

## Central West Coal Project - Summary of Issues Raised in Submissions

<b>GENERAL</b>			
<b>Issue Raised</b>	<b>Raised by</b>	<b>Definition of Issue/Further Details</b>	
Adequacy of detail provided	Department of Environment and Conservation	<p><i>"... the document does not provide sufficient information to enable an informed assessment of all the potential (direct and indirect) impacts on the high biodiversity values potentially impacted by the proposal."</i></p> <p><i>Deficiencies in relation to the level of detail presented and the associated potential environmental impact. As a result, the Department is unable to adequately assess the likely scale and extent of the potential environmental impact of this project. Based on the information presented, the Midwest Region of DEC considers that the proponent has not adequately demonstrated that impact associated with the Coolimba Power Project has been sufficiently investigated in order to undertake an environmental impact assessment.</i></p>	
Cumulative impacts of CWC and Coolimba Projects	Wildflower Society of Western Australia	<i>Both the Coal Mine and the Coolimba Power Project should have been considered together as one project.</i>	
Consideration of the principles of Environmental Protection	Wildflower Society of Western Australia	<i>We don't believe the proponent has properly considered the Precautionary Principle, the Intergenerational Equity Principle, the Conservation of Biological Diversity Principle and Ecological Integrity Principle.</i>	

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<b>BIOPHYSICAL</b>			
<b>Issue Raised</b>	<b>Raised by</b>	<b>Definition of Issue/Further Details</b>	
<b>Dewatering</b>			
Impact of dewatering on other groundwater users	Department of Water	<i>The PER has identified that dewatering may affect other water users. These effects must be considered in both the EPA and the DoW assessment processes.</i>	
Impact of dewatering on GDE's	Department of Water Department of Environment and Conservation	<i>There is the potential for a number of GDEs within or in close proximity to the disturbance (drawdown) footprint, including Lake Logue, Lake Indoon, Rocky Springs TEC and Erindoon Creek, to be affected by groundwater abstraction associated with the proposal.</i>	
Impact of dewatering on SENR and LLNR	Wildflower Society of Western Australia	<i>The proposed dewatering is likely to have a detrimental impact on biodiversity.</i>  <i>The hydrology modeling is only that, modeling and past experience has shown this to be wanting.</i>	
Impact on surface water flows of creeks and springs	Department of Water	<i>The disruption to the surface flow created by the pit may have an adverse effect on the flow in Erindoon Creek and surface water levels in Lake Indoon.</i>  <i>“The comment that perched water would continue to provide moisture to riparian vegetation, water to Lake Indoon and potentially reduce impacts of dewatering (Section 7, pages 7-16 to 7-1 7) is not considered to be correct.”</i>	

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	Department of Environment and Conservation	<p><i>Crucial hydraulic characteristics of the groundwater aquifers have not been investigated to assess the level of connectivity of the stated groundwater abstraction footprint, to other hydraulic features such as creeks, springs and fault boundaries.</i></p> <p><i>Erindoon Creek has been identified as having a hydraulic connection with the underlying aquifers potentially affected by abstraction, therefore affecting both the creek systems and the ecological water requirements of systems downstream.</i></p> <p><i>Further to the impacts associated with dewatering, there is the potential for changes to surface water quantity and quality, affecting natural drainage systems and downstream ecosystems (surface lakes and groundwater aquifers) as mining works will intercept natural drainage systems.</i></p>	
Groundwater Model Boundaries	Department of Environment and Conservation	<i>The level of connectivity of the stated groundwater abstraction footprint, to fault boundaries has not been assessed.</i>	
Disposal of excess dewatering supply	Department of Water	<i>"... contingency measures will be needed to ensure that water management at the mine reflects the principles of efficiency and conservation."</i>	
	Department of Environment and Conservation	<i>It is proposed that water in excess of 9 GL/a may be discharged into natural drainage systems. The impact of this has not been addressed.</i>	

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Location of raw water storage dam	Department of Water	<i>The construction of the dewatered effluent storage dam within the Cattamarra Coal Measures aquifer will be appropriate. However, the final location of the dam and issues of evaporation and infiltration will need to be considered and discussed.</i>	
Management of groundwater water quality	Department of Water	<i>It is important for the proponent that water quality is maintained in the pit as it is the main water source for the power station. The co-disposal of ash and saline residues may affect the quality of the dewatered effluent in the long term.</i>	
Impact of final pit void on Lake Logue Nature Reserve	Department of Water	<i>The final changes to water level, salinity and other solute concentrations may extend into the reserve.</i>	
<b>Vegetation and Flora</b>			
Preservation of biodiversity	Wildflower Society of Western Australia	<i>Biodiversity is best preserved insitu.</i>	
Impacts on threatened ecological communities	Department of Environment and Conservation – Terrestrial Ecosystem Branch	<i>It is inappropriate to state that the subject area is unlikely to contain a threatened ecological community (TEC), as this can only be determined through floristic plot survey (which has not been undertaken by the proponent) and subsequent verification by DEC.</i>	
Impacts on declared rare flora, priority flora	Department of Environment and Conservation	<i>The declared rare flora (DRF) Grevillea althoferorum subsp. althoferorum is known from within the project footprint, however the PER does not identify this or address impacts on this species.</i>  <i>DRF is not adequately addressed in the PER and there is a significant risk that adverse impacts from this proposal have not been presented.</i>	

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Impacts on vegetation communities	Department of Environment and Conservation	<p><i>The proponent has not placed the impacts on the vegetation communities in a regional context, and on current information the impacts have not been demonstrated to be environmentally acceptable.</i></p> <p><i>The H1 plant community is associated with species and lateritic rises in common with the Ferricrete floristic community (Rocky Springs type) threatened ecological community (TEC), and 93.3 percent of its extent will be impacted by the proposal.</i></p> <p><i>The proposal will impact 93.3% of Vegetation community H1 in the proposal area and has been described as similar to the Rocky Springs TEC. Additionally, occurrences of Rocky Springs TEC occurs with 500metres of the proposal area. Similarly 13 of the 17 mapped vegetation communities have been described as locally or regionally significant.</i></p> <p><i>No demonstrated actions have been presented in the PER to avoid, minimise or reduce impact on vegetation communities or PF.</i></p>	
Adequacy of flora and vegetation surveys.	Department of Environment and Conservation	<p><i>The survey information provided on flora and vegetation is insufficient to determine the potential impacts of the proposal.</i></p> <p><i>The information provided on flora and vegetation contains significant discrepancies.</i></p>	

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Clearing of vegetation and flora	Department of Environment and Conservation	<i>The project will require the clearing of approximately 861 hectares of native vegetation, and directly impact two DRF, one Priority 1, 11 Priority 2, eight Priority 3, and five Priority 4 taxa.</i>  <i>Impacts from upgrade of Rocky Springs Road are not considered.</i>	
	Conservation Council of WA	<i>“CCWA believe that the impact on already fragmented Kwongan Heath vegetation (one of the most species-rich vegetation type anywhere in the world) as are result of extensive clearing associated with the mine site and transmission lines is unacceptable.</i>	
	Wildflower Society of Western Australia	<i>The construction of the mine will result in the clearing of 861 ha of native vegetation.</i>	
	Public Submission #1	<i>The proponent has not demonstrated a commitment to minimise clearing of sensitive native vegetation and flora. The waste dump is currently located on native vegetation linked to southern beekeepers reserve where a number of rare flora and fauna were recorded and should be moved to adjacent freehold farmland.</i>	
Impacts on Nature Reserves	Department of Environment and Conservation	<i>Indirect impacts on the South Eneabba and Lake Logue Nature Reserves have not been addressed.</i>	

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Fragmentation of Kwongan Heath	Conservation Council of WA	<i>"CCWA believe that the impact on already fragmented Kwongan Heath vegetation (one of the most species-rich vegetation type anywhere in the world) as are result of extensive clearing associated with the mine site and transmission lines is unacceptable. CCWA understands that a significant proportion of the clearing proposed for the transmission lines will take place in a nature reserve which is a wholly unacceptable outcome for a project of this type."</i>	
Cumulative impacts on flora and vegetation	Department of Environment and Conservation  Wildflower Society of Western Australia	<i>The cumulative impacts of this project, in conjunction with the Coolimba Power Station, Tiwest's Falcon and Iluka's Eneabba Expansion projects, have the potential to cause loss of significant flora values of the Lesueur grey vegetation subsystem identified by Hopkins, Griffin and Langley for the West Midlands study</i>	
EPBC listed species	DEWHA	<i>It is unclear from the PERs how impacts on the EPBC Flora species Grevilliea Althoferorum, Eucalyptus crispate, Eucalyptus impensa and Eucalyptus johnsonia will be addressed.</i>	
<b>Fauna</b>			
Regional context of fauna assemblage	Department of Environment and Conservation	<i>The PER fails to adequately assess the fauna assemblage in a regional context. This is mainly compounded by major errors in the regional fauna data provided in Appendix C. For example the dataset ascribed to Dell et al. (1979) is not from this data source and includes an assemblage with many arid distributed species. All other data sets in this table need to be checked for accuracy and likely occurrence of species in the region of the project area.</i>	

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Impacts on EPBC listed species	DEWHA	<p><i>“It is ... unclear from the PERs, how impacts on the Carnaby's Black Cockatoo will be mitigated.”</i></p> <p><i>“It is unclear from the PERs how impacts on the EPBC Flora species Grevillia allthpferorum, Eucalyptus crispate, Eucalyptus impensa and Eucalyptus johnsonia will be addressed by the two proponents.”</i></p> <p><i>“It is unclear from the PERs how impacts on the EPBC species Rainbow Bee-eater will be addressed.”</i></p> <p><i>“Further clarification of the impact on the Carnaby's Black Cockatoo is required to allow the Minister to be able to make a decision on approval of the projects. This should include mitigation measures and whether off-sets for loss of Carnaby's Black Cockatoo foraging habitat will be proposed.”</i></p>	
	Department of Environment and Conservation	<p><i>“The proposal has the potential to significantly impact on Carnaby's Black-Cockatoo (Calyptorhynchus latirostris) foraging habitat”</i></p>	
Dieback	Department of Environment and Conservation	<p><i>“There is a significant risk of the spread of Phytophthora dieback and weeds resulting from mining related activities including disturbances to surface water flow regimes, land clearing and traffic movement.”</i></p>	



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Rehabilitation	Department of Environment and Conservation	<p><i>“The PER has not demonstrated that the proposed rehabilitation aims can be met.”</i></p> <p><i>“The landforms of the area will be greatly modified and not be returned to their original contours.”</i></p>	
	Wildflower Society of Western Australia	<p><i>The proponent docs not have a record of revegetation in the Kwongan area of Western Australia and we don't believe they would be able to meet community expectations or for that matter that of the government agency.</i></p>	
	Public Submission #2	<p><i>The final pit containing the residue of 30 years of mining would become progressively more saline through evaporation.</i></p> <p><i>24,600,000 tons of ash will eventually be buried in the pits, the leachate from which they hope will concentrate in the final pit void.</i></p> <p><i>Considering the sandy nature of the site it is very likely that the leachate will filter gradually into local aquifers and creek systems, despite the precautions taken.</i></p> <p><i>The proponents offer no supporting evidence of the safety of such a practice.</i></p> <p><i>Will the area be safe with regards to 50 or 100 year weather events?</i></p>	
	Department of Environment and Conservation	<p><i>“Potentially harmful metal and metalloid accumulation in the Pit Lake system and its consequent impact on fauna had not been adequately assessed in terms of closure management.”</i></p>	

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	Shire of Coorow	<i>“Council does have some concerns on the lake being left behind and the quality of the water as it states in the PER that the concentration of salts in the final pit void will increase over time the PER does not appear to cover what action will be taken to ensure the area is not used for recreation purpose and the effect of the rising salt levels will have on the surrounding areas .”</i>	
Visual Amenity	Department of Environment and Conservation	<i>“The proposal does not address impacts on landscape and visual amenity.”</i>	
Offsets	Department of Environment and Conservation	<i>“DEC will not be in a position to endorse strategies for offsetting impacts given impact on critical assets until the level of significance of the impacts is adequately determined and the EPA has formed a view on the environmental acceptability of the project.”</i>	
	Department of Environment and Conservation - Midwest	<i>Aviva's offset position has not been clearly described or assessed.</i>	
	Public Submission #1	<i>“A 4:1 offset for disturbed vegetation should be considered incorporating rehabilitation of nearby cleared areas adjacent to the reserve.”</i>	

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<b>POLLUTION</b>			
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Air Quality			
Potential dust exceedances at nearby receptors.	Department of Health	<p><i>The Proponent should ensure that dust management and monitoring plans are implemented in a timely fashion and comply with DEC requirements.</i></p> <p><i>Strategies should include providing feedback to DOH and include DOH in the processes to respond to breaches.</i></p>	
	Department of Environment and Conservation – Air Quality Management Branch	<p><i>There is potential for the mine to contribute to exceedances of the NEPM PM10 24 hour criteria of 50 ug/m3 and the Kwinana EPP 24 hour average TSP criteria of 90 ug/m3); however, the 150 ug/m3 24 hour average limit for TSP is unlikely to be exceeded.</i></p>	
	Department of Environment and Conservation – Air Quality Management Branch	<p><i>Emissions data: while we do not ordinarily comment on or attempt to verify emissions data, it is important to recognise that the IPI emissions factors used in the modelling have significant limitations and cannot be guaranteed to be conservative.</i></p> <p><i>It is therefore recommended that a program of source emissions and modeling verification work is undertaken on commissioning of the mine to confirm that the current modelling is conservative.</i></p>	
	Department of Environment and Conservation – Air Quality Management Branch	<p><i>It is not clear from the PER on what basis the background PM 10 level of 30 ug/m3 was selected; this level is reasonably high however and should be conservative</i></p>	

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	Department of Environment and Conservation – Air Quality Management Branch	<i>Rainfall is one of the parameters that is used to estimate dust emission (page 10); but is not clear from the PER whether observed or modelled rainfall was used in emissions estimations.</i>	
Dust could be a problem at coastal towns	Public submission #2	<i>The township of Leeman is situated directly due west of the minesite and power station and would be directly in line for plumes and dust from the mine and the power station when the east winds blow.</i>	
Impacts of sulfur levels in the coal	Public submission #2	<i>Despite the information from CWC regarding the 1.72% sulphur content of the coal, the fact remains that 64% of that sulphur is organic and unable to be cleaned. Coal Laboratories figures acknowledge that Cattamarra coal is twice as dirty as Collie coal to burn because of its organic sulphur content. What method of desulphurisation will be implemented? Will the organic sulphur residue be consigned to the ash pits?</i>	
Pesticide Safety	Department of Health	<i>It is expected that any treatment and application of pesticides must be applied in accordance with the Health (Pesticides) Regulations 1956.</i>	

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Noise	Department of Environment and Conservation	<p><i>The precise noise data for the equipment to be used in the proposed mine site was not available. There was no guarantee that the noise levels of the equipment to be used in the proposed mining site would be no higher than those used in the noise modeling. In addition, the detailed design and assessment of several noise control measures proposed to reduce the noise emissions of major noise sources was not available and the efficiency and practicability of these proposed noise control measures were not demonstrated.</i></p> <p><i>A change in the PER is required to confirm that unless the noise assigned levels can be met, the construction work outside daylight hours needs to seek the approval from the DEC Noise Branch CEO.</i></p>	
Acid Mine Drainage	Department of Environment and Conservation	<i>Potential exists for groundwater contamination by leaching of mine backfill, ash and power station residues to be disposed within the mine void.</i>	
	Department of Environment and Conservation - Midwest	<i>Results from static testing (acid-base accounting) are inadequate to determine the long term potential risk of AMD to the receiving environment.</i>	

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	Public Submission #2	<i>How much acid is involved here? What is the definition of AMD?</i>	

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<b>SOCIAL</b>			
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<b>Community and Social Effects</b>			
Mosquitoes might present a health concern	Department of Health	<i>The development is proposed in a region where mosquito-borne disease is Got generally a major concern. However, under certain environmental conditions the region can experience problems , with nuisance mosquitoes and cases of Ross River virus have been reported.</i>	
Social impacts to towns on Turquoise Coast	Public submission #2	<i>Set up a social impact unit to consider and manage issues in consultation with communities.</i>	
Temporary camp site.	Shire of Coorow	<i>It is however essential that the proponent works closely with Council and the Community in relation to the temporary camp site.</i>	
<b>Traffic and Transport</b>			
Reconstruction or sealing of the Penn and Erindoon Roads	Shire of Coorow	<i>The Shire of Coorow would like a commitment that the proponents would assist Council in lifting the quality of these roads to a bitumen standard as the road would no require upgrading with out the expected level of traffic movements.</i>	
<b>Aboriginal Heritage</b>			
Aboriginal Sites	Department of Indigenous Affairs	<i>Submission of identified possible Aboriginal Sites for assessment under Section 5 of the Aboriginal Heritage Act and possible required Section 18 notice.</i>	

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Additional consultation	Department of Indigenous Affairs	<i>Additional consultation with Franks and Amangu native title claimants.</i>	
Cultural material	Department of Indigenous Affairs	<i>Requirement to cease work if cultural material is identified.</i>	
Cultural training	Department of Indigenous Affairs	<i>Workers should be made aware of obligations under Aboriginal Heritage Act</i>	