if decision makers were confronted with thorough cost-benefit analysis of their projects, decision makers might agree with Judge Preston in the Warkworth case, who was “not satisfied that ... economic benefits of the Project outweigh the environmental, social and other costs”.<sup>39</sup>

It is interesting that the New Hope Group decided to include in its Stage Three EIS a ‘Rapid Cost Benefit Analysis’ (RCBA).<sup>40</sup> A RCBA is an innovation unique to the assessment of the New Acland Project, one quite distinct from traditional cost-benefit analyses. The key difference is that New Hope’s RCBA does not actually consider any costs of the project, for example, capital costs, operating costs, health costs or environmental damage. Nor does it consider most benefits, for example, profits, royalties or tax revenues. In fact, the only value

<sup>35</sup> This quote is from Qld DIP, 2011 p18. Similar sentiments are expressed by Department of Finance and Administration, 2006; NSW Treasury, 2007 and many others.

<sup>36</sup> NSW Treasury, 2012

<sup>37</sup> Richardson & Denniss, 2011

<sup>38</sup> see for example, Epstein et al., 2011 and Muller et al., 2011

<sup>39</sup> Preston, 2013 p155

<sup>40</sup> New Hope Group, n.d.

included in the RCBA is the income that workers that live in the local area might earn. More specifically:

- The difference between average mine wages and average regional wages for local recruits, estimated as 40 per cent of employees.
- All the wages for recruits from outside the area who move to the area, estimated as 28 per cent of employees.

The remaining 32 per cent of employees are assumed not to count, as they will take their wages back to where they live, outside the local area. Under the RCBA:

- Wages represent a cost to the company and are usually considered as a cost in cost-benefit analysis.
- Wages are considered a benefit to workers; the standard assumption is that the workers could get another job at a similar wage, so the project actually makes only a marginal difference to the worker.
- The project's average wage is compared with the region's average wage and the difference is considered to be a benefit of the project. This assumes, however, that local workers are unable to commute outside the area to work in similar jobs. Yet 60 per cent of the labour for the project is assumed to commute into the region.
- The full wage of workers who move to the region is included as a benefit which suggests that they will spend their entire wage in the region and that the goods and services they buy involve no cost to the region to provide.

This is a non-standard approach to cost-benefit analysis. This approach offers absolutely no guidance on the value of the costs and benefits of the project and how they affect the welfare of the people of Acland, Oakey, Queensland or Australia. The Australia Institute is unaware of any similar assessments anywhere in the world. The first 10 pages of results of an internet search for this term reveal no similar methodology.

If a standard cost-benefit analysis of the project were conducted, the outcome would depend on the scope of the assessment. At a very local level, the project clearly makes people worse off – the town of Acland has almost disappeared, with only one resident remaining. At a global level, the greenhouse gas emissions it will create are almost certainly more costly to the world's climate than the profits of the mine. At an intermediate level, results may be less certain, and would require serious consideration of the health costs, damage to water, agricultural land and the wider natural environment and detrimental social outcomes in the local communities.

A standard cost-benefit analysis may not entirely reflect the impacts of reducing the output of farms and grazing properties, due to the assumptions inherent in its methodology. The acquisition of so much property and the flow-on effects, such as the closure of the Acland and Oakey businesses, need to be considered by decision makers through more than just the prism of formal economic assessment.

## Conclusion

The claims relating to the economic impacts of the New Acland Coal Project are based on economic assessments that are deeply flawed. While most of the methods used are typical of major project proponents lobbying for fast approvals and minimal conditions, others are unique to the New Acland assessment.

Most obviously, these assessments completely ignore the negative effects of the project. It is hard to understand how the mine's economists failed to notice the disappearance of the community of Acland, the decline of the area's farms and the effects this decline has had on

businesses in Oakey. The closures of agricultural businesses in the district are prime examples. All of these impacts have been omitted from the assessments.

The use of input-output multipliers to exaggerate the positive economic impacts of a project while ignoring the negative impacts is common practice for project proponents in Australia. Such models assume the existence of a 'ghost workforce' and other 'ghost' resources to enable their modelled project to have no negative effect on other industries. The Australian Bureau of Statistics, the Productivity Commission and the NSW Land and Environment Court have all been critical of this approach. Using this method to assess the New Acland Project ensures its benefits are overstated while its costs are ignored.

Cost-benefit analysis, the type of economic assessment that would have been most appropriate, has not been conducted on the New Acland Project. The proponents claim to have conducted 'Rapid Cost Benefit Analysis', a form of economic assessment they seem to have invented themselves. While it may be rapid, their assessment entirely ignores the costs of the project as well as the commonly accepted benefits of the project. Its focus on wages and demographics is not in line with standard economic practice.

The example of Oakey highlights in particular the adverse social and economic impacts of open-cut mining in an intensive agricultural region. Mining results in closure of many farms with marked downstream impacts on the local economy. Health impacts are likely to be considerable in relatively densely populated regions such as Oakey and the nearby Darling Downs.

On the basis of certain negative effects on the local community, but uncertain and largely unquantified wider benefits, The Australia Institute concludes that the New Acland Project and its latest expansion proposal is likely to further reduce economic welfare and should not go ahead.

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