APPENDIX A
TABLE OF SUBMISSIONS

Table 1 - Stage 2 EA Submissions

Category	Issue	Section
Air Quality	The Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DECC, 2005) specifies the methodology for conducting cumulative impact assessments. The background concentration can be accounted for in the assessment by two methods: 1. Assuming the maximum concentration of the pollutant being assessed for the relevant averaging period from available ambient monitoring data; or 2. Conducting a contemporaneous assessment where ambient monitoring data is obtained that is contemporaneous with the meteorological data used in the assessment and at each receptor, each individual dispersion model prediction is added to the corresponding measured background concentration to obtain hourly predictions of total impact.	4.1.2 & Appendix C
	An assessment of the background concentration in the assessment of 24-hour average PM_{10} impacts has not been undertaken.	4.1.3
	There has been no assessment of baseline dust in the northern section of EL6288.	4.1.3
	There is the potential for increased (compared to Stage 1 and cumulative with surrounding mines) dust impacts on the community and local environment (including the Goulburn River National Park and Munghorn Gap Nature Reserve, a long standing area for bird research).	4.1.3 & 4.1.4
	There is no discussion of cumulative increased dust levels on adjacent reserves.	4.1.2
	The dust impacts from Stage 1 are yet to be realised and Stage 2 will result in impacts on top of these.	4.1
	The statement that 'reduced off-site noise and dust impacts from Stage 2 will be achieved because Stage 2 impacts will be effectively buffered by the land occupied by Stage 1' is highly questionable. This statement fails to take into account the cumulative impacts of neighbouring coal mines.	4.1.3 & 4.4.3
	The size of the disturbance in OC4, length of haul roads, additional movements of coal around the site, in conjunction with the existing operations will have a cumulative impact on air quality.	3 & 4.1
	Adverse dust impacts may occur at additional private residences when issues which may underestimate impacts are taken into account.	3 & 4.1
	Property 23 was identified in the EA as likely to be subject to exceedances of dust, an issue that the residents (Woodhead) had raised in their first submission. They feel they have been denied the right to independent monitoring because the exceedance was predicted by the mining company.	N/A
	The EA does not provide any data to validate the assumption that chemical dust suppressants on trafficked areas will result in an 85% reduction in dust emissions.	4.1
	Chemical dust suppressants have not been used widely in NSW. The crusting agents are broken up when driven over and are also soluble in light rain. The application of chemical dust suppressants requires constant application. The EA contains no discussion around the management of these issues in relation to managing increased dust levels in the local area.	4.1

Category	Issue	Section
	In the draft statement of commitments for Stage 2 works, MCO has committed to 'accept an obligation to purchase (if so requested by any affected private landholder under the conditions of the Stage 2 Approval) any land at which noise or air quality limits determined in the Stage 2 Approval trigger such an obligation, due to the operation of the MCP' (EA Section 6.6.6, DECC emphasis added).	4.1 & 4.4
	The DECC considers that there are a number of additional properties that may be affected by dust should chemical dust suppression not be as effective in practice as in theory and winds predominate from the northeast.	4.1 & 4.4
	The DECC recommends the development of a reactive dust management strategy, including specific trigger levels, be formalised in the recommended conditions of approval. These conditions should include an assessment of the effectiveness of chemical dust suppressants.	4.1 & 4.4
	Blasting in certain meteorological conditions can lead to significant off-site dust impacts on residences and the Munghorn Gap Nature Reserve. The DECC recommends that MCM commit to the implementation of a blast dust management protocol that outlines the meteorological conditions during which blasting may only occur, which will ensure that the blast-generated dust is limited.	4.5
	It would be ideal for MCM to analyse wind direction patterns over a longer duration dataset, preferably at least five years to determine if there is a dominant pattern. The use of the 2005 dataset in the modelling may have underestimated potential impacts at residences to the west and southwest of the site. As such, the DECC recommends that MCP continue to operate WS1 (weather station no. 1) and WS2 (weather station no. 2) in their present locations.	4.1
	The DECC recommends that MCM identifies and establishes dust monitor TEOM 2 in a location representative of the residential areas to the west and southwest of the Project Area.	4.1.4 & Appendix C
	Additional dust deposition monitoring should be undertaken at the Aboriginal rock art shelter located above UG2 (DM10) and in the Munghorn Gap Nature Reserve (DM11).	4.1.2
	An appropriate monitoring network should be established by MCM to allow for the distinction between the MCP and other surrounding operations regarding the source of dust emissions.	4.1.4
	The DECC proposes the following amendments to the draft statement of commitments regarding air quality: – Windblown dust control procedures as outlined in Table 14 on page 42 of the Holmes Air Sciences report of 5 March 2009 (EA Appendix 3A) will be undertaken. – Additional TEOM and meteorological stations will be installed as required by the Department. – Unfavourable meteorological conditions will be determined during which blasting will not occur.	4.1

Category	Issue	Section
	The DECC recommends that the following special conditions are applied: 1. A dynamic dust management plan must be maintained and developed on an ongoing basis for the site which addresses the following: – The minimum aim of the plan must be to achieve and demonstrate best management dust control practice for the mine. – Effective reactive management of activities on the mine in response to the results of measured real-time PM_{10} and other inputs (trigger levels). The reactive management strategy must aim to control PM_{10} (and/or other dust) levels due to the mine at receiver locations. – Detail of the identification and establishment of a minimum of one TEOM monitor at a location representative of residences to the west and southwest of the project site. – Commit to a minimum of one review of the effectiveness of the dust management plan after 12 months. – A commitment to updating the plan and the management of all relevant activities on the site in accordance with the findings of any review of the plan. – Availability of the plan to the DECC upon request. – The implementation of all actions specified in the plan must be in the course of routine operation of the site. 2. An investigation by a suitably qualified person must be undertaken within 3 months of project approval to establish readily identifiable indicators of 85% control of dust by watering of and use of chemical dust suppressants on trafficked areas. A report is to be provided to the DECC upon completion. The indicators identified in the study are to be incorporated in the mine's best practice dust management plan at 1 above.	4.1
	The EA does not indicate the possibility of spontaneous combustion occurring in the Stage 2 overburden stockpiles. Both Wilpinjong and Ulan coal mines have had this issue and the MCP will be sourcing coal from the same coal seam.	4.3
	The suggestion that coal will be left in stockpiles for longer than two weeks is highly optimistic. This would depend on economic circumstances and availability of access to rail and port facilities.	4.3
	There is no consideration of spontaneous combustion occurring in overburden emplacements or open cut backfills. These are the areas where Wilpinjong and Ulan coal mines have experienced management problems with spontaneous combustion.	Stage 2 EA Section 5.1.8
Greenhouse Gas	Arguments regarding the significance of greenhouse gas emissions from the project are based on a bizarre set of calculations and claim that the effect of a given quantity of greenhouse gases to the atmosphere is less and less as the concentration becomes higher and higher.	4.2
	The EA only takes into account the emissions generated by diesel fuel consumption and electricity used on the site. It does not include the emissions produced by the coal that is mined.	4.2
	The EA does not provide a quantitative assessment of potential greenhouse gas emissions from spontaneous combustion.	4.2

Category	Issue	Section
	The Greenhouse Gas Assessment report (EA Appendix 3B) incorrectly calculates the Scope 1 emissions by including spontaneous combustion emissions as Scope 3 emissions.	4.2
	The Greenhouse Gas Assessment is presented as a revised assessment of Stage 1, therefore consideration of spontaneous combustion and other Scope 1 emissions for the entire operation have not been accurately assessed.	4.2
	There is no consideration in the Scope 1 calculations of the emissions from low-temperature oxidation of waste coal in spoil piles1.	4.2
	The Greenhouse Gas Assessment report (EA Appendix 3B) does not include greenhouse gas emissions sourced from exposed tailings in the calculations.	4.2
	The use of the coal for electrical power generation produces carbon dioxide, a greenhouse gas, and therefore contributes to climate change. Specifically, the expanded mine will produce 700 or 800 million tonnes (Mt) of CO2-e, which is 1.5 times Australia's net yearly emissions.	4.2
	The projected contribution of the MCP to rising global temperatures is very significant, especially given that this, after all, is but one coal mining project in Australia.	4.2
	It is refuted that the MCP's contribution to greenhouse gas emissions will be statistically insignificant.	4.2
	Greenhouse emissions violate NSW Government's Ecologically Sustainable Development (ESD) Principles as the impacts of burning coal are potentially irreversible and pose substantial intergenerational environmental stress.	4.2
	As a result of climate change, to which the project is contributing, there will be increased bushfire risk; Ridge Road was identified by the NSW Rural Fire Service as the most vulnerable high casualty area in the State.	4.2 & Section 5.15 of the Stage 2 EA
	The recently released DECC report on climate change in the Upper Hunter predicts a significant decrease in rainfall and runoff. The impact of this decrease will begin to be felt during the life of this mining proposal. There is no indication that the models used to predict water impacts have taken this decrease into account.	4.2
	The government and/or community should retain the right to revoke the approval to mine this publicly-owned coal resource (with no compensation), if, within a reasonable time (5 to 10 years), the coal is not being used in an ecologically sustainable carbon capture and storage system.	4.2
	The public, who must bear the consequences of this approval, should retain the right to seek action for damages (relating to greenhouse gases).	4.2
Blasting	Blasting will occur up to six times a day (and up to 23 blasts per week) from Wilpinjong coal mine and Stages 1 and 2 of the MCP.	4.5
	There is an increased potential for further disturbance from blasting on the local community, flora and fauna.	4.5

Category	Issue	Section
	There will be an increased risk to the structural integrity of local residences, buildings and sensitive natural features (such as the sandstone overhangs). Households are experiencing blasting damage in excess of 2 km from the Wilpinjong coal mine.	4.5
	The impact of noise exceedances on the Munghorn Gap Nature Reserve and potential mitigation measures have not been adequately addressed and the proposed 20 m buffer between the mine and the reserve for OC4 is highly inadequate.	4.5
	There will be an increase in the quantity of toxic gases released into the atmosphere, which will impact on both human and animal health.	4.5
	The DECC considers that ground vibration and overpressure monitoring should be undertaken at the nearest non mine-owned residence (not the subject of a private agreement) and noise sensitive location, and when blasting is within 1 km of the Aboriginal rock art site above UG2.	4.5
	The DECC recommends that MCM commits to: – Limiting the maximum instantaneous charge (MIC) of blasts to 1,788 kg. – Limiting blasts, where the MIC exceeds 400 kg, to one blast per week when averaged over a 12-month period.	4.5
Aboriginal Heritage	Five high-significance and 16 medium-significance Aboriginal heritage sites should not be removed and two high-significance and seven medium significance Aboriginal heritage sites should not be disturbed.	4.13
	The 55 m buffer distance proposed to protect the Aboriginal artworks in Cliff C7 from subsidence is inadequate.	4.13 & 4.12
	Connections with important Aboriginal heritage sites within the Goulburn River National Park and Munghorn Gap Nature Reserve have not been identified in the EA.	4.13
	The extent and variety of evidence of Aboriginal connection to the Stage 2 Project Area indicates its importance as a repository of cultural heritage and that important linkages need to be better understood and should not be destroyed.	4.13
	Heritage conservation areas should be provided to offset the loss of Aboriginal heritage sites in the Murragamba Creek valley.	4.13
	An agreement should be made to protect the conservation areas in perpetuity.	4.13
	Adequate mapping is required to determine where the proposed conservation areas are, and to determine whether the proposed conservation areas are the same as those proposed as offset areas for Stage 1.	4.13
	The cumulative impacts on Aboriginal cultural heritage in the region have not been assessed.	4.13 & Section 5.9 of the Stage 2 EA
	The cumulative impact is not clearly aggregated or identified as a total loss in the Aboriginal cultural heritage assessment.	4.13 & Section 5.9 of the Stage 2 EA
	The conclusions of the cumulative impact assessment are not identified in the management measures or statement of commitments.	4.13 & Section 5.9 of the Stage 2 EA

Category	Issue	Section
	The DECC acknowledges that consultation with the Aboriginal community has been undertaken. However, it believes there have been no attempts to properly list the concerns raised, discuss the merits of these and provide a response. It further believes that as part of the consultation process, the Aboriginal community was not provided an opportunity to review and provide comment on the Aboriginal cultural heritage assessment report and, as such, the recommendations of the report may not concur with the wishes of the Aboriginal community.	4.13 & Section 5.9 of the Stage 2 EA
Non-Aboriginal Heritage	The Brett Whitely mural is of cultural significance and should be protected from the impacts of mining.	Section 5.10 of the Stage 2 EA
Transport	Road usage and proposed traffic movements associated with Stage 2 need to be clarified.	Section 5.12 of the Stage 2 EA
	Mid-Western Regional Council raised concern that the proposal will generate traffic movements, which would equate to 800 additional movements created by Stages 1 and 2 of the MCP and the Wilpinjong coal mine.	4.16
	The road traffic assessment does not appear to consider traffic generated from Ulan Coal Mine Limited's (UCML) existing and currently approved operations.	Section 5.12 of the Stage 2 EA
	The RTA states that traffic volumes and road crash data should be collected and assessed every two years throughout the project's construction and operation to ensure road safety and traffic measures are operating as intended and that no other major changes in the area have affected safe and efficient traffic operation.	4.16
	While the EA outlined the extension of the construction period from two to six years, it did not outline how this might affect traffic.	Section 5.12 of the Stage 2 EA
	There is the potential for increased traffic on local roads (e.g., Cassilis-Ulan Road), leading to unsafe driving and overtaking. Contrary to what the EA says, Ulan Road is not capable of coping with an increased traffic flow of cars and heavy and wide load vehicles.	4.18
	Mid-Western Regional Council raised concern with the estimated increase in traffic load associated with Stages 1 and 2 and Wilpinjong coal mine, resulting in an additional 3.9 crashes per year.	4.18
	Mid-Western Regional Council requested that MCM make additional contributions specific to road upgrades of $200,000 for the intersection of Ulan Road and Wollar Road and $150,000 for the intersection of Ulan Road and Mud Hut Creek Road.	4.18
	There is a potential for the cumulative increase of train movements and coal handling on the Gulgong-Sandy Hollow rail line to impact on the community from Ulan to Newcastle.	Section 5.12 of the Stage 2 EA
	There will be an increase in noise levels from coal trains travelling through Mudgee and Gulgong to Lithgow.	N/A

Category	Issue	Section
Visual Amenity and Landscape	Stage 2 will cause the loss of aesthetic value of the local environment, landscape and catchment (including the Goulburn River).	Section 5.13 of the Stage 2 EA
	The lighting impacts from Stage 2 will extend and spread the overall lighting changes over a wide area and therefore increase the cumulative impact of lighting on the rural landscape.	Section 5.13 of the Stage 2 EA
	The significant impact of the large overburden emplacements as permanent changes to the landscape adjacent to Munghorn Gap Nature Reserve has not been addressed.	Section 5.13 of the Stage 2 EA
Social and Economic	The project will lead to a depopulation of the area with a subsequent loss of: – Community or social fabric. – Organisations providing voluntary services to the wider community, e.g., fire-fighting and religious services.	4.18
	The socio-economic assessment has not valued the ecosystem services that will be destroyed by the mine.	4.18
	Moolarben Coal Mines interacted poorly with the community in relation to community consultation and complaints.	4.18
	Mining will be a source of health deterioration and stress to local residents.	4.18
	The EA did not adequately consider the impacts on housing and social services, such as medical facilities and schools, due to the introduction of a new population of workers and their families to Mudgee and Gulgong, nor did it assess the cumulative impact of these pressures in relation to Wilpinjong coal mine and Stage 1 operations.	4.18
	Employment and investment should be directed to other types of industries or energy sources (e.g., renewable energy sources).	4.18
	Economic benefits to the region, state, and federal governments outlined in the Stage 1 EA report have yet to commence.	4.18
	The MCP will have a permanent detrimental impact on existing tourism and the potential for tourism in the local area.	4.18
	Additional mining operations will compromise the great potential of the fertile valley to be a major tourism area.	4.18
	The MCP will have a permanent detrimental impact on the Goulburn River Stone Cottages, an ecotourism business.	4.18
	The MCP will result in the loss of tourism access to the Goulburn River Gorge.	4.18
	The local area will be subject to rapid growth with the uncontrolled frenzy of mining before becoming a ghost town.	4.18
	Social impacts from Stage 1 have yet to be tested.	4.18
	Felix Resources did not list their donations to political parties in any of the documents on public exhibition.	4.18
	The voluntary planning agreement (VPA) offered for Stage 2 is in staged payments with payments not commencing until after the combined mining operations reach 10 Mtpa coal production.	4.18
	The VPA is highly inadequate and does not compensate for the additional impact to the amenity of the area should 10 Mtpa production not be reached.	4.18

Category	Issue	Section
Land Use	Additional mining operations will compromise the great potential of the fertile valley to be a major agricultural production area.	Section 5.11 of the Stage 2 EA
Rehabilitation	Current coal mining methods remove the top layer of soil, leaving unattractive landscapes that are useless for crops, vines, raising thoroughbreds or attracting tourists.	4.22
Mine Closure	The DPI notes that Wilpinjong coal mine and Stage 2 propose final voids in close proximity to each other and recommends that MCM coordinate with Wilpinjong coal mine to ensure that only one void exists at the end of mining.	3
	The long-term rehabilitation of subsided land across the region does not appear in any of the mitigation or mine closure plans.	Section 5.8 of the Stage 2 EA
Other	It is difficult to locate specific properties in EA Plan 2 and property ownership is not listed alphabetically or numerically.	2.5
	The DPI states that the risk analysis does not indicate what constitutes an unacceptable risk.	5.15 of the Stage 2 EA
	The EA fails to address the Director-General's Requirements to include 'any cumulative impacts associated with concurrent operations of the project with any other existing or approved mining operations in the region'.	4
	The EA attempts to dismiss cumulative impacts by identifying the region as being primarily a mining landscape and therefore not worth consideration.	4
	There is potential conflict in the application for a mining lease (MLA331) over the Corner Gorge, Goulburn River (EL 7074 – 35 ha), an area previously identified by the Independent Hearing and Assessment Panel (IHAP) report as part of a protective buffer zone for this gorge. As a result of IHAP recommendations, MCM agreed to increase the buffer zone between the mine workings and Corner Gorge to 450 m. ML331 contradicts that undertaking.	N/A
	Mining Lease 331 presumes development approval when the MCM Stage 2 – No: 08_0135 (and Modification Stage 1 – No: 05_0117 MOD 3) is still currently being assessed by the DoP and the DECC. This mining lease should be not considered by the DPI-Mineral Resources (DPI-MR) before the DoP has been able to complete both a rigorous and transparent process that would include, should an approval be granted, extensive conditions of consent that may have a significant affect on any mining lease boundary.	N/A
	A senior Planning Department officer is a consultant for MCM apparently to use contacts and experience in framing the company's response to our objections.	N/A
	The DPI state that the existence of previous mining should not be allowed to be a reason to increase mining impacts on the landscape. This reasoning contradicts cumulative impact and ESD principles.	The Stage 2 EA and this PPR
	The hours to be worked during the construction phase of Stage 2 needs clarification.	3

Category	Issue	Section
	Moolarben Coal Mine proposes to conduct a number of mining and related activities associated with the MCP on UCML-owned land.	2.5
	The proposed development will make accessing private land holdings in the Murragamba Creek valley more difficult.	4.18
	Various impact assessments from the EA (including air quality, noise and rail traffic) did not consider the Ulan Continued Operations Project.	4
	The EA does not apply the precautionary principle.	6
	Project alternatives analysed in EA Section 7.3.5 are based on cost rather than mitigation of irreversible environmental damage.	Stage 2 EA
	The EA does not explain why Stage 2 has such a large ratio of coal reject (i.e., 5 Mtpa run-of-mine (ROM) coal to produce 3 Mtpa saleable product). This indicates that the coal being mined in Stage 2 is of questionable quality.	3
	The entire justification for Stage 2 is based on economic arguments in favour of the proponent and shareholders. The points in EA Section 7.3.1 do not indicate why Stage 1 does not give flexibility in delivery of different product coals with differing ash contents or why Stage 1 does not meet contractual obligations as an equity participant in the Newcastle Coal Infrastructure Group (NCIG).	6
Noise	There is no serious consideration in the EA of the cumulative impacts of noise on residences from mining operations.	4.4
	Since noise from Wilpinjong coal mine is audible 15 km from the site, near Wollar, it can be expected that noise from the MCP will also propagate the same distance. Wollar will experience a cumulative noise impact from both the MCP and Wilpinjong coal mine.	4.4
	The DECC indicated that modelled noise levels for the project may be underestimated based on its assessment of the sound power levels specified for mobile equipment and the coal washery.	4.4
	The DECC considers that ongoing monitoring of sound power levels is required to ensure that equipment is being operated and maintained in a manner that is consistent with the noise model.	4.4
	The operational noise model did not consider the two water carts as noise sources.	4.4
	There is no consideration of the noise from borefield pumps.	4.4
	There will be increased noise from 76 heavy diesel machines (or 109 when combined with Wilpinjong coal mine) operating 24 hours a day, seven days a week.	4.4
	Moolarben Coal Mines should provide the CCC with the manufacturer's noise profiling of large machinery, including the bandwidth and sound power levels, particularly of diesel electrics, water carts and overburden drills.	4.4
	Noise from the mine will affect the residents from Moolarben and Cooks Gap through to Gulgong once the hills and natural noise barriers are removed and replaced with a 5 to 15 m bund wall.	4.4
	The MCP will add substantially to low frequency and infrasonic emissions in the area.	4.4

Category	Issue	Section
	The DECC has recommended that the difference between C- and A-weighted levels be evaluated at receiver locations for modelled noise outputs and, where this exceeds 15 dB, a 5 dB penalty is added to the predicted A-weighted level, before comparison with the relevant noise impact assessment criteria.	4.4
	The DECC has identified that the noise impact assessment does not provide the existing level of road traffic noise, for comparison against the criteria in the Environmental Criteria for Road Traffic Noise (ECRTN) guideline.	4.4
	There is no specific mention in the EA of potential noise impacts along Ulan Road even though it is expected that 80% of the workforce will reside in Mudgee and, therefore, travel along Ulan Road to the MCP.	4.18
	The traffic noise assessment states that traffic from MCP in combination with other sources will increase the overall traffic noise levels on these roads. The noise impact assessment provides no further assessment of cumulative noise impacts resulting from traffic. Xstrata Coal seeks further quantification of the MCP contribution to cumulative road traffic noise including identification of those residences affected by cumulative traffic noise.	4.18
	Mid-Western Regional Council expects that the combined traffic noise of MCP traffic and other sources will mean that residences within 30 m of Ulan-Cassilis Road and Cope Road will exceed night-time criteria. Moolarben Coal Mines should commit to covering the cost of mitigation measures, where possible, and, if necessary, acquire such properties.	4.18
	Monitoring conducted by Advitech in Wollar, March 2009, observed each train emitting in excess of 35 dB(A) for over 15 minutes at a receiver at a distance of 400 m and a maximum of 58 dB(A). This satisfies the Environment Protection Authority (EPA) definition of intrusive noise and is above the sleep disturbance level set by the World Health Organisation (WHO).	Section 5.3 of the Stage 2 EA
	All residents within 500 m of the length of the Gulgong–Sandy Hollow rail line will be affected by rail traffic noise.	Appendix 13 of the Stage 2 EA
	The DECC indicated that: • The frequency of occurrence of winds of speeds less than 3 m/s for each assessment period in each season has not been presented and no drainage wind component was included with inversion condition modelling, which could lead to an under prediction of noise impacts at residences in the direction of Ulan village and Ridge Road. A 2 m/s drainage flow wind from the southeast is recommended to be included with inversion condition modelling. • The frequency of F class stability class occurrence on winter nights, which includes lapse rates to 4oC/100 m, has not been considered and it is recommended that 4oC/100 m be used in the inversion condition modelling. • The amount of time that mild temperature inversions occur more than 30% of the time is not specified.	4.4

Category	Issue	Section
	Footnotes to the noise impact assessment criteria (Schedule 3 Condition 2), which state that the noise emission limits identified in Table 2 of the Stage 1 Project Approval apply only up to certain meteorological conditions, are deceptive and the wording becomes a licence to exceed the criteria.	4.4
	The DECC indicated that the noise model did not account for reflected noise from sandstone outcrops and cliffs, or a more reflective ground type cover representative of extended drought conditions.	4.4
	The DECC has indicated that to adequately manage the impact of noise on residences, a commitment to implement real-time noise monitoring is required and that this should include on-site monitoring of noise levels during adverse meteorological conditions and the use of noise trigger levels to indicate when operations need to be temporarily altered.	4.4
	EA Section 5.3.6.1 suggests that background or control noise monitoring will be established in the Ridge Road to Cooks Gap area to record background noise levels. It is essential that this monitoring be in place before the commencement of the construction of Stage 1 and mining operations in OC1.	4.4
	Monitoring of resonating rooms should be included in the noise impact assessment.	4.4
	Internal noise monitoring is not available to affected residents.	4.4
	What does it mean when a property is located within a 'noise management zone'?	4.4
	The Industrial Noise Policy (INP) inadequately considers the impacts of noise from mining operations, especially in rural settings.	4.4
	The noise impact assessment fails to comply with the INP, particularly relating to ambient noise monitoring, public access to monitoring data, establishment of a complaints-monitoring system, and consideration of loss of property value.	4.4
	Explanation is required for the high ambient noise level of 54 dB for property R36 (Rayner). The property is located in a very quiet part of the valley. Measured ambient noise levels for property R36 (shown in EA Appendix 4 Table S1) are in stark contrast to lower projected noise impact levels on properties closer to noise sources than property R36.	4.4
	No baseline noise assessment has been conducted in the area of the Goulburn River Stone Cottages (Property 11) and the northern section of EL6288.	4.4
	Predicted noise contours on maps and figures provided in the EA are incomplete.	4.4
	Residents to the north of the MCP have not been given an indication of the expected noise impacts.	4.4
Groundwater	Mining OC2, OC3, and longwalls 9 to 13 of UG4 should be excluded from the MCP as these areas are highly valued by our society for their irreplaceable water resources and other values.	4.6
	The proposed borefield is unsustainable, unnecessary and should not be approved.	Appendix E

Category	Issue	Section
	The proposal to place an additional borefield adjacent to the Drip on Goulburn River, to provide operational water for Stage 2, is unacceptable and unnecessary poor planning.	Appendix E
	The production borefield should not be located within 2 km of Goulburn River and the Drip or 'Corner Gorges'.	Appendix E
	The EA is a flawed document that bases many of its predictions and conclusions on inadequate data and assumptions that include the following: • Collected baseline groundwater data is assumed to fully represent the hydrogeological environment. • With very little evidence, MCM assumes the Drip is fed only by a perched Triassic aquifer recharged from localised infiltration of rainfall. This is an over-simplification of a complex and dynamic system. • EA Appendix 5 Section 4.7.3 states: 'This [Triassic groundwater] contribution must originate predominantly from the northern side of the river, as the Triassic is largely unsaturated to the south'. This is an extrapolation based on insufficient data. • EA Appendix 5 Section 4.7 states: 'significant impacts to Triassic groundwater levels have only occurred since Ulan Coal Mine increased the width of their longwall panels to 450m'. This is misleading and ignores the fact that Ulan coal mine had collected no solid data on the behaviour of the Triassic aquifers before and during the mining of previous longwalls. 'Ulan Coal Mine monitoring data indicate that the dewatering of the Ulan Seam and the overlying Permian coal measures had negligible impacts on groundwater levels in the Triassic sediments up to the end of 2006.' • The groundwater assessment predicts that the groundwater at point SP49 (Imrie house bore) will experience a 5 m drop in level by 2039, while adjacent Goulburn River and nearby soaks and springs will experience 'no impact' even though 'groundwater derived from the Triassic is believed to be the main baseflow contributor to Goulburn River'. • The collar height of the private bore SP49 is incorrectly shown on all EA tables.	4.6
	Mid-Western Regional Council has indicated its concern over the interference to the aquifer system due to dewatering and on-site water use and the adverse impact this will have on existing groundwater users.	4.6
	Stage 2 will cause a significant reduction in the quality and quantity of water in bore SP49 and the water supply to Goulburn River.	4.6
	Stage 2 will cause extraction and depressurising of groundwater within Goulburn River Stone Cottages' privately owned coal resource.	4.6
	Impacts on the Triassic aquifer will have far reaching effects on local farmers and communities who rely on groundwater for their livelihood.	4.6
	Groundwater levels will be affected up to 18 km away and a 20 km buffer should be imposed on the development to protect the natural values of the abutting Goulburn River National Park and Munghorn Gap Nature Reserve.	4.6
	As Stage 1 mining has yet to commence, the impacts of subsidence on the aquifer are still unknown.	N/A

Category	Issue	Section
	The shallow depth of cover in some areas above the Stage 2 underground mines is likely to have a negative effect on overlying aquifers, where present.	4.6
	Subsidence induced groundwater impacts may be masked by dewatering of the open cut mines.	4.6
	There should be no mining where there is the potential for damage or deterioration of aquifers.	4.6
	The cumulative impact on groundwater, base flows and surface water of the Upper Goulburn River catchment, caused by the interception and interference of Stage 2 when added to the existing and future impacts from Stage 1, Ulan and Wilpinjong mining operations, has not been identified.	4.6
	The EA does not appear to accurately consider current operations at the Ulan coal mine, nor appropriately recognise the relative contribution to cumulative impacts of both the MCP and Ulan operations on the Triassic aquifers.	4.6
	The model developed to predict impacts on regional groundwater for Stage 2 is not an accurate indication of cumulative impacts with existing operations. It is calibrated against publicly available mine dewatering records for the Ulan and Wilpinjong coal mines and, therefore, based on a number of assumptions.	4.6
	The EA does not identify the cumulative loss of groundwater from the combined mining operations already approved in the area.	4.6
	The cumulative loss of groundwater through mine dewatering and open cut interception of aquifers and the watertable has not been adequately assessed, quantified or mitigated.	4.6
	The EA does not adequately refer to any independent regional water modelling.	4.6
	The modellers have not had access to all relevant information to be able to calculate an accurate regional water model.	4.6
	Information related to the drawdown of the Triassic aquifer systems is very recent and does not measure past losses due to all longwall mining in the Ulan operation.	4.6
	The long-term damage to the water sources of the Upper Goulburn River catchment has not been adequately identified.	4.6
	An exhaustive study must be undertaken on the long-term impacts of Stage 2 on water resources prior to the project being approved.	4.6
	The long-term impacts on the watertable from open cut and longwall mining has not been discussed.	4.6
	There seems to be no evaluation of the absorption of rainfall and runoff into large areas of mine rehabilitation. Mine rehabilitation is not as compacted as the original ground surface. The air pockets and spaces between the rock in overburden emplacements will take many years to settle. This increases the absorption of rainfall.	4.6
	There is no indication that water modelling considered the DECC's prediction that rainfall and runoff in the Upper Hunter region will decrease as a result of climate change.	4.6

Category	Issue	Section
	The groundwater model sets the post-mining recovery at 100 years and assumes the climate will not change in this period. This is a high-risk and unacceptable strategy that ignores the long-term effects of an extensively depleted groundwater system on riparian ecosystems combined with lower or infrequent rainfall. The 100-year recovery period equates to the unsustainable mining of irreplaceable water resources in a climatically uncertain future.	4.6
	The DWE has recommended that groundwater verification methodology be developed to differentiate between drawdown from longwall mining and drainage to open cut mining.	4.6
	The suggested contingency response plans to predicted and 'unforeseen adverse impacts' are disappointing and not supported by adequate baseline data. It is essential that the community has confidence with the monitoring criteria underlying the conditions of consent and protection of the catchment and water resources.	4.6
	Water issues from Stage 1 have still not been satisfactorily addressed. There have been no follow up water studies done on the Swords property ('The Lagoons') since early 2005. It has been four years since the original inspection of groundwater (i.e., dams, springs, wells, etc). The results were questionable.	4.6
	The monitoring of groundwater census points 'on at least a six monthly basis' has not occurred and the baseline data collected does not fully represent the hydrogeological environment.	4.6
	The DWE has indicated that the nominated groundwater impact thresholds (trigger values) specified in the EA (EA Table 5.4.2) are not satisfactory and has recommended that cut off and other impact response triggers be established in consultation with the DWE and DECC.	4.6
	The trigger response for groundwater is for groundwater level drawdowns to exceed predicted drawdowns by 20% or more for any consecutive three-month period. Three months is too long a period before a review is carried out and any assessment should be made by an independent hydrologist.	4.6
	Using a 50% increase in salinity for mine water inflows or dewatering discharge as the trigger point is unacceptable. This would push the possible levels for the Triassic groundwater at SW1 to 1,170 µS/cm, which is well over the Australian and New Zealand Environment and Conservation Council (ANZECC) (1992) recommended upland and drinking water levels and allows the pollution of a drinking quality water resource. The Triassic groundwater salinity levels should not be allowed to exceed 800 µS/cm.	4.6
Surface Water and Creek Realignments	There should be no mining where there is a potential for loss in water quality and quantity.	4.7
	Water should not be used for mining as it is required, both in adequate quantity and quality, for land owners, agriculture and ecological and riparian systems.	4.7
	Rivers and waterways should be protected from coal mining.	4.7

Category	Issue	Section
	Too many rivers are being lost to the coal mining industry; these need to be protected and preserved for future generations to explore and enjoy. Once these areas are destroyed, they can never be rehabilitated to their former glory and are lost forever.	4.7 & 4.9
	The Goulburn River diversion is the regional example of damage caused to waterways interfered with by coal mining activities. The Cumbo Creek diversion on the Wilpinjong coal mine is yet to have a feasible plan developed.	4.9
	There is no genuine analysis of the impact of removing 7.3 ML/day or 2,668 ML/year of water from the regional environment.	4.6
	Enough damage has been done to Goulburn River. The river system will never recover.	4.7
	The EA (Appendix 6A) refers incorrectly to Goulburn River and the Drip as a 'substantially altered system… that is no longer representative of the stream conditions that formerly existed'. While the upstream Goulburn River diversion channel (adjacent to the Ulan coal mine) has been significantly modified and degraded by mining, the spectacular downstream section is a highly valued landscape and should be classified accordingly.	4.7
	Goulburn River, including the Drip, Corner Gorge and adjacent escarpment, should be added to Goulburn River National Park to protect these unique features in perpetuity.	4.11
	The average Goulburn River conductivity level at monitoring point SW1 is reported as 780 µS/cm (EA Appendix 6A). This is 20% higher than results reported by the DWE at its Gleniston sampling point (21010017) (average 600 to 700 µS/cm) for the same period. The EA should have acknowledged that the Ulan coal mine discharged saline water prior to 2005 and on a few occasions during 2006, which would have raised electrical conductivity readings.	4.7
	The project may cause an increase in the salinity of Goulburn River.	4.7 & 4.8
	Mid-Western Regional Council expressed concern over mine dewatering and on-site water use interfering with the river system.	4.8
	The project will cause loss of flows to the Goulburn River system.	4.8
	The EA does not consider the overall loss of low flows in the system caused by mining over the lifetime of the MCP.	4.7 & 4.8
	The loss of surface flows to Wilpinjong Creek from Murragamba and Eastern creeks, particularly in low rainfall periods, has not been fully identified, in conjunction with loss of flows from the destroyed creeks systems on the Wilpinjong lease area.	4.8
	The DWE requires that any loss of water to Wilpinjong Creek as a result of mining must be quantified and mitigation strategies developed to account for and replace that loss.	4.8
	Increased mining in the area will result in the cumulative loss of flows to the Wilpinjong Creek and Upper Goulburn River.	4.8
	The cumulative loss of surface flows to the Wilpinjong Creek and Goulburn Rivers systems from Ulan, Stage 1 and Wilpinjong operations has not been adequately assessed, quantified or mitigated.	4.8

Category	Issue	Section
	The model for Stage 2 was calibrated using guidelines because of insufficient continuous stream flow data from the area. This means assumptions are being used to assess the impacts of these mining operations on surface flow in the region.	4.7 & 4.8
	It is debatable whether the upper Wilpinjong Creek in property 15 is dry, as the area is named after 'running springs'.	4.7 & 4.8
	The DECC has indicated that the EA does not address the level of suspended solids that may be discharged from sedimentation ponds and has recommended that sedimentation ponds be designed to accommodate a 1 in 50 year, 24-hour storm event.	4.7, 4.8 & 4.9
	The EA referred to the possibility of mine discharge into the downstream creek system. This is not an acceptable option for maintaining river health in the Upper Goulburn River catchment.	4.8
	The EA identified that there will be surplus water for the final years of the mine with the completion of open cut mining and maximum inflows into UG4. This would possibly require mine water discharges into natural watercourses.	4.8
	Subsidence and dewatering of UG4 will crack and depressurise the water-rich zone around Goulburn River and permanently alter the structure and connectivity of this water system.	4.6
	There is concern over interference to the river system due to mine subsidence.	Appendix I
	The EA does not address the impacts of the inception and loss of surface water flows caused by subsidence and surface fracturing of drainage lines above UG1 and UG2.	4.6
	The DWE indicated that the combined influence of longwall and open cut mining must be carefully observed and specific management of subsidence impacts must be incorporated into subsidence management plans (or approval conditions) for the proposal.	4.12
	Murragamba Creek is a healthy example of a natural system of chain of ponds. This relatively undisturbed riverine ecosystem demonstrates the hydrological processes of the original watercourses in Australia. This creek should not be disturbed by open cut mining operations.	4.9
	The diversion of third order, or greater, creeks or surface waters should not be allowed.	4.9
	The impact of diverting and realigning Murragamba and Eastern creeks has not been fully described or assessed and there is insufficient detailed information on how creek diversions will be reconstructed over reclaimed mine land.	4.9
	Natural watercourses cannot be reconstructed on top of reclaimed mining land.	4.9
	Natural creek beds should not be altered before the construction of any creek bed diversion is at a stage where it is stable and successfully vegetated with locally appropriate species.	4.9
	The ecological integrity of the reconstructed creek bed should be confirmed by independent experts before any mining of the existing creek is allowed.	4.9

Category	Issue	Section
	The DWE requires MCM to prepare a detailed management plan outlining how the relocated creeks will be constructed and maintained, including completion criteria and timeframes for construction, revegetation, maintenance and sign off. Detailed design will need to consider measures to establish surface and shallow groundwater connectivity.	4.9
	The DWE requires that each stage of creek reconstruction be certified by a registered engineer and that, prior to excavating the existing creek, each section of reinstated creek is shown to operating successfully.	4.9
	The Hunter-Central Rivers Catchment Management Authority (CMA) does not support the realignment of Murragamba and Eastern creeks. Mining should avoid extraction beneath these waterways.	4.9
	The Hunter-Central Rivers CMA indicated that the EA does not address ongoing maintenance and conservation of Murragamba and Eastern creek catchments once mining is complete.	4.9
	Surface water discharges from the MCP to the Goulburn River diversion need to be managed to prevent further degradation of the Goulburn River diversion from sedimentation and erosion.	4.8
	Once the management of a mine changes hands or is put in control of a contractor, there is limited opportunity to monitor rehabilitation activities of disturbed watercourses in line with commitments made in the EA.	4.9 & 4.22
	An adequate water monitoring network must be established so that the source of any impacts on water sources can be clearly identified.	4.7
	Current poor remediation of the impacts of the destruction of water sources, such as Bowman's Creek, Glennies Creek, Wambo Creek and the Goulburn River diversion, are an indication that the mining industry has no intention of fixing environmental damage and the NSW government has no resources to regulate or implement these impacts.	4.9
Water Demand and Supply	There is insufficient information on the various elements of the site water balance, its analysis, assumptions and mitigation.	4.8
	It is unclear if the revised site water balance covers both Stages 1 and 2. If so, the modification to Stage 1 does not include a change from using water for dust suppression to using chemical suppressants across the Stage 1 operations.	4.8
	The EA does not consider the economic impacts of reducing the rate of mining or adjusting the mine schedule in response to predicted deficits in water supply.	4.8
	There is no explanation why the mining schedule for Stage 1 has been revised so that maximum groundwater inflows do not occur at the same time as maximum water demand.	4.8
	The DWE requires MCM to comply with the operating rules of any water sharing plan or licence requirements in force under the *Water Act 1912* or *Water Management Act 2000*.	4.8
	The DWE requires MCM to assess and report on the MCP water supply as part of a total water balance assessment on a three yearly basis throughout the life of the mine.	4.8

Category	Issue	Section
	Water collection and extraction for mine use should not exceed the permitted harvestable rights for surface water runoff. If inadequate water is available, MCM should adjust their coal production accordingly.	4.8
	Mid-Western Regional Council supports water sharing between the Ulan, Wilpinjong and Moolarben coal mines, and requests that local water supplies be protected.	4.8
	The EA has not identified the cumulative use of water by the Ulan and Wilpinjong coal mines.	4.8
	The proposal requires 7.3 ML/day or 2,668 ML/year to run the mining and coal washing operations. This is greater than the combined usage of all households in the local government area (LGA). Mudgee, Gulgong, Rylstone and Kandos all have major water storages to provide the bulk of this water supply. The proposal has only the groundwater and surface water sources associated with Goulburn River from which to obtain this volume of water.	4.8
	The government should commission an independent hydrologist to review the MCM proposal and investigate the cumulative and long-term impacts of the proposal prior to project approval.	4.8
	Stage 2 should not be approved until the Regional Water Supply / Monitoring Investigation has been completed and full cooperation of the three mining operators has been reached.	4.7
	The Regional Water Supply / Monitoring Investigation, which is a condition of the Stage 1 Project Approval, is not adequately considered in the Stage 2 EA.	4.7
	The DWE requires that the operating rules of the Water Sharing Plan for the Hunter unregulated and alluvial water sources be incorporated into any mitigation or management measures.	4. 8
	Options for the management of Splitters Creek Dam must be considered in terms of the limitations and dealings rules permitted under the Water Sharing Plan for the Hunter unregulated and alluvial water sources.	4.8
Ecology	Financial gains of development should not override consideration of the impact on the environment.	4.11
	The opening of a new mine does not justify the destruction of ecology, especially the destruction of mature vegetation habitat, which cannot be mitigated.	4.11
	The MCP is likely to compromise the ability of the Hunter-Central Rivers Catchment Management Authority and the NSW government to meet their short-term Catchment Action Plan and State Plan targets, respectively.	4.11
	The Drip and adjacent escarpments should be protected by being included in the Goulburn River National Park.	4.11
	Loss of good condition, intact habitat for threatened species cannot be compensated. Most of the habitats for woodland birds such as Jacky Winter and Restless Flycatcher are highly degraded in NSW, but remnants in the Murragamba Valley are in particularly good condition and should not be destroyed.	4.11

Category	Issue	Section
	No loss of any endangered ecological community (EEC) and critically endangered ecological community (CEEC) (especially woodland vegetation communities) is acceptable and these communities cannot be offset.	4.11
	Detailed mitigation measures need to be provided, in particular for displaced wildlife. The EA report should have quantitatively demonstrated that the proposed mitigation measures will actually improve or maintain environmental outcomes.	4.11
	Mine rehabilitation and regeneration will be over a very long time scale in terms of replacing lost habitat, feeding and nesting grounds for a range of listed threatened species.	4.11
	The environmental management measures and monitoring outlined in EA Tables 6.1 and 6.2 need to be more rigorous and also need to be laid out clearly in the approval conditions.	5
	The long-term rehabilitation of subsided land should be included in the mitigation and mine closure plans.	4.22
	Stage 2 should be delayed until Stage 1 is completed so that the proposed revegetation and rehabilitation of the Stage 1 footprint will have time to establish before the Stage 2 clearing of mature, threatened vegetation occurs.	3
	Impacts on the adjacent reserves from groundwater extraction, noise and blasting, lighting, dust, vehicle emissions, and subsidence have not been addressed, in particular, in relation to impacts on flora and fauna (especially nocturnal fauna).	4
	There are no proposals within the EA report to monitor impacts within the National Estate.	4.11
	The increased territorial pressure on feeding and breeding grounds in the reserves from displaced fauna populations has not been assessed.	4.11
	Subsidence is listed as a key threatening process under the *NSW Threatened Species Conservation Act 1995* and should be discussed in the EA report.	Section 5.7 of the Stage 2 EA
	The impacts of subsidence on CEEC, water sources and threatened species has been understated in the EA, particularly in the context of cumulative impacts from Stage 1 and Ulan mines.	4
	MWRC is concerned about the removal of two groundwater-dependent ecosystems (GDEs).	Section 5.7 of the Stage 2 EA
	Mining operations are drawing down regional groundwater supplies, which is impacting natural springs and other GDEs.	4.6
	The loss of 11 km of creek habitat in Murragamba Creek and Eastern Creek, including a further 7% of flow in Wilpinjong Creek, will impact on the availability of natural water supply, especially in times of low flow, for fauna species using or travelling between the reserves.	4.9
	The construction of any creek bed diversion must be stable and successfully vegetated with locally appropriate species before the natural creek beds are altered in any way. The ecological integrity and geomorphologic and hydraulic stability of reconstructed creek beds should be confirmed by independent experts before any mining of the existing creeks is allowed.	4.9 & 4.11

Category	Issue	Section
	The examples of vegetation species suggested for planting the creek beds during the creek realignment process (EA Appendix 6A Table 24) are inappropriate and not native to this upland catchment.	4.9, 4.11 & 4.22
	Stage 2 will undermine the efforts and investments of many non-government groups and State and Federal governments, which are trying to improve the condition of communities and habitats. Specifically, the Commonwealth government has committed $43.5 million in the Caring for Country Program for the rehabilitation of the CEEC threatened by Stage 2.	4.11
	The Hunter-Central Rivers CMA stated that the EA did not address the loss of in-stream biodiversity during the construction, diversion and eventual alignment of the waterways.	4.9
	Cumulative impacts from current and approved mining operations and powerlines adjacent to Goulburn River National Park and Munghorn Gap Nature Reserve were not considered or were not adequately considered as part of the EA report, including loss of habitat and disruption of connectivity and green corridors (local scale and Great Eastern Ranges scale).	4
	The proposal to clear a further 157 ha of CEEC additional to the 69 ha approved for Stage 1, 47 ha approved for Wilpinjong coal mine and 57 ha approved for Wollar-Wellington Transmission Line, has not been quantified in the EA as a cumulative impact on this threatened ecosystem.	4.11
	The loss of high conservation value vegetation and biodiversity has not been adequately offset.	4.11
	Offsetting requires increased security and should only proceed if an appropriate legal mechanism or instrument is used to permanently secure the area and enforce the required actions.	4.11
	The management of offset areas is required in terms of threats, time-lag effects, and the uncertainties and risks associated with actions such as revegetation.	4.11
	The Murragamba and Eastern creek valleys should be kept as an offset for the surrounding mines and are better suited to maintain and improve the unique biodiversity values of the healthy woodland communities and CEECs approved for clearance in Stage 1. The offset agreed to for the Stage 1 clearing of 69 ha was an exceptionally poor outcome.	4.9 & 4.11

Category	Issue	Section
	The Department of Environment, Water, Heritage and the Arts (DEWHA) stated that the following items need clarification within the ecology assessment of the EA report: • EA Table 5.7.5 does not list all the species that are most likely to be impacted. For example, EA Volume 4 (Appendix 7) Section 9.1.2 states that the Eastern Long-eared Bat has a high likelihood of being impacted by the development, yet this species is not mentioned in the table. • Specific management measures for each *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed species is required as the impact management section of the EA is too vague. • EA Volume 4 (Appendix 7) Section 9.2 needs to clearly state which EPBC Act matters are being affected, including clarification on: – Area and quality of habitat of each species being impacted. – Proportion of regional habitat for this species being impacted. – Regional importance of the habitat (e.g., wildlife corridor). • In EA Volume 4 (Appendix 7), information on the Regent Honeyeater on page 121 contradicts information on page 156. Similarly, information on the Spotted-tailed Quoll on page 122 contradicts information on page 158.	4.11 & Section 5.7 of the Stage 2 EA
	Moolarben Coal Mines has not complied with the Project Approval conditions of Stage 1; they have built roads and fences and cleared trees that they said they would not touch.	N/A
Subsidence	The DPI has noted that: • Two identified cliff lines (C8 and C9), which are situated on private property, will be the most impacted by subsidence, potentially causing rock falls affecting the general landscape and creating a public safety hazard. • A number of Aboriginal archaeological sites associated with rock formations may be impacted by subsidence. • Depth of cover in the order of 120 m or less may affect groundwater aquifers if they are present above the proposed underground workings.	Appendix I
	Mine subsidence could trigger ground movements that will destabilise the sandstone cliffs and gorges.	Appendix I
	There is no discussion of the condition of the sandstone escarpment in relation to weathering, existing fractures, or density of overhangs.	Appendix I
	Mine subsidence (in the order of 2.4 m) will seriously damage the only access road to Goulburn River Stone Cottages, its underground telephone line and, with associated mine operations, constitutes a significant risk to guests arriving and leaving throughout the day and night.	Appendix I

Source: MCM (2010)