



Cumberland Bird Observers Club

PO Box 550, Baulkham Hills NSW 1755

www.cboc.org.au

17 May 2017

[To: http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6456](http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6456)

Re: CBOC Submission on the Santos Narrabri Gas Project EIS

Dear Sir/Madam,

Thank you on behalf of Cumberland Bird Observers Club Inc (CBOC) for the opportunity to comment on the Environmental Impact Statement (EIS) for the Santos Narrabri Gas Project. Our concerns centre mainly (but not exclusively) on proposals likely to adversely affect terrestrial flora and fauna within and adjacent to the area of the mooted gas (CSG) project.

Overall, we object to this project on grounds of predicted impacts and possible extra risks to the rich biodiversity (including birds) in the proposed project area and beyond it. Details are given below.

Proposed general scope and layout of project

The total gross project area is about 95,000 ha, 75% of which is covered by native vegetation in State Forests, with 25% as private farmland/partly cleared pasture. Santos proposes up to 850 gas wells on 425 well pads spread over this area. This project is more than four times the size of either of the previously approved CSG projects in NSW.

The proposal includes a gas processing facility for compression, dehydration and treatment of gas, a water management facility for storage and treatment of produced water and brine, possible additional power generation on site, continual flaring (burning-off of gas) at two locations, an infrastructure corridor through the forest between Leewood and Bibblewindi properties, and expansion of worker accommodation.

Surprisingly, the EIS does not provide maps showing proposed locations of the 850 gas wells and where the lines and infrastructure that run between and around them will go. Further, without specific information about where the wells and lines will be located, a proper ecological impact assessment cannot be completed. Santos appears to be seeking a "blank cheque" consent for this gasfield on the promise that it will decide where the wells will go afterward, using a "Field development protocol." The constraints Santos proposes for this are weak and could be subject to change later on. The NSW Government must insist that Santos releases details to the public about the placement of its wells, pipelines and other infrastructure., before considering approvals.

Impact on natural vegetation cover and wildlife habitats by proposed infrastructure

According to the EIS, a total of 989 ha of natural vegetation would be destroyed for construction and operation of the project. An extra 181.1 ha would supposedly be destroyed due to "indirect impacts". The EIS stresses several times that the total of these two areas (1,170 ha) equates to the removal of approximately 1.5 per cent of native vegetation covered by the project, which would be dispersed throughout the project area.

The intention is probably to make us think: "**Only** 1.5% - that's pretty insignificant." However, that would be misleading. Indirect impacts listed in the EIS include 12 topics, among them being increased fragmentation of habitats; increased traffic; noise, artificial light; increased wildfire risk; risk of hydrological change; and increased incursion by feral predators. It is absurd to try to reduce these myriad "indirect" risks to a "hectare equivalent", especially one to an accuracy of 0.1 ha! In practice several of these risks are very real and potentially wide-ranging, likely to affect wildlife across much more than a couple of hundred hectares. Wildfires have done immense damage to vegetation and fauna on large areas in the Pilliga forests over the past 7-8 years. Any activities that might increase wildfire frequency should be avoided.

Calculations of fragmentation due to the direct effects of the project indicated that the number of patches would nearly double, reducing the intactness index from 0.446 to 0.232. Although fragmentation would mostly be caused by relatively narrow linear features (roads and tracks, power lines, pipelines), the impact on fauna species (including some small birds) that cannot cross quite narrow barriers of bare ground should not be dismissed as negligible.

Impacts on threatened ecological communities (EECs) and plant species

Four plant communities in the project area are listed as threatened ecological communities under State and/or Commonwealth legislation. Predicted direct impacts on these are relatively minor, ranging from 0 ha (Carbeen) to 19.3 ha (Brigalow-belah) destroyed. However, any damage to these four EECs surely should and could be totally avoided, since they are already so scarce throughout NSW, especially brigalow communities. It is wrong to accept destruction of even small areas of such rare EECs, as several small bits lost could soon add up to the loss of the whole.

Impacts on threatened fauna species

48 terrestrial fauna species listed as threatened under the NSW *TSC Act* and / or Commonwealth *EPBC Act* (one reptile, 33 birds and 14 mammals) were recorded in the project area during field surveys or are considered potentially or likely to occur in the project area and may be impacted as a result of the project. This is a large inventory of threatened species which illustrates the richness of biodiversity in the northern Pilliga area, and its great and unique value as a large, relatively undisturbed refuge area for woodland wildlife (such refuges are now scarce in south-eastern Australia).

According to the EIS, "up to 10,143 hollow-bearing trees would be removed during construction of the project". This is an estimate, which could be reduced if an "ecological scouting procedure" was properly implemented as described, prior to construction, "to avoid significant hollow-bearing trees where possible". In any case, some thousands of tree hollows of all sizes would likely be lost, further threatening many species of birds, arboreal mammals, and bats, including threatened

species such as Squirrel Glider, Pygmy Possum, Barking Owl, Masked Owl, and Glossy Black-Cockatoo, to name just a few.

The EIS states: "The habitat in the development site that would be modified is not occupied by the (Critically Endangered) Regent Honeyeater (RHE) and is considered 'potential' habitat for the species" Potential habitat could be used at any time when it has the right resources for this nomadic bird, such as prolific eucalypt flowering, and would thus become important for it on occasions. Stating, in the EIS, that "no habitat used by a local population (of RHE) would be impacted" is largely irrelevant for this bird and should not be taken as meaning that destruction of the potential habitat would not cause an impact to its fragile population.

Similar flawed reasoning is used in the case of the Koala, which has declined severely in the Pilliga area over the past 8-10 years. The project area does not constitute core Koala habitat as defined in NSW SEPP 44. The area does, however, contain habitat critical to the survival of the Koala as defined under the EPBC Act Referral Guidelines for the Vulnerable Koala. This latter, more conservative definition of the importance of the habitat (i.e. critical habitat) should be the guide to determining how the Koala is treated in this project. The statement "The project is not considered likely to interfere substantially with the recovery of the Koala" is based on the apparent absence of live animals during surveys for the EIS and the down-playing of potentially useful habitat that could be utilised by a hopefully expanding population recovering from past fires. If such habitat was destroyed, it would be yet another big blow to the Koala in this area.

Statements that "The project is unlikely to result in increased Koala fatalities due to dog attack or vehicle strike, is unlikely to result in the spread of disease or pathogens such as Chlamydia or *Phytophthora cinnamomi*, is unlikely to create a barrier to movement to, between or within habitat critical to the survival of the Koala" are unlikely to be true if there are Koalas already in the project area, or if some attempt to move into it later.

The reason for excluding the Critically Endangered Swift Parrot from "further consideration" is not explained. It is considered to possibly occur in the project area based on the presence of suitable habitat.

Proposed "rehabilitation" of cleared vegetation

Following construction, approximately 50 per cent of vegetation clearing associated with the well pads and the gas and water gathering systems (totalling about 587 hectares) is supposed to be "rehabilitated" in accordance with a strategy for the project (Appendix V of EIS). This strategy appears to be comprehensive, but the acid test would be how well it was implemented in practice, and how diligently it was pursued after the decommissioning of gas wells.

Rehabilitation of vegetation in relatively small patches (often surrounded by intact bush), as in this project, should be much simpler than trying to rehabilitate large coal mines, for example. Yet Appendix V of the EIS shows that the logistics for successful reestablishment are still very complex even in these simpler cases.

Proposed biodiversity "offsets"

Mitigation and management measures aimed at reducing impacts of the project on biodiversity are missing in the EIS (Table 15-22) for a number of potential impacts: hydrological changes; toxic

spills and leaks; collision with traffic or fences; and "hunting" presumably including vandalistic shooting. The reason for these omissions is not clear. There are some ridiculous proposals, such as: "the removal of hollow-bearing trees with a hollow of greater than 300 mm in diameter will be offset by a 1:1 replacement" (by artificial trees?).

The EIS states that the biodiversity offset strategy "would aim to compensate for all residual impacts of the project". Under a valid offsetting regime, the clearing of at least 1,200 ha of mature woodland and forest should be "compensated" by secure protection of at least 4,000-5,000 ha of essentially identical ecological communities not far away (and not already protected). The actual like-for-like physical offset requirement for this project (ha of habitat) is not clear. It seems to be considered unattainable at the outset, leading to a proposed mish-mash of "supplementary measures" (allowable under current NSW offsetting policy), like broad-scale feral animal control, research into locating koala populations (helps to postpone commitments to actually conserving them in areas they choose to live in), and paying some money for "eventual transfer into the biodiversity offset fund (once established)". How these measures would help to materially conserve the actual ecological communities and wildlife species impacted by this project is obscure.

Impacts on water yield and quality

In the semi-arid environment of the Pilliga, ground and stream water of high quality is vital for most plants and animals (wild and domesticated). The project is expected to remove 37.5GL of groundwater ("produced water") over the life of the gasfield, due to de-watering of the coal seam. This scale of water removal may cause draw-down and maybe pollution of Great Artesian Basin aquifers, as has happened due to CSG mining in Queensland.

The project is predicted to produce a huge amount of waste salt, up to 41,900 tonnes per year (long-term average 48 tonnes per day) during the treatment of groundwater. It is supposed to be "disposed of" in a "licensed landfill". The handling and disposal of saline water and salt introduces extra potential for damage to vegetation and soil health beyond the predicted footprint of the project. The release of treated water into Bohena Creek is likely to cause some accumulation of persistent organic chemicals and heavy metals in aquatic environments, which would be a long-term threat to wildlife and domestic stock.

Yours sincerely,

I G Johnson

I.G. Johnson

Conservation Officer, CBOC

Cumberland Bird Observers Club Inc

e-mail: conservation@cboc.org.au