

Airly Mine Response to the Independent Environmental Audit Recommendations – June 2018

The following tables are representative of Airly Mine’s Response to the Auditor’s Recommendations identified within the June 2018 Independent Environmental Audit (IEA) Report. This document has been prepared to satisfy Schedule 6, Condition 13 of the Airly Mine Development Consent (SSD_5581).

Table 1. Airly Mine Response to IEA Non-compliances and Recommendations

Condition	Finding	IEA - Recommendation	Airly Mine Response / Action Plan	Timeframe for Completion of Action
<p>Schedule 2 Condition 2(a) SSD_5581</p> <p><i>Terms of Consent – carry out development generally in accordance with the EIS and Mining Schedule.</i></p>	<p>Finding: A review of mining operations as detailed in the 2017 Annual Review indicates that Airly has predominantly worked in accordance with the Mining Schedule (Figure 3 appended to SSD_5581), however, some workings undertaken in 2017 (year 1 of the development) north west of Mt Genowlan appear to be outside of the area scheduled Years 1-4. Mine planning going forward also indicates works in 2018 (year 2 of the development) to continue outside of the area scheduled Years 1-4.</p>	<p>Recommendation: Airly to discuss the mine plan with DPE and the IEP to clarify if there is any inconsistency and what action should be taken to address any inconsistency between the planned mining and the Mining Schedule.</p>	<p>Airly Mine Response: Airly Mine will clarify and resolve this matter with the IEP and DPE.</p>	<p>December 2018</p>
<p>Schedule 4 Condition 18 SSD_5581</p> <p><i>Coal Transport – monitor and report on amount of coal transported and date and time of train movements to the satisfaction of the Secretary.</i></p>	<p>Finding: Although Airly are compliant with the monitoring requirements of this condition and are currently compliant with the reporting requirements of this condition (subject to receiving evidence of satisfaction from the Secretary), it is noted that coal loading and transport by rail records were not reported for the period 31 January 2017 (date of commencement of development under SSD_5581) to 30 June 2017. Airly are therefore not fully compliant with this condition.</p>	<p>Recommendation: Continue to liaise with DPE in seeking its endorsement of the manner in which coal transport is currently being monitored and reported by Airly.</p>	<p>Airly Mine Response: Airly Mine agrees to action and will continue to request feedback on the endorsement status of the manner in which the Mine reports coal transport tonnes.</p>	<p>December 2018</p>

Condition	Finding	IEA - Recommendation	Airly Mine Response / Action Plan	Timeframe for Completion of Action
<p>Schedule 6</p> <p>Condition 14</p> <p>SSD_5581</p> <p><i>Website</i></p>	<p>Finding: The following two approved documents required under development consent SSD_5581 were not on the Centennial / Airly website when it was reviewed on 5 February 2018 however it was noted that the documents had only relatively recently been approved and that they were uploaded prior to completion of the audit report:</p> <ul style="list-style-type: none"> • Airly Mine, Cliff Line Zone of First Workings Extraction Plan (ML1331), September 2017; and • Mining Operations Plan, Airly Mine, 1 January 2018 to 31 December 2024 incorporating consent requirements for Rehabilitation Management Plan. 	<p>Recommendation: Ensure that all approved management plans; Mining Operations Plans and IEP reports are placed on the website immediately once approved or issued.</p>	<p>Airly Mine Response: Noted.</p>	<p>N/A</p>
<p>Condition L2.1</p> <p>EPL 12374</p> <p><i>Concentration Limits – for each discharge point the concentration of a pollutant discharged must not exceed the specified limits.</i></p>	<p>Finding: During the extended audit period there was one discharge event which was from discharge point 8 (LDP3) on 23 November 2017. Analysis of a grab sample from the discharge indicated that Total Suspended Solids were 88 mg/L which exceeded the 50 mg/L concentration limit specified in condition L2.4 of the EPL. Airly are therefore non-compliant with this condition.</p>	<p>Recommendation: Complete the investigation of options to improve Airly’s surface water management system including automation of pumps and construction of additional downstream pollution control dam; and implement the findings. It is noted that the Annual Review 2017 contains a commitment to <i>“Investigate options for the installation of a pollution control dam, downstream of Airly operations to improve the Mines pollution control management”</i>.</p>	<p>Airly Mine Response: Investigations currently underway. An update on this will be provided in the 2018 Annual Review.</p>	<p>March 2019</p>

Table 2. Airly Mine Response to IEA Not Verified Conditions and Recommendations

Condition	Finding	IEA - Recommendation	Airly Mine Response / Action Plan	Timeframe for Completion of Action
<p>Schedule 2</p> <p>Condition 10</p> <p>SSD_5581</p> <p>Surrender of Existing Development Consent – within 12 months of date of commencement.</p>	<p>Finding: Although Airly provided DPE notification of surrender within the required timeframe and had been considered to undertake actions in order to meet the condition, no evidence was available at the time of the audit to confirm that the notification was to the satisfaction of the Secretary as required by this Condition (considered relevant given that consent from all landowners as required under EP&A Regulation had not been obtained).</p>	<p>Recommendation: Continue to liaise with DPE to confirm surrender of the previous Development Consent has been satisfactorily completed.</p>	<p>Airly Mine Response: Airly Mine will continue to request feedback from DPE regarding the status of DA162/91 following Airly Mine’s Notice of Surrender that was issued to DPE on 31/1/2018.</p>	<p>December 2018</p>
<p>Schedule 4</p> <p>Condition 5</p> <p>SSD_5581</p> <p>Air Quality Criteria – particulate matter emissions not to exceed specified criteria at any residence on privately owned land.</p>	<p>Finding: Although monitoring indicates that depositional dust during the audit period was well below the relevant air quality criterion stipulated by this condition, no HVAS monitoring of PM₁₀ or TSP was undertaken and therefore full compliance with this condition could not be verified.</p>	<p>Recommendation: Progress negotiations with regulators and relevant landowner to establish a HVAS monitoring site.</p>	<p>Airly Mine Response: Airly Mine will seek to progress negotiations with the relevant land owner. Additionally, Airly Mine will investigate options for an alternative suitable location for the installation of the HVAS, preferably on Centennial owned lands.</p>	<p>June 2019</p>
<p>Schedule 4</p> <p>Condition 7(d)</p> <p>SSD_5581</p> <p>Air Quality Management Plan –</p>	<p>Finding: The Air Quality Management Plan includes provision for an HVAS monitoring station including monitoring for PM₁₀ and TSP to be installed in the future. It does not provide for immediate monitoring and hence does not address the condition to ensure compliance with the air quality criteria. Currently it is not evident that Airly are compliant with the criteria in regards to PM₁₀ or TSP. It would be up to the discretion of DPE to approve the delayed</p>	<p>Recommendation: Continue to liaise with DPE on the need for submitted new and/or revised environmental management plans, programs and strategies to be approved.</p>	<p>Airly Mine Response: Airly Mine will continue to seek DPE’s feedback and approval of outstanding draft environmental management plans, programs and strategies.</p>	<p>March 2019.</p>

Condition	Finding	IEA - Recommendation	Airly Mine Response / Action Plan	Timeframe for Completion of Action
<i>include monitoring program that evaluates and reports on compliance with the air quality criteria.</i>	installation of this monitoring to demonstrate compliance with the condition. On this basis the condition has been assessed as Not Verified.			

Table 3. Airly Mine Response to IEA Opportunity for Improvement

Condition	IEA - Observation	IEA - Opportunity for Improvement	Airly Response/Action Plan	Timeframe for Completion of Action
Schedule 3 Condition 1	Observation: It is not clear from the Condition that it does not apply to second workings under the existing Extraction Plan MOD 3 Variation. If the condition only applies to works completed under the Development Consent, no second workings were reported to have been conducted hence Airly would be compliant with the condition.	Opportunity for Improvement: Confirm with DPE that second workings under the MOD 3 EP Variation are not applicable under this condition.	Airly Mine Response: Airly Mine will seek clarification from DPE regarding this Condition.	December 2018
Schedule 3 Condition 7	Observation: The Annual Review 2017 does not include a segment on Implementation of the Extraction Plan, specifically related to conformance of the actual mine workings with the mine design. Given Mine design is a key determinant of long term stability of the mine, it considered appropriate that Airly demonstrate in the Annual Review that actual mining is in compliance with the mine design.	Opportunity for Improvement: Include in the Annual Reviews a section on Implementation of the Extraction Plan specifically related to mining and compliance of the mine workings with the mine design.	Airly Mine Response: Airly Mine will include a section in the 2018 Annual Review that addresses compliance of mine workings with respect to mine design.	March 2019
Schedule 4 Condition 2 <i>Noise Criteria</i>	Observation: The monitoring report uses $L_{A1,1min}$ to demonstrate compliance against the night time criterion $L_{A(max)}$ stipulated in Table 4 of this condition. These are different parameters which are not immediately comparable.	Opportunity for Improvement: It is recommended that noise reporting includes justification for the use of $L_{A1,1min}$ to demonstrate compliance against the night time criterion $L_{A(max)}$	Airly Mine Response: A measurement of LA1, 1minute corresponds to the highest noise level generated for 0.6 second during one minute. In practical terms this is the highest noise level, or LAmax, received from the site during the entire measurement period (i.e.	March 2019

Condition	IEA - Observation	IEA - Opportunity for Improvement	Airly Response/Action Plan	Timeframe for Completion of Action
			<p>the highest level of the loudest minute during the 15 minute measurement.</p> <p>Airly Mine will clarify / include a justification for the use of $L_{A1,1min}$ within future noise monitoring reports.</p>	
<p>Schedule 4</p> <p>Condition 5</p> <p>SSD_5581</p> <p><i>Air Quality Criteria</i></p>	<p>Observation: The depositional dust Certificates of Analysis note that dust monitoring gauges DG1 and DG2 are non-compliant sites in accordance with AS 3580.1.1 with respect to clear sky angle and/or unrestricted air flow and/or dripline of trees.</p>	<p>Opportunity for Improvement: If DG1 and DG2 are to remain, consider re-siting the gauges such that they are compliant with AS 3580.10.1</p>	<p>Airly Mine Response: DG1 and DG2 are scheduled to be relocated in accordance with Figure 2 of the Airly Mine Air Quality and Green House Gas (AQGHG) Management Plan. This issue will be rectified following DPE's approval of the Management Plan.</p>	<p>March 2019</p>
<p>Schedule 4</p> <p>Condition 15</p> <p>SSD_5581</p> <p><i>Water Management Plan</i></p>	<p>Observation: The Water Management Plan is yet to be approved under Schedule 3, Condition 15 of the Development Consent SSD_5581.</p>	<p>Opportunity for Improvement: It is recommended that Airly update and re-submit the Water Management Plan to DPE after addressing comments on the Plan from DPE received in June 2018.</p>	<p>Airly Mine Response: Airly Mine will update and re-submit the Water Management Plan to address DPE's feedback that was received during June 2018.</p>	<p>December 2018</p>
<p>Schedule 4</p> <p>Condition 15</p> <p>SSD_5581</p> <p><i>Water Management Plan</i></p>	<p>Observation: The Groundwater Management Plan (part of the yet to be approved Water Management Plan) had not been implemented in respect of Annual water quality sampling not undertaken, and sampling of Private bore, Nioka, in 2017, not undertaken. In a letter to DPE dated 25 May 2018, Airly reported in the letter that "two requirements of the updated 2017 Water Management Plan were not completed during the reporting period as the management plan had not yet been approved by the Department of Planning & Environment prior to the scheduled sampling events.</p>	<p>Opportunity for Improvement: Airly has committed to undertake the required sampling and monitoring in 2018.</p>	<p>Airly Mine Response: Noted.</p>	<p>December 2018.</p>

Condition	IEA - Observation	IEA - Opportunity for Improvement	Airly Response/Action Plan	Timeframe for Completion of Action
	<p>These requirements include:</p> <ul style="list-style-type: none"> Annual analytical suite as specified by Table 4-4 of the WMP; Quarterly sampling of Nioka bore (neighbouring bore, subject to landholder consent and access agreement following the approval of the Airly Water Management Plan). <p>Both of these items are scheduled for implementation in the 2018 monitoring program. (Section 7.2.2 and Appendix 1 of the revised 2017 Annual Review).”</p>			
<p>Schedule 4</p> <p>Condition 15</p> <p>SSD_5581</p> <p><i>Water Management Plan</i></p>	<p>Observation: Airly did not report the exceedance of an EPL concentration limit to DPE.</p>	<p>Opportunity for Improvement: Report to DPE non compliances with the EPL criteria (e.g. the exceedance discussed for this condition) or the criteria defined in the Water Management Plan to avoid the risk on non reporting of incidents or confirm with DPE the extent to which reporting of such events is required.</p>	<p>Airly Mine Response: Noted.</p> <p>The exceedance was reported in the November 2017 Monitoring Report, 2017 Annual Return and 2017 Annual Review and the January 2018 CCC Meeting.</p>	<p>N/A</p>
<p>Schedule 6</p> <p>Condition 14</p> <p>SSD_5581</p> <p><i>Access to Information</i></p>	<p>Observation: It is noted that the majority of environmental management strategies, plans and programs required under development consent SSD_5581 have been submitted to DPE but they not yet been approved and are therefore not on the Centennial website.</p>	<p>Opportunity for Improvement: Where management plans have not yet been approved under SSD_5581, consider, in consultation with DPE, placing corresponding management plans approved under the previous consent on the Centennial Coal / Airly website</p>	<p>Airly Mine Response: Noted. Airly Mine will consider including a management plan status table within the 2018 Annual Review.</p>	<p>March 2019</p>

Condition	IEA - Observation	IEA - Opportunity for Improvement	Airly Response/Action Plan	Timeframe for Completion of Action
		for the interim.		
Condition 2 ML 1331 <i>Rehabilitation</i>	Observation: Rehabilitation of borehole ARP07 site was undertaken prior to the extended audit period. Sediment fencing was still in place but had deteriorated.	Opportunity for Improvement: Remove sediment fence and repair ground at Borehole ARP07 where controls are not required in the area.	Airly Mine Response: Airly Mine will seek approval from NPWS to remove the sediment fencing around ARP07.	December 2018
Condition 5 ML 1331 <i>Incident Reporting</i>	Observation: One incident report was submitted late to DRG and did not have all of the required information as defined by the condition.	Opportunity for Improvement: Future incident reports to DRG should contain all requirements of Condition 5 of the Mining Lease and be submitted within 7 days as specified in the condition.	Airly Mine Response: Noted. Airly Mine does not consider any incidents within the audit period to have triggered Condition 5 of ML1331. All incident reports supplied to DRG within the audit period were of an informative nature only. Any future incidents that trigger Condition 5 of ML1331 will have an associated incident report that fulfils all requirements of ML1331.	N/A
Schedule 4 Conditions 4, 7, 15, 17, 19, 21 & 26 and; Schedule 6 Condition 1 SSD_5581 <i>Environmental Management Plans</i>	Observation: A number of environmental management plans and strategies have been developed and or updated under Development Consent SSD_5581 and submitted to DPE for approval in the first half of 2017, however approval has not yet been granted. Such plans include: Noise Management Plan, Air Quality and Greenhouse Gas Management Plan Western Region, Water Management Plan, Western Region Biodiversity Management Plan, Transport Management Plan, Western Region Historic Heritage Management Plan, Exploration Activities and Minor Surface Infrastructure Management Plan and Environmental Management Strategy.	Opportunity for Improvement: Continue to liaise with DPE on the need for submitted new and/or revised environmental management plans, programs and strategies to be approved.	Airly Mine Response: Airly Mine will continue to seek DPE's feedback and approval of outstanding draft environmental management plans, programs and strategies.	March 2019

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<i>Independent Expert Panel (IEP)</i>	Observation: The Independent Expert Panel (IEP) do not appear to have a role in assessing the ongoing performance of the mine in respect of subsidence related performance. There is no ongoing regular requirement for third party expert review of mine subsidence performance.	Opportunity for Improvement: Given the involvement of the IEP as subsidence subject matter experts, it is recommended that DPE and Airly consider directing the IEP to conduct Independent Third Party reviews of the subsidence findings in the Annual Review (or through some other forum), in particular assessment of whether Airly are meeting the requirements for the performance measures as defined in the Development Consent and are in compliance with Subsidence Specific conditions within the Development Consent.	Airly Mine Response: Airly Mine will provide subsidence monitoring results to the IEP for their review and comment every six months.	August 2018 (on-going)
<i>Hydrocarbon Management at the Pit Top.</i>	Observation: While hydrocarbon management appears to have improved since the previous audit, further improvements could be made to the storage and handling of oil; waste oil and diesel on site. Airly are well into planning the construction of new workshop and ancillary facilities that incorporate improved hydrocarbon management.	Opportunity for Improvement: Continue to develop the design and then construction of best practice hydrocarbon management in the new site facilities such as the workshop.	Airly Mine Response: Airly Mine will improve hydrocarbon management systems during the construction / upgrade of the Pit Top facilities.	December 2019

Table 4. Airly Mine Response the IER of the Groundwater Management Plan & Model - Opportunities for Improvement

Condition	IER - Opportunities for Improvement	Airly Mine Response/Action Plan	Timeframe for completion of Action.
<p>Schedule 4</p> <p>Condition 15</p> <p>SSD_5581</p> <p><i>Water Management Plan</i></p>	<p>The water management plan, and the assignment of groundwater level triggers for unsaturated VWP sensors, should be reviewed and updated.</p>	<p>Groundwater level triggers to be reviewed and updated if necessary as part of the next WMP update</p>	<p>December 2018</p>
	<p>Review monitoring locations for Gap Creek and Genowlan Creek alluvial standpipes. Are the standpipes located in the deepest sections of the alluvium?</p>	<p>Alternative locations are unlikely to intercept more permanent groundwater. It is considered that the coverage of alluvial groundwater is sufficient.</p>	<p>NA</p>
	<p>Review procedures for analysis, presentation and use of VWP data.</p>	<p>To be undertaken as part of the 2018 Annual Water Monitoring Report</p>	<p>March 2019</p>
	<p>Review and revise water quality analytical suite.</p>	<p>Rationalise analytical suite for surface water and groundwater sampling as part of the next WMP update</p>	<p>December 2018</p>
	<p>Review lack of dynamic response in model predictions.</p>	<p>Currently being undertaken as part of the 2018 groundwater model update.</p>	<p>December 2018</p>
	<p>Assess potential for re-activation of major geological structures, particularly seam to surface structures that intersect or are coincident with the Gap Creek and Genowlan Creek alluvial aquifers.</p>	<p>Development mining has been completed on all sides of Gap Creek. Extraction is complete on the western side and no further mining is possible. Extraction mining on the eastern side of Gap Creek will not include extraction around significant faults (i.e. single faults or multiple faults with total >0.5m throw). This prevents reactivation by maintaining large and stable pillar sizes around such features. No extraction workings are planned under or immediately adjacent to Genowlan Creek.</p>	<p>N/A</p>