

# Submission to the Isaac Downs Project on the draft terms of reference

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67 Payneham Road  
College Park SA 5069  
P 0422 974 857  
E [admin@dea.org.au](mailto:admin@dea.org.au)  
W [www.dea.org.au](http://www.dea.org.au)

Healthy planet, **healthy people.**

#### **DEA Scientific Committee**

Prof Colin Butler  
Prof David de Kretser AC  
Prof Robyn McDermott  
Prof Emeritus Sir Gustav Nossal AC  
Prof Fiona Stanley AC

Prof Stephen Boyden AM  
Prof Peter Doherty AC  
Prof Stephen Leeder AO  
Prof Lidia Morawska  
Prof Hugh Possingham  
Dr Rosemary Stanton OAM

Prof Emeritus Chris Burrell AO  
Prof Michael Kidd AM  
Prof Ian Lowe AO  
Prof Peter Newman AO  
Prof Lawrie Powell AC  
Dr Norman Swan

## Doctors for the Environment Australia

Doctors for the Environment Australia (DEA) is an independent, self-funded, non-Government organisation of medical doctors in all Australian States and Territories. Our members work across all specialties in community, hospital and private practices. We work to prevent and address the diseases - local, national and global - caused by damage to our natural environment. We are a public health voice in the sphere of environmental health with a primary focus on the health harms from pollution and climate change.

## Recommendations

The prime consideration of the project must be whether it complies with the need for Queensland and Australian sustainability in view of the climate change and biodiversity emergencies.

We recommend;-

That the proposal be withdrawn because of its contributions to the climate change and biodiversity emergencies. If despite, these overwhelming scientifically based constraints the project proceeds then we recommend;-

- The terms of reference (TOR) address climate change, provide modelling for the region for the next 30 years and assess domestic and export emissions from the mine of 1.4 billion tonnes over the life of the mine which will impact the sustainability of the Bowen region and Australia.
- That the recent OGIA report on groundwater of the Surat and southern Bowen Basin be extended to the entire Bowen Basin with information on the water usage of all coal and gas mining, existing and proposed.
- Provide a comprehensive assessment of biodiversity of the Bowen Basin area so that the proposals in the TOR can be assessed in the context of the cumulative impact of all mining activity.
- Provide a cost benefit analysis for the project, including health and environmental costs of domestic and export emissions with

Economic Impact Assessment through computable general equilibrium modelling.

- Provide a realistic assessment of the life of the mine based on current moves to provide alternatives to metallurgical coal.

## Submission

We find the TOR to be well written and cognisant of existing regulations and no doubt it will satisfy the Queensland government. However, in terms of sustainability of Queensland, other factors must be increasingly taken into account by the proponent; such will be the nature of corporate responsibility if both proponents and communities are to survive in a rapidly changing environment. This issue has been raised by BHP which proposes actions to reduce emissions in its supply chain. This action may not be possible for Stanmore but other contributions could be pursued. The obligations of a proponent are no longer confined to satisfying a government which supports developments which threaten the sustainability of Queensland and Australia.

## Sustainability

This depends on the pillars of life, climate, water and food and therefore on agriculture in the region. The present climate emergency is progressing faster than many scientists were expecting; the biodiversity crisis similarly. Relevant to both are the region's water resources.

These factors are relevant to Stanmore but despite their absence from government regulations it would be wise to have 25 years of climate modelling for the region, and a cumulative water study for all existing and proposed mines in the Bowen Basin.

Also relevant to the sustainability of Stanmore are factors such as the rapid development of technology to replace metallurgical coal and the likelihood of scope 3 emissions being the subject of financial imposts if climate emergency continues on its current trajectory. We cover some of these issues below.

## Present expectations of world temperature rise

Australia has signed and ratified the COP24 Paris Agreement, which aims to limit "the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels".<sup>2</sup>

Indeed, the recent Intergovernmental Panel on Climate Change (IPCC) report demands urgent and deep reductions in greenhouse emissions and shows that if emissions are not in rapid decline by 2030, we have little chance of limiting warming to 1.5°C or even 2°C. Their conclusion is that limiting warming to 1.5°C implies reaching net zero CO<sub>2</sub> emissions globally around 2050.<sup>2</sup> We note that the Stanmore project would expect to produce greenhouse emissions until 2040.

## **New expectations on world temperature rise**

The IPCC reports involve more than a thousand scientific experts reaching consensus and inevitably there are new scientific findings being published even before the next IPCC report is due. Whilst the IPCC is offering warnings on the 2°C temperature rise, an accumulation of findings indicates that in the absence of aggressive action, we are likely heading for an alarming 4°C rise this century.

The reports from the Royal Society in 2011<sup>3</sup> and followed in 2013 by a comprehensive report<sup>4</sup> from the Potsdam Institute and World Bank predicted a 4°C rise before the end of this century.

This was confirmed by a study in the Journal Advances in Atmospheric Sciences which estimated there is a 74 percent chance of exceeding a rise of 4°C by the turn of the century.<sup>5</sup>

The latest review of these predictions from David Spratt and Ian Dunlop summarises these 4°C statements from highly esteemed scientific institutions.<sup>6</sup>

We note that for thirty or more years, science has modelled the consequences of steadily rising greenhouse emissions and their expected trajectories of warming have been correct. As a result, these current predictions have a high degree of confidence.

## **Australia's domestic and export emissions**

Climate Analytics has standing in the scientific community. Their July 2019 report<sup>7</sup> indicates Australia's domestic and export fossil fuel emissions are now 5% of global emissions and current developments in NT, WA, Queensland and NSW could increase this 12 to 17% by 2030. On a per capita basis, Australia's carbon footprint, including exports, surpasses that of China by a factor of 9, the US by a factor of 4 and India by a factor of 37. These findings must be taken into account by the current assessment process in any decision to develop Isaac Downs.

In Australia, the State of Queensland will be damaged most from the progression of climate change and it is clearly illogical for Queensland to promote its own demise.

In the TOR Section 1, climate change it is stated  
"Assess the proposed project's vulnerabilities to climate change (e.g. changing patterns of rainfall, hydrology, temperature and, extreme weather events). Describe possible preferred and alternative adaptation strategies based on climate change projections for the region to minimise the risk of impacts from climate change to the proposed project"  
Repeated under 9.4.3, 9.10 and Appendix 3.

We **recommend** this section needs much more specificity.

However, we **recommend** the project does not proceed on the basis of 1.4 billion tonnes of greenhouse gas emissions over the life of the mine which will exacerbate the climate emergency.

## Water resources

The region in which the Isaac Downs mine is situated is contiguous with the Surat and southern Bowen Basins which support extensive coal and gas mining. The Office of Groundwater Impact Assessment (OGIA) has recently reported on the groundwater resources<sup>8</sup> of this region which is bounded by Toowoomba, St George, Emerald, Cracow and Kingaroy. The Isaac Downs mine is approximately 250km north of Emerald.

DEA believes that the OGIA report indicates sustainability of the Basins<sup>9</sup> is in doubt. The number of coal seam gas wells is projected to triple, and the Queensland government supports this further development. With the development of further mines in the Bowen Basin it is essential that this cumulative study of water usage be extended by OGIA or that a comprehensive study is carried out by the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC). Such a study must be accompanied by climate modelling for the Basin for the next 30 years.

## Biodiversity

It is essential that a comprehensive assessment of biodiversity be carried out in the Bowen region.

A World and national biodiversity crisis parallels the climate crisis; they are related and augment each other. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services summarised the problem:

"The overwhelming evidence of the IPBES Global Assessment, from a wide range of different fields of knowledge, presents an ominous picture," said IPBES Chair, Sir Robert Watson. "The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide".<sup>10</sup>

In Australia the Interim Report by the Senate Inquiry into Faunal Extinction, 'The *Senate Environment and Communications References Committee Australia's faunal extinction crisis*'<sup>11</sup>, to which DEA made a submission<sup>12</sup> has been released<sup>13</sup>. It provides a damning testimony of the appalling loss of wildlife and habitats facilitated by the failures of the Federal Government to protect the environment.

The importance of these reports to Queensland and Australia relates to the need to retain and nurture its biodiversity to maintain our sustainability as a food producing resource. Biodiversity loss resulting in deteriorating soil ecology will have a critical impact on food production as detailed by the report<sup>14</sup> "the State of the world's biodiversity for food and agriculture" from the Commission on genetic resources for food and agriculture, food and agriculture organisation of the United Nations.

Within Queensland there is evidence that the impact of the steady and relentless rise in emissions will result in the loss of both the Great Barrier Reef and the northern tropical rainforest. Indeed, the science currently indicates that the reef along with other world reef systems has only a small chance of survival.<sup>15</sup>

We note the section on flora and fauna on page 12. We regard current assessments in 9.6 as inadequate in view of the findings in the OGIA report and suggest that such a report be prepared for the bioregional region of the remainder of the Bowen Basin not covered in the recent OGIA report. The region requires full assessment of biodiversity including endangered and threaten species.

## Economics

We agree the economic assessment of the project (see 9.13) should be based on cost benefit analysis, but supported by economic impact assessment. The detail provided by the Queensland government is inadequate<sup>16</sup> for it is skewed to providing benefits.

The DSDIP Project Assurance Framework is explicit in its requirement of cost benefit analysis:

*The primary method of economic evaluation of public sector policies and projects is cost-benefit analysis... 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 [economic] analysis (p18)<sup>17</sup>.*

Over many years, the Business Council of Australia has promoted the importance of using cost-benefit analysis to evaluate major public expenditure and regulatory decisions<sup>18</sup> and we understand these recommendations are still in force.

Cost benefit analysis will allow inclusions of the costs of domestic and scope 3 emissions for collectively these are causing costs in Queensland and Australia. Those calculated should include the Australia-wide health, social and infrastructure costs, the cost of Scope 3 emissions calculated from world impacts, and the cost eventualities if the mine has to be curtailed because of possible worsening of the climate emergency.

Economic impact assessment should be carried out through computable general equilibrium modelling, not through input-output modelling.

The TOR should discourage consultants from using input-output models (IO) which often erroneously overstate the positive impacts of projects. While cheap and easy to perform IO invariably overstates the impacts of a project on output and employment.

**Life of mine assessment;** the issue of coal mines becoming stranded assets is relevant for consideration in the TOR in view of the necessity for rapid transition from coal; within this context the duration of need for metallurgical coal should be assessed taking into account the development of suitable energy resources which is underway.

## References

<sup>1</sup> <https://environment.des.qld.gov.au/management/impact-assessment/eis-processes/isaac-downs-coal-mine-project.html>

<sup>2</sup> [https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15\\_Chapter2\\_Low\\_Res.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_Chapter2_Low_Res.pdf)

<sup>3</sup> <https://royalsocietypublishing.org/doi/full/10.1098/rsta.2010.0303>

<sup>4</sup> New Report Examines Risks of 4 Degree Hotter World by End of Century [press release]. Washington: World Bank Group 2012. <http://www.worldbank.org/en/news/press-release/2012/11/18/new-report-examines-risks-of-degree-hotter-world-by-end-of-century>

<sup>5</sup> Wang X, Jiang D, Lang X. Climate Change of 4°C Global Warming above Pre-industrial Levels. *Advances in Atmospheric Sciences*. 2018;35(7):757-70

<sup>6</sup> [https://docs.wixstatic.com/ugd/148cb0\\_a1406e0143ac4c469196d3003bc1e687.pdf](https://docs.wixstatic.com/ugd/148cb0_a1406e0143ac4c469196d3003bc1e687.pdf)

<sup>7</sup>

[https://www.acf.org.au/evaluating\\_the\\_significance\\_of\\_australias\\_global\\_fossil\\_fuel\\_carbon\\_footprint](https://www.acf.org.au/evaluating_the_significance_of_australias_global_fossil_fuel_carbon_footprint)

<sup>8</sup> <https://www.business.qld.gov.au/industries/mining-energy-water/resources/landholders/csg/surat-cma/uwir>

<sup>9</sup> <https://www.dea.org.au/wp-content/uploads/2019/07/Underground-Water-Impact-Report-for-the-Surat-Cumulative-Management-Area-07-19.pdf>

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<sup>10</sup> Nature's Dangerous Decline "Unprecedented"; Species Extinction Rates "Accelerating" [press release]. Paris: IPBES2019. <https://www.ipbes.net/news/Media-Release-Global-Assessment>

<sup>11</sup> 'The Senate Environment and Communications References Committee Australia's faunal extinction crisis'  
[https://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Environment\\_and\\_Communications/Faunalextingtion](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Faunalextingtion)

<sup>12</sup> <https://www.dea.org.au/wp-content/uploads/2018/09/Australia's-faunal-extinction-crisis-submission-08-18.pdf>

<sup>13</sup> [https://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Environment\\_and\\_Communications/Faunalextingtion/Interim\\_report](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Faunalextingtion/Interim_report)

<sup>14</sup> <http://www.fao.org/3/CA3129EN/CA3129EN.pdf>

<sup>15</sup> <https://www.climatecouncil.org.au/resources/climate-change-great-barrier-reef/>

<sup>16</sup> <http://www.coordinatorgeneral.qld.gov.au/resources/guideline/cg/economic-impact-assessment-guideline.pdf>

<sup>17</sup> <http://www.treasury.qld.gov.au/office/knowledge/docs/project-assurance-framework-guidelines/paf-cost-benefit-analysis.pdf>

<sup>18</sup> (BCA. (2012). Cost – Benefit Analysis. Policy Essentials report for the Business Council of Australia prepared by Deloitte Access Economics p1)