

Mount Thorley Warkworth Complex (SSD-6464 and SSD-6465) – Independent Environmental Audit 2020 – Responses to Audit Recommendations

NON-COMPLIANCE RECOMMENDATIONS AND RESPONSES			
Ref	Non-Compliance	Hansen Bailey Recommendation	MTW Response
<b>Previous IEA</b>			
Table 6	Review process for documenting training records for training required by approvals. Implement process for documenting these training records as required.	No outstanding recommendations from previous IEA.	Review of process has been completed by MTW, and progress has been made but not finalised (e.g. Viewed BMP training procedures listing the role and purpose for Drill and Blast Engineer, Environment and Community Coordinator and Drill Coordinator). This will be completed during the 2020 Annual Review period.
<b>SSD 6464</b>			
Sch 2 Cond 2(b)	Some non-compliances identified in SSD 6464 as described below.	Work with relevant regulators to resolve non compliances in this table.	MTW will work with relevant regulators to resolve non compliances in this table.
Sch 2 Cond 9	The application to surrender DA-300-9-2002-i has not been approved by DPIE. Email from DPIE dated 3/3/20 states that DPIE does not have capacity to complete the surrender and will complete in “the near future”.	Follow up with DPIE to seek surrender notice.	MTW followed up progress with DPIE during August 2020, and will follow up with DPIE to progress surrender of the relevant consent during the 2020 Annual Review period.
Sch 3 Cond 8	Three blast non-compliances during the IEA period. Two blasts exceeded the blast criteria of 120 dBA (28/12/18, 4/4/19). One blast was an administrative non-compliance for failure to capture the blast at the monitor (5/7/18). A penalty notice was issued from DPIE for the blast exceedance occurring on the 4/4/19.	Implement continuous improvement practices with the aim to avoid any blast exceedances.	MTW has already reacted with modification to blast practices in relation to each on the non-compliances noted, including engaging external investigations, modifications to blast permissions pages, and installing an additional weather station to assist review.  As a further measure of continuous improvement, MTW are also working with stakeholders in the Hunter Valley to enable the implementation of a real time model, which will use real time meteorological data from weather stations throughout the Hunter Valley to better determine the effect of possible overpressure enhancement. Development of an MTW specific model has commenced in 2020, with testing and implementation expected to occur by end of June 2021.
Sch 3 Cond 14(a)	Blast dust incident on 7/8/19. The blast dust travelled to the east over land associated with Warkworth Coal Mine, Putty Road, and the Mount Thorley Industrial Estate before dissipating over farmland east of the licenced premises. A penalty notice was issued by the EPA for the blast dust incident.	Implement continuous improvement practices with the aim to avoid dust blast events.	Refer to response associated with Ref Sch 3 Cond 8 regarding the blast dust incident.
Sch 3 Cond 26	Two water management incidents (4/12/17 and 30/3/19) which incurred MTW three penalty notices and one caution.	Implement continuous improvement practices with the aim to avoid any water management incidents and implement improvements.	MTW will continue to implement improvement practices, including those that have been committed to following incidents associated with water management on site.  Further details regarding follow up actions to the two water management incidents referred to are shown below:  MTW reported both incidents to the relevant authorities in accordance with its Pollution Incident Response Management Plan (PIRMP). Corrective actions were implemented for the both of these incidents which included:

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			<ul style="list-style-type: none"> <li>- Increased awareness training for site personnel with regard to water related risks within operational areas.</li> <li>- Installation of a new boundary dam monitoring system on required dam locations to assist with improving operational water management during rainfall.</li> <li>- Upgrades to dewatering infrastructure to assist with dewatering boundary dams during and post rainfall.</li> </ul>
Sch 3 Cond 28	The condition requires retirement of the required biodiversity credits within 3 years of the development commencing (i.e. by 14 February 2019). Although correspondence with regulators has occurred regarding progress to date, including issues with changing biodiversity legislation, possible timelines to complete, and correspondence on impending administrative non-compliance with this condition, there is no evidence available that the timelines proposed for the retirement of biodiversity credits has been achieved. No formal extension to the 3 year timeframe can be granted by DPIE as the condition does not allow the Secretary to grant one.	At next modification consider to request amendment to condition to facilitate extension to time by adding "or with the agreement of the Secretary" after "approval" consistent with other contemporary approvals.	<p>MTW agree with this recommendation if next modification occurs prior to credits being retired for biodiversity areas. MTW will continue to progress current engagement path with Biodiversity Conservation Division regarding this condition as detailed in the IEA report. DPIE Sydney has also been advised of progress with BCD.</p> <p>Estimated completion date for establishment of Biodiversity Stewardship Agreements and retirement of credits from the various Biodiversity Areas is 30 November 2021.</p>
Sch 3 Cond 30	No evidence that offset areas listed in Table 12 have been secured under an in-perpetuity conservation mechanism in accordance with the relevant provisions of the <i>Threatened Species Conservation Act</i> .	Continue to progress long term security mechanism for ecology offset areas with relevant regulators.	<p>MTW will continue to progress current engagement path with Biodiversity Conservation Division regarding this condition as detailed in the IEA report. DPIE Sydney has also been advised of progress with BCD.</p> <p>Estimated completion date for establishment of Biodiversity Stewardship Agreements and retirement of credits from the various Biodiversity Areas is 30 November 2021.</p>
Sch 3 Cond 34	2017 audit confirmed it sighted evidence of consultation with neighbouring mines and OEH. OEH has not confirmed whether the Integrated Management Plan for the Warkworth Sands Woodland EEC is to their satisfaction.	Follow up with OEH to confirm that Integrated Management Plan for the Warkworth Sands Woodland EEC is to their satisfaction.	<p>OEH has not approved this plan yet despite being submitted for approval within 12 months. Follow up with Biodiversity Conservation Division has occurred during April-May 2020 which indicated this item has moved up BCD priority list.</p> <p>MTW to follow up with BCD on the status of the Integrated Management Plan for the Warkworth Sands Woodland EEC during site visit planned for 27 October 2020 with the intention to resolve during the 2020 Annual Review period.</p>
Sch 3 Cond 43(c)	The research program as part of the AHMP has not been progressed and was due to be implemented in August 2017.	Access to the sand bodies with HVO should be resolved. If access cannot be granted, discussions should occur with relevant regulators and modify the ACHMP to relocate the Research Program requirement. The Research Program on MTW should be progressed.	<p>The main delay associated with this project has been the access arrangements for research areas that are not located on land owned/managed by Yancoal. Timing to resolve access issues for parts of the currently proposed program located on non-MTW owned land to understand if access may be granted: By 31 December 2020.</p> <p>Within 3 months of understanding land access position, MTW is proposing to consult with the relevant regulators and its registered Aboriginal parties (RAP's) regarding a revised scope of works for the research program which will be tailored for research areas that are currently located on land that is currently owned or is under agreement with MTW. This will</p>

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			allow for the program to proceed without further delays associated with legal agreements for access.
Sch 3 Cond 51b	At the time of the IEA site visit, coal transport amounts were not reported on the website or in the Annual Review. The Annual Review has since been updated and coal transport amounts are now included in Section 4.3.	Continue to report coal transport amounts in Section 4.3 of the Annual Review.	Noted. This will be included in future Annual Reviews.
Sch 3 Cond 55(c)	No evidence that waste minimisation and management measures are reported in the Annual Review.	Waste minimisation and management measures should be described in future ARs.	Noted. This will be included in future Annual Reviews.
Sch 3 Cond 57	There were ongoing delays in the progression of rehabilitation areas identified by the Resources Regulator for which MTW received a Section 240 notice.	Complete undertaking actions described in Section 240 notice issued by the Resource Regulator. Actions are being processed as described in Appendix E.	<p>MTW do not agree that this is not compliant regarding progressive rehabilitation. Rehabilitation progress on Woodlands Dump area has been delayed by move to partially back fill South Pit Void. Autobahn Haul road will be required to be kept open for longer to allow access for waste trucks to dump into South Pit Void. Closure of the Autobahn Haul road is required to progress rehabilitation on the south facing slope of Woodlands Dump. Alternative rehabilitation areas have been found in other parts of Warkworth Pit to allow rehabilitation progress to keep pace with EIS projections.</p> <p>Confirmation received from Resources Regulator on 24 January 2020 that the directions of section 240 notices NTCE0003219 and NTCE 0003168 had been satisfactorily addressed by the submission of the Emergent Ecology Report into rehabilitation progress at MTW. The requirements of subsequent section 240 notices NTCE0004831 and NTCE0004858 have been addressed through the submission of the MTW MOP Amendment C on 31 March 2020. MTW MOP Amendment C is currently being reviewed by Resources Regulator.</p>
Sch 5 Cond 5(a)	No evidence that a revision of the strategies, plans and programs was undertaken following the: <ul style="list-style-type: none"> <li>• 4 Dec 2017 Water Incident; and</li> <li>• 28 Dec 2018 Blast Incident.</li> </ul>	Records should be kept that review undertaken after each AR (could be included in AR), incident report (could be included in report) and audit to fulfil this condition in future.	Noted. MTW will ensure that a revision and or review of strategies, plans and programs is undertaken as required.
Sch 5 Cond 7	In regards to the 4 December 2017 Water Incident, no evidence that Secretary was notified within 7 days.	Ensure future incidents are reported to DPIE within 7 days.	Noted. MTW will ensure that any incidents (as defined by the consent) will be notified within 7 days.
<b>SSD 6465</b>			
Sch 2 Cond 2(b)	Some non-compliances identified in SSD 6464 as described below.	Work with relevant regulators to resolve non compliances in this table.	MTW will work with relevant regulators to resolve non compliances in this table.
Sch 3 Cond 6	At the end of the 12 month 2019 calendar year, one Mt Thorley blast at the Wollemi Peak Road monitoring location exceeded 5 mm/s. This represented 6.3% of blasts which his greater than the allowable 5% of blasts. DPIE have advised that no further action would be taken at this time regarding the incident.	Implement continuous improvement practices with the aim to avoid blasting events that generate unacceptable dust.	Regarding the non-compliance referred to, an investigation of the individual result that was >5mm/s (5.67mm/s result recorded on 10 December 2019) was undertaken to determine the potential contributing factors affecting the ground vibration level recorded at the Wollemi Peak Road monitoring station. The investigation identified that ground conditions related to drought conditions and a presplit shot fired shortly after the

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			<p>main production shot, may have both contributed to the higher than predicted result.</p> <p>The blast design checklist has since been revised to reduce the potential for reoccurrence of a similar ground vibration result. Also improved tracking of the 5% item has been implemented on a monthly basis.</p> <p>MTW will continue to implement improvement practices, including those that have been committed to following non-compliance.</p>
Sch 3 Cond 27	No evidence that the Loders Creek Aboriginal Cultural Heritage Conservation Area has been entered into a Conservation Agreement.	Progress establishment of the Loders Creek Heritage Conservation Area Agreement with relevant regulators.	<p>MTW has provided BCD with a draft Conservation Agreement for the WBACHCA for its consideration and continues to engage with BCD on the process for registering the WBACHCA conservation agreement.</p> <p>Once BCD has approved the WBACHCA conservation agreement it is MTW's intention to use the approved agreement as a template to draft and submit the LCACHCA conservation agreement for approval. Estimated timing for submission of LCACHCA conservation agreement to BCD post the WBACHCA process being completed is 30 June 2021.</p>
<b>Environment Protection Licence (EPL) 1376</b>			
L.5	<p>As reported in the EPL Annual Returns, during the IEA period, there were two non-compliances against L5.2 for blast events on 4/4/19 and 28/12/18, discussed in Sch 3 Cond 8 of SSD 6464). A further Non-compliance in 2017 for low level fume emitted from West Pit.</p> <p>This is the same non-compliance as for SSD 6464 Sch 3 Cond 8 and 14a.</p>	As per recommendation for Sch 3 Cond 8 of SSD 6464.	Noted. Refer to response associated with Ref Sch 3 Cond 8 and Ref Sch 3 Cond 14(a).
O1.1	<p>As reported in the EPL Annual Returns, during the IEA period, there were two non-compliances against O1.1 for sediment dam overtop at Dam 53N and for separate water incident on 4/12/17.</p> <p>This is the same non-compliance as for SSD 6464 Sch 3 Cond 26.</p>	As per recommendation for Sch 3 Cond 26 of SSD 6464.	Noted. Refer to response associated with Ref Sch 3 Cond 26.
M2.1 M2.2	As reported in the EPL Annual Returns, during the IEA period, there was a non-compliance against M2.2 for non-continuous data capture and non-compliance against M2.3 for not providing quarterly effluent monitoring samples.	Ensure non continuous data capture for quarterly effluent monitoring samples is collected.	<p>Quarterly monitoring is undertaken as required. Where the location is dry and a sample is unable to be collected, and this is noted.</p> <p>Regarding M2.2, periodic maintenance and calibrations are required at the air quality monitoring points, which results in one or more periods of missing 10 minute data.</p> <p>Regarding M2.3, samples were not collected at locations that had been decommissioned, where safe access was not available and where the location was referring to a septic cell rather than the final treated effluent cell. A variation to EPL 1376 was subsequently processed with the EPA, to provide updated sampling points.</p>

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M4.1	As reported in the EPL Annual Returns, during the IEA period, there was one non-compliance against M4.1 for failure to capture continuous data at the Charlton Ridge met station. This has been resolved.	Implement continuous improvement practices with the aim to capture all met station data.	Data capture from the Charlton Ridge met station was greater than 99% for the reporting period. Scheduled maintenance is undertaken at the met station and this can take monitoring equipment offline for 10 minutes or more due to the nature of the maintenance, which for example necessitates periodic lowering of the mast on which the wind speed and direction sensor is located and changing out sensors/calibrating etc. Calibrations need to continue to occur and so brief outages will happen from time to time.
G2 E1	As reported in the EPL Annual Returns, during the IEA period, there was one non-compliance against E1.1 for dam 46N.  This is the same non-compliance as for SSD 6464 Sch 3 Cond 26.	Implement continuous improvement practices with the aim to meet water quality monitoring criteria.	Noted. Refer to response associated with Ref Sch 3 Cond 26.
<b>EPL 1976</b>			
L5	Non-compliance for 5% of blasts <5mm/sec in EPL reporting period, reported in Annual Return for MTO 1976 submitted to EPA on 29/5/20. Discussed further in SSD 6465 Sch 3 Cond 6.  This is the same non-compliance as for SSD 6465 Sch 3 Cond 6.	As per recommendation for SSD6465 Sch 3 Cond 6.	Noted. Refer to response associated with Ref Sch 3 Cond 6.
M2	As reported in the EPL Annual Returns, during the IEA period, there was one non-compliance against M2.2 for non-continuous data capture and against M2.3 for failure to sample at monitoring point 3. There were also non-compliances against Condition M.2 for failure to sample at monitoring point 3. This has been resolved.	Implement continuous improvement practices with the aim to capture all monitoring data.	Regarding M2.2, periodic maintenance and calibrations are required at the air quality monitoring points, which results in one or more periods of missing 10 minute data.  Regarding M2.3, there was a "failure" to sample at monitoring point 3 due to the area being dry. These non-compliances are reported in the Annual Return as required. No regulatory action has been taken on dry sampling points by the EPA in response to Annual Returns
M4	As reported in the EPL Annual Returns, during the IEA period, there were two non-compliances against M4.1 for failure to capture continuous data at the Charlton Ridge met station. This has been resolved.	Implement continuous improvement practices with the aim to capture all met station data.	Data capture from the Charlton Ridge met station was greater than 99% for the reporting period(s). Scheduled maintenance is undertaken at the met station and this can take monitoring equipment offline for 10 minutes or more due to the nature of the maintenance, which for example necessitates periodic lowering of the mast on which the wind speed and direction sensor is located and changing out sensors/calibrating etc. Calibrations need to continue to occur and so brief outages will happen from time to time.
<b>Consolidated Coal Lease (CCL) 753</b>			
Cond 56	Dam 48N was constructed in 2017 within CCL 753 to control sediment within Warkworth Pit in accordance with the Water Management Plan. The Water Management Plan (WMP) states that erosion and sediment controls will be designed generally in accordance with the 'Blue Book': Managing Urban Stormwater: soils and construction, but there is no evidence that Mining, Exploration and Geoscience (MEG) (or the District Inspector of Coal Mines)	Seek approval from District Inspector of Coal Mines for any new dams required to be constructed within this lease prior to construction. This may form part of a revised MOP.	Sediment dams like Dam 48N at MTW are constructed ahead of mining in accordance with MTW's approved Water Management Plan. As outlined in the WMP, sediment dams are designed in accordance with the requirements of the relevant version of the "Blue Book" for Managing Urban Stormwater at the time of design. Dam 48N was constructed in 2017 as a temporary

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	approved the WMP or the construction of Dam48N. It is noted that this temporary sediment Dam 48N has been mined through during the audit period.		sediment basin, and has since been mined out by the progression of Warkworth mine to the west.  MTW will consult with the District Inspector of Coal Mines regarding the Department's requirement for any new dams required to be constructed within CCL753 prior to construction.
<b>Mining Lease (ML) 1751</b>			
Cond 5	No evidence that the Department was notified within seven days of the 4/12/17 Water Incident.  This is the same non-compliance as for SSD 6464 Sch 5 Cond 7	As per recommendation for Sch 5 Cond 7 of SSD 6464.	Noted. MTW will ensure that any incidents (as defined by the consent) will be notified to the Resource Regulator within 7 days. Notifications to the Resource Regulator have been occurring as required since 2018.
<b>Coal Lease (CL) 219</b>			
Cond 21	Section 240 notice received from the Resources Regulator during the IEA period.  This is the same non-compliance as for SSD 6464 Sch 3 Cond 57.	As per recommendation for SSD 6464 Sch 3 Cond 57.	Noted. Refer to response associated with Ref Sch 3 Cond 57

CONTINUAL IMPROVEMENT RECOMMENDATIONS		
Ref	Hansen Bailey Recommendation	MTW Response
<b>Previous IEA</b>		
<b>Table 6 of IEA</b>	As per recommendation for Sch 5 Cond 1 of SSD 6464.	Noted. Refer to response associated with Ref Sch 5 Cond 1 of SSD 6464
<b>SSD 6464</b>		
Sch 2 Cond 14	Recommend that where a management plan is updated and WML can justify that consultation with all parties under another condition is not required, ensure that written approval from DPIE is granted.	Noted. MTW agrees with this recommendation and will implement.
Sch 3 Cond 6(c)	Due to the higher percentage of invalid results in the sample of monthly attended noise results reviewed, although trending downwards, it is recommended that % of valid results be regularly reviewed to ensure that a high percentage of invalid readings are not being received.	Weather conditions are variable and compliance monitoring is undertaken by an external acoustic consultant once a month. At MTW, supplementary monitoring is undertaken by MTW's Community Response Officers every night at MTW and so attended noise monitoring occurs under all conditions.
Sch 3 Cond 6(d)	Recommend toolbox talk (or similar) distributed to relevant personnel in relation to reminder for need for sound suppression on mobile fleet.	Noted. MTW agrees with this recommendation and will implement by 31 December 2020.
Sch 3 Cond 7(e)	Undertake a regular comparison of real time monitoring as part of regular, external noise monitoring to validate real time monitoring results and discuss in Annual Review which is the intent of this condition. Recommend showing maximum monitored result from the three quarterly readings (L <sub>Aeq</sub> 15 min) in all tables in section 6.5 of the Annual Reviews, instead of an average of the three. The link in the AR should also be updated to facilitate ease of finding detailed noise results to <a href="https://insite.yancoal.com.au/document-library/monthly-reporting-mtw">https://insite.yancoal.com.au/document-library/monthly-reporting-mtw</a> .	MTW will undertake a regular comparison of real time and external noise monitoring from quarter four 2020 and will discuss in Annual Reviews going forward. MTW will show maximum values in Table 6.5 of the 2020 Annual Review and in Annual Review's going forward and the link in the AR will also be updated to facilitate ease of finding detailed noise results, as recommended.
Sch 3 Cond 13(a)	If modification to SSD 6464 is sought, recommend consideration to apply to modify condition to within 2km consistent with condition 12.	Noted. MTW will seek update to the condition if a modification to SSD 6464 is sought, as recommended.
Sch 3 Cond 16(c)	Add statement in Road Closure Management Plan at next update that occupancy licences are updated annually.	A statement will be either included in the RCMP and/or in the main text of the Blast Management Plan that occupancy licences are updated annually. This change will be made at the next update to the Blast Management Plan and submitted for approval to DPIE by 13 November 2020.
Sch 3 Cond 17	The Warkworth TEOM (OEH operated) is located adjacent three receptors (77, 102 and 264). As such, we recommend that the monitor be moved outside the predicted exceedance zone, or only utilised for internal monitoring and another monitor be utilised as representative for the closest receivers to the north which are not predicted to be impacted above criteria. If modification to SSD 6464 is sought, amend (a) "total impact" criteria of 50 ug/m <sup>2</sup> to (b) "incremental impact" for PM <sub>10</sub> 24 hr consistent with other NSW coal mine consent conditions	MTW will consider relocation of the Warkworth TEOM and will move it outside of the predicted exceedance zone if deemed necessary. MTW will seek amendment to (a) "total impact" criteria of 50 ug/m <sup>2</sup> to (b) "incremental impact" for PM <sub>10</sub> 24 hr if modification to SSD 6464 is sought.
Sch 3 Cond 18(a)	Tenant and landowner on mine owned land be re-notified of any health risks associated with such exceedances in accordance with the notification requirements under schedule 4 of this consent; at least 5 yearly (i.e. 2020).	Noted. MTW will review notification methods, when last notification was undertaken, and where this is not already addressed in residential tenancy agreements, will develop a system to schedule re-notification of tenants and landowners as every 5 years by the end of Q1 2021.
Sch 3 Cond 18(c)	MTW's TEOM's are located in positions that are representative of privately owned properties. The TEOM results should be utilised to calculate results for the closest tenant to be available should a regulator, tenant or landholder request this data.	MTW will engage an air quality consultant to clarify whether extrapolation from the current air quality monitoring network data provides representative data to inform tenants of the particulate emissions at their residence or if additional monitoring is required. This engagement and review will occur by Q1 2021 and any outcomes will be assessed and implemented where required in 2021.

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Sch 3 Cond 19(c)	Ensure equipment downtime logging includes all environmental alerts.	Equipment downtime is currently categorised for "Dust" and "Environment". MTW will investigate the need for additional downtime categories for environmental downtime in 2020 and if deemed required, will implement changes by Q1 2021.
Sch 3 Cond 19(d)	Process to co-ordinate the air quality management on site with the air quality management at nearby mines (including the Mt Thorley, Bulga, Wambo and Hunter Valley Operations mines) to minimise any cumulative air quality impacts is formalised and included in next revision to AQMP as per condition Sch 3 Cond 20f below.	Noted. MTW will update the inter-site communications protocol for environmental management within the AQMP, to minimise the cumulative air quality impacts with neighbouring mines and submit to DPIE for approval by 13 November 2020. .
Sch 3 Cond 19(d)	Document protocols to minimise the cumulative air quality with neighbouring mines within the AQMP	Noted. MTW will update the inter-site communications protocol for environmental management within the AQMP, to minimise the cumulative air quality impacts with neighbouring mines and submit to DPIE for approval by 13 November 2020.
Sch 3 Cond 22	Annual Review should state for each category what the Warkworth EIS water take prediction was, then the annual calculated impact from the project and confirmation of water licences held for that volume, where required. The water balance recommended at condition 27 should be updated cognisant of actual data.	Noted. Future Annual Reviews will be updated to address these recommendations.
Sch 3 Cond 27(b)(i)	Site water balance update commenced in April 2020, this should be completed and validated with onsite results in the next IEA period.	Noted. The updated model will be validated with onsite values in the next IEA period. Annual site water balance summary will continue to be provided in the sites Annual Reviews.
Sch 3 Cond 27(b)(ii)	Progress the SLR recommendations in the annual Stream Health and Channel Stability report.	Noted. MTW is committed to progressing the recommendations in the annual Stream Health and Channel Stability report regarding observed erosion near monitoring points. This will commence with a preliminary environmental constraints review (cultural heritage, ecology, works near watercourse) during the 2020 Annual Review period to inform the scope of any further works.
Sch 3 Cond 27(b)(iii)	<p>The recommendations in the 2019 Annual Groundwater Review conducted by SLR Consulting should be progressed:</p> <ul style="list-style-type: none"> <li>• MTW changed its sampling methodology during the 2019 reporting period following recommendations in the 2018 review. It is recommended that a review of the trigger be undertaken in light of the revised sampling methodology.</li> <li>• Further investigation into the ground conditions, bore construction and loggers at PZ7S and PZ7D is recommended.</li> <li>• Grab samples have been taken for monitoring bores WOH1239A, WOH2141A, WOH2153A, WOH1254A, WOH2155A, WOH2156A, WD622P, MBW02 and MBW03 within the network. This approach is not in line with industry standards and may not provide a representative water quality sample. The justification for this methodology should be reviewed to determine if more suitable methods (i.e. full purge or low flow) can be applied. A review into the requirement of these bores for the collection of water quality data for the WMP should be undertaken. If it is found that the continued collection of water quality data is required from a bore and suitable sampling methods cannot be adopted, then bore rectification works should be considered.</li> <li>• A review of the construction details and lithological logs for each bore should be undertaken to confirm that each bore is targeting the Blakefield Seam."</li> </ul> <p>At the next Annual Groundwater Review, bore GW98MTCL2 is reviewed and discussed in the AR.</p>	MTW has commenced addressing the recommendations from the 2019 Annual Groundwater review. These will be progressed through the 2020 Annual Review period.

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Sch 3 Cond 28	<p>Adding a table to Section 4 of the Biodiversity MP summarising the specific ecosystem/species credit obligations and where they are being met across each offset property to confirm all credit obligations are being met by the offset package.</p> <p>At next modification, to ensure compliance, consider seeking to amend the mechanism as NSW Biodiversity Offsets Policy for Major Projects no longer applies (in this and subsequent relevant conditions).</p>	<p>MTW agree with the recommendation. A table will be added to BMP when agreement is reached with BCD on retirement of credits.</p> <p>Estimated completion date for establishment of Biodiversity Stewardship Agreements and retirement of credits from the various Biodiversity Areas is 30 November 2021. MTW will consult with DPIE on this matter if a modification occurs prior to credits being retired for biodiversity areas.</p>
Sch 3 Cond 32	<p>Collect attributes as part of monitoring include additional measures such as stem classes and groundcovers. Given data is available, suggest adding some of these to the performance criteria or provide discussion on using data to aid in adaptive mgt e.g. stem class count threshold to aid in determining whether future thinning actions are required to increase vegetation in groundcover.</p>	<p>MTW agree to add detail to the Trigger, Response and Action table in the BMP by 13 November 2020.</p>
Sch 3 Cond 35	<p>Follow up Saving Our Species contribution with OEH by end July 2020, to seek evidence that contribution received in Saving Our Species program.</p>	<p>Complete. MTW submitted an enquiry on 16/7/20 to the Saving Our Species program regarding the 2016 payment to the Saving Our Species contribution and on 22 July 2020, received an agreement signed by OEH in August 2018 which indicated Warkworth's funding of \$1M (as a requirement of the SSD-6464 development consent) was to be used towards the construction of facilities for a captive breeding program for Regent Honeyeaters at the Taronga Western Plains Zoo.</p>
Sch 3 Cond 36(e)	<p>Implement the monitoring reports recommendations for the restoration of WSW and generally the Biodiversity Offset Area (BOA)s including:</p> <p>Habitat restoration monitoring for the southern and northern BOAs (Niche 2018).</p> <ul style="list-style-type: none"> <li>• A more finely detailed assessment of management zones (Warkworth Sands Grassland (Management Zones 2 and 4) be undertaken in order to target management works appropriately;</li> <li>• Direct seeding of grassland areas may be required; and</li> <li>• An assessment of the canopy recruitment at each transition site should be undertaken to determine if further planting or seeding is required.</li> </ul> <p>Vegetation and habitat monitoring for the Goulburn and Condon View BOAs (Niche 2016 and 2018).</p> <ul style="list-style-type: none"> <li>• Management intervention involving increased weed management should be considered to prevent weed incursions impacting on vegetation; and</li> <li>• For intensive management including intensive weed would be needed to assist in regeneration.</li> </ul> <p>Provide information relating to salinity in Biodiversity Management Plan or link to Plan where this is addressed.</p>	<p>Noted – monitoring report recommendations to be implemented in monitoring period 2022 (2020 monitoring already completed).</p> <p>BMPs to be updated to include salinity information by 13 November 2020.</p>
Sch 3 Cond 39	<p>Progress and complete conservation agreement relating to Wollombi Brook Aboriginal Cultural Heritage Conservation Area prior to entering the area beyond the "Proposed Initial Mining Area" west of Lot 1/2 DP 124545.</p>	<p>The Aboriginal Heritage Conservation Agreement (CA) is in progress. Yancoal MTW met with BCD on 11/3/20 to discuss. In order to register the CA on relevant land titles, a standard form (Form 13NP) is required to be signed by all relevant landowners and the Minister (being progressed during current Annual Review period). Updated survey sketch plans of the land to be included in the CA have since been prepared, with an update to the CA schedule of land and the associated Plan of Management is to be prepared for submission to BCD prior to end of 2021.</p>

CONTINUAL IMPROVEMENT RECOMMENDATIONS		
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Sch 3 Cond 42	No reports were available for the first and second salvages (defined in Table A of <b>Appendix E</b> ) were available at the time of this IEA. Recommend these are finalised asap and submitted to BCD to update AHIMS Register.	Noted. While formal salvage reports were not developed for these salvages, MTW can confirm that the salvages were undertaken in accordance with the methodology outlined in the sites ACHMP. All salvage activities were undertaken in consultation with the CHWG.  During the 2020 Annual Review period, MTW will engage a suitably qualified archaeologist to assist with completing the required salvage reports associated with the above-mentioned works. Where required, updated site cards will be provided to the relevant government agency.
Sch 3 Cond 43(a)	In future version of AHMP, evidence of consultation with OEH and/or approval not to consult should be included.	Noted. Future revisions will include evidence of this consultation.
Sch 3 Cond 43(b)	<ul style="list-style-type: none"> <li>Original GDP forms and spreadsheet are updated following field inspection by Environmental team to confirm that all GDPs actions are completed and signed off.</li> <li>A requirement of the AHMP is for the long-term management of Aboriginal Objects. The objects are in storage at HVO. A new care agreement has been approved with OEH, 26 April 2019, and communicated to the Registered Aboriginal Parties in October 2019, however the objects are yet to be relocated. Recommend this is progressed.</li> </ul>	During the 2020 Annual Review period, MTW will relocate the Aboriginal Objects associated with the recent Care Agreement from OEH. MTW will progress this relocation of these objects in consultation with the Registered Aboriginal Parties, HVO and the Office of Environment and Heritage.
Sch 3 Cond 46(d)	<ul style="list-style-type: none"> <li>Add labels for the RAAF Base Bulga, Great Northern Road, the Brickhouse and Springwood Homestead to figures in the HHMP at next review.</li> <li>Action recommendations from 'Archaeological Investigations of the Former RAAF Base Bulga' report dated March 2018 and report on in Annual Review.</li> <li>Action recommendations from 'Mount Thorley Warkworth Historic Heritage Management Plan 2019 Compliance Audit Inspection' in the next period and report on in Annual Review.</li> </ul>	<p>MTW will include the labels for the relevant historic heritage sites in the next review of the sites Historic Heritage Management Plan.</p> <p>MTW has developed a project schedule and budget to progress the recommendations outlined in the sites Historic Heritage Management Plan and each Conservation Management Plan for its known heritage sites during the 2020 and the 2021 Annual Review period</p>
Sch 3 Cond 52(a)	Amend internal Procedures and CRO Work Instruction to refer to revised ' <i>Lighting and Management Leaders document</i> ' and training rolled out to relevant personnel.	Noted. This will be undertaken as recommended and completed by March 2021.
Sch 3 Cond 52(b)	Additional plantings designed and undertaken to reduce view at the third crossing into Mt Thorley.	MTW will review the location of this recommendation for additional plantings, and action if visual screening is deemed necessary. The location will be reviewed by 30 November 2020 and plantings completed by Autumn (May) 2021.
Sch 3 Cond 56	<p>Update rehabilitation procedures to include requirements of biosolids guidelines. Recommend fly ash and other waste conditions from EPL are also included.</p> <p>As per <b>Appendix F</b>, the current weed management controls on site is generally acceptable and in accordance with key guidelines. However, successfully management and tracking of improvement in these areas against performance and long term completion criteria may require more intensive control actions. Potential options for investigation may include:</p> <p>Additional trials areas and analysis of spoil compost Vs no compost VS topsoils in weed cover and density;</p>	<p>MTW is already progressing adding the requirements of Biosolids Guideline to rehabilitation procedures. Requirements for other wastes listed in EPL will be added to rehabilitation procedures as required.</p> <p>Update rehabilitation procedures to include the requirements of the Biosolids Guidelines and requirements for other wastes listed in the EPL as required. Completion date 30 November 2020.</p>

CONTINUAL IMPROVEMENT RECOMMENDATIONS		
Ref	Hansen Bailey Recommendation	MTW Response
Sch 3 Cond 58(d)	<p>The TARP is shown in Table 44 of the MOP, and does not clearly delineate between tier one and tier two trigger values, recommend this is amended to clarify.</p> <p>Within the MOP, it is also unclear how the rehabilitation of the site is integrated with the implementation of the biodiversity offset strategy, the next amendment should clarify this.</p>	<p>MTW will review TARP during next MOP update to provide guidance on delineation for trigger values between Tier One and Tier Two responses. MTW will also consider how the biodiversity offset comments can be included in the next MOP amendment.</p> <p>Update MOP to provide guidance on delineation for trigger values between Tier One and Tier Two responses; and to clarify how the rehabilitation of the site is integrated with the implementation of the biodiversity offset strategy. Completion date 13 November 2020.</p>
Sch 3 Cond 58(e)	Update topsoil inventory record to include topsoil establishment date, volume of topsoil and maintenance activities (i.e. soil amelioration, weed control etc.)	Records are being maintained by MTW as per Resources Regulator requirements.
Sch 3 Cond 58(g)	Although the MOP is approved, no relevant level of mine closure strategy is included. Recommend this is undertaken and included at next Amendment.	<p>Include mine closure strategy items listed in Sch 3 Cond 58(g) in the next Rehabilitation Management Plan (MOP) amendment.</p> <p>Update MOP to Include mine closure strategy items listed in Sch 3 Cond 58(g). Completion date 13 November 2020.</p>
Sch 4 Cond 2(a)	Tenants are advised of the potential health and amenity impacts associated with living on the land, and provided a copy of the NSW Health fact sheet regularly (e.g. five yearly).	Noted. MTW will review notification methods, when last notification was undertaken, and where this is not already addressed in residential tenancy agreements, will develop a system to schedule re-notification of tenants and landowners as every 5 years by the end of Q1 2021.
Sch 5 Cond 1	As proposed, prepare a risk based environmental training program focusing on high priority areas. Program should be completed regularly as toolbox talks (or other preferred methods) and training recorded.	MTW undertakes environmental training for new starters and at induction and maintains records of that training. MTW is looking to extend the environmental training based on risk for particular roles. This will include tool box talks, keeping a record of personnel attendance. A more formal training program will be developed and distributed to relevant site personnel. The formal environmental training program currently being developed will be rolled out prior to the end Q2 2021.
Sch 5 Cond 9(d)	<p>Northern Biodiversity Area</p> <p>The current weed management controls on site is generally acceptable and in accordance with key guidelines. However, successfully management and tracking of improvement in these areas against performance and long term completion criteria may require more intensive control actions. Potential options for investigation may include:</p> <ul style="list-style-type: none"> <li>• A digitised register of application area linked to proposed return frequency prior to consecutive seed set may further assist in medium to long term planning of weed control on site;</li> <li>• Trials of dedicated repeat control Vs non control to determine effort reward improvements; and</li> <li>• Trail areas of scalping, burning and or supplementary native seeding in BOAs with significant pasture and understorey weed infestations.</li> </ul> <p>To ensure year 15 performance targets of 75% survival and minimum number of tube stock are met, increased number of plantings are proposed. These additional plantings should reflect the survival rates for species diversity across each of the different structural layers of the WSW.</p>	<p>Scalping trials have been included in the 2020 planting strips at the NBA.</p> <p>Native grass seeding has also been included prior to tube stock planting at the NBA to increase species diversity in the groundcover.</p> <p>Increased number of planting are planned, BMP to include this updated mapping by 13 November 2020.</p>

CONTINUAL IMPROVEMENT RECOMMENDATIONS		
Ref	Hansen Bailey Recommendation	MTW Response
<b>EPL 1376</b>		
P1.3	Update Water and Land Table as follows: Location Description for Discharge to pipe (EPA Identification No. 24), is required by Special Condition E2, not E3. Include mine name where discharge of mine water will occur to.	MTW will request that this table be updated in the next revision to EPL1376.
O4	Inspection / maintenance forms required under this condition be updated to specifically refer to ponding (O4.3).	MTW will review and update the sites effluent management system quarterly inspection checklist to include ponding by 31 December 2020.
<b>EPL 1976</b>		
U1.1	Recommend to remove completed condition if EPL varied.	MTW agree with this and will do this at the next revision.