

20 March 2015

DETERMINATION REPORT

Snapper Mineral Sands Mine Modification 5 – Production Increase (06_0168 MOD 5)

1. INTRODUCTION

Snapper Mineral Sands Mine (Snapper mine) is located approximately 40 kilometres (km) west of Pooncarie and 170 km south of Broken Hill within the Wentworth Shire Council local government area. Cristal Mining Australia Limited (Cristal) owns and operates this mine as well as the nearby Ginkgo Mineral Sands Mine (Ginkgo mine) and the Broken Hill Mineral Separation Plant (MSP) which processes the mineral sands concentrate from both the Ginkgo and Snapper mines. It also has the Atlas Campaspe mine in Balranald Shire.

The Snapper mine was granted approval in August 2007 and commenced operation in late 2010. It has been modified five times since then. The modifications related to the offset area, road transport and minor increases in extraction, production and transportation rates of the mine.

Both Snapper and Ginkgo mines transport their mineral concentrate to the MSP in Broken Hill and processed waste from the MSP is hauled back to either mine via the approved haulage route. Between the mines and the intersection with the Silver City Highway, the haulage route comprises private and public unsealed roads. Wentworth Shire Council (Council) is the road authority for these local roads.

2. PROPOSED MODIFICATION 5

On 1 August 2014, Cristal lodged an application to modify the current development consent under Section 75W of the *Environmental Planning and Assessment Act 1997* (EP&A Act) which continues to apply to transitional Part 3A projects.

The proposed modification involved:

- Increasing the extraction rate of ore from 9.2 million tonnes per annum (Mtpa) to 14 Mtpa with no change to the overall total ore extracted of 122Mt;
- Changing the sequence of mining involving three extraction options;
- Installing an overburden slurry pipeline;
- Increasing the total haulage rate of mineral concentrate from the Snapper and Ginkgo mines to the Broken Hill MSP from 780,000 to 975,000 tpa; and
- Changing the trucking fleet from 80% AB-triples to 100% AB-triples to facilitate the increase in production.

The modification request was exhibited by the Department of Planning and Environment (Department) from 14 August until 27 August 2014. The Department received six submissions, all from public authorities. No community or special interest group submissions were received. In September 2014, Cristal submitted a Response to Submissions (RtS). Apart from the Council, none of the public authorities objected to the modification.

Council objected to the proposed modification, with similar concerns to those it raised for a proposed expansion of the Ginkgo mine (Crayfish deposit (DA 251-09-01 MOD9)). Council's concerns related primarily to the haul road construction and maintenance provisions under the

Ginkgo mine consent. It was claimed that Cristal did not comply with the *Road Acquisition and Construction Agreement 2005* and associated construction certificates issued by Council for the haulage road under the Ginkgo consent. Council was also concerned that:

- all Cristal mining modification applications in the region are not consolidated into a state significant development application;
- there is a lack of detailed assessment for the 3 proposed mining sequences and a failure to identify the preferred option; and
- a need to pay road maintenance contributions for local roads used by mine-related vehicles.

3. DELEGATION TO THE COMMISSION

The modification request was referred to the Commission for determination under Ministerial delegation dated 14 September 2011, as Wentworth Shire Council objected to the proposal.

The Commission to determine this modification application consisted of Mr Gordon Kirkby (Chair) and Mr Bob McCotter.

The Department of Planning and Environment requested that the Commission consider the Snapper modification application and the Ginkgo modification application concurrently due to similar issues raised by Wentworth Shire Council.

4. SECRETARY'S ENVIRONMENTAL ASSESSMENT REPORT

The Department's Assessment Report identified the following key issues:

- Traffic and transport;
- Water resources; and
- Rehabilitation.

The report found the proposed modification would not change:

- The disturbance boundary of the mine;
- The total volume of ore extracted;
- The overall life of the mine; or
- The number of trucks hauling concentrates to the Broken Hill MSP.

The Department recommended that the Snapper modification be approved subject to a number of amendments to existing conditions.

In particular, the Department recommended conditions to ensure that Cristal continues to maintain the haulage route and undertakes a road safety audit of the haulage route between the Silver City Highway and the site, as recommended by the Road and Maritime Services in their submission to the proposal. To ensure a consistent approach to the maintenance of the haulage route, the Department also recommended similar obligations to those proposed for the expansion of Ginkgo mine.

The Department considered that the proposed increase in the capacity of the existing vehicle fleet with no changes in the number of vehicle movements would be acceptable. The Department concluded that there would be no additional traffic impact from light vehicles accessing the site as there would be no increase in employee numbers.

The Department was also satisfied that Cristal's existing water licence allocations would be adequate to cater for the marginal increase in water demand associated with the proposal.

The Department was satisfied that in the three mining sequence options would not cause any material differences in environmental impacts of the approved operations, rehabilitation of the mine

or the final landform. It believed that, given all options have been documented and assessed, Cristal should be allowed the flexibility to decide which option should be implemented. To ensure proper planning occur on the site, the Department updated and strengthened rehabilitation conditions.

5. COMMISSION'S DETERMINATION PROCESS

Advice was received in late 2014 that this application would be referred to the Commission for determination in early January 2015. It was also requested that the Commission consider this application concurrently with the Crayfish extension of the Ginkgo mine. However, the Commission only received this application on 16 February 2015 with a request that the application be determined by 27 February 2015.

The Commission visited the Snapper mine on 10 February 2015 in conjunction with its visit of the Ginkgo mine and Crayfish extension area. However, the application was only briefly considered at the meeting with Council because the Secretary's assessment report for the Snapper mine was not available for Council's review before the meeting.

Following receipt of the Secretary's assessment report and draft conditions, the Commission forwarded a copy to Council and Cristal, seeking comments by 27 February 2015.

Council provided its comments on 2 March 2015 and requested a meeting to discuss its concerns. The meeting was held on 4 March 2015.

The following is a brief summary of the site visit and meetings.

Site Visit

On 10 February 2015 the Commission visited the existing Snapper mine in conjunction with an inspection of the Ginkgo mine and proposed Crayfish extension area. This allowed discussions with Cristal. The Meeting notes are attached as Appendix 1.

Additional submission from Council dated 2 March 2015

Council's submission is attached as Appendix 2. The issues raised by Council included:

- There was no reference to the trucking of Atlas Campaspe processed waste from the Broken Hill MSP to the Ginkgo and Snapper mines. Council was not consulted.
- A change of trucking fleet requires the approval of the relevant road authority. Council has not yet given its approval.
- There was a discrepancy in transportation limits between consents for the Snapper mine and Ginkgo mine.
- Inadequate public consultation.
- Although the Snapper modification would not increase employee numbers, it would be integrated with the Ginkgo mine and there would be an increase in cross mine traffic. This demonstrated the need to consider road maintenance requirements for this application.
- The adequacy of road maintenance contributions and the number of local roads used by mine vehicles and staff. Council objected to the Department's contribution formula.
- Council reiterated its preference to negotiate a road maintenance agreement with Cristal.
- An independent road safety auditor should be selected by a panel including RMS and Council to ensure proper independence.
- The ratepayers of Wentworth LGA carry the costs of the mines with very little, if any, benefits.

Meeting with Council on 4 March 2015

The Commission chair in opening the meeting advised Council that the meeting would include Council's views on the Snapper modification assessment report. However, as Council's concerns were very similar to those for the Ginkgo mine, the discussion could cover the two applications. Appendix 3 is a record of this meeting.

6. COMMISSION'S CONSIDERATION

Wentworth Shire Council provided extensive submissions to the Department and the Commission including the briefing meetings on the 10 February and 4 March 2015. The Commission was requested to consider this application concurrently with the Ginkgo mine extension. Council raised similar issues on both applications, particularly those related to the haul road, maintenance of other local roads, Council's preference for a VPA, and cross mine traffic and resulting impacts on local roads. The Commission considered these issues very carefully in its determination report on the Ginkgo mine extension.

6.1 The Haul Road

The original approval for the Ginkgo mine included a condition that facilitated a road acquisition and construction agreement between Council and Cristal, which was signed on 28 April 2005. The agreement was for the construction and maintenance of the haul road between the mine and the Silver City Highway. It imposed obligations on Council to acquire land to make the private haulage route into a public road, and for Cristal to construct and maintain the haul road in accordance with Council requirements. The haul road has handled material generated in the Snapper Mine (via Ginkgo) from 2010 onwards.

There is an on-going dispute between the Council and Cristal about the agreement, particularly whether the haul road should be sealed and acquisition of land in the haul road corridor by Council. Council believes the Department should assist it in resolving the dispute rather than replacing the road agreement condition with a new condition (as recommended by the Department) that would leave the dispute unresolved.

The Department in its assessment concluded that both parties have not fully complied with their respective obligations under the agreement, and that it is a compliance matter. The current modification application provides an opportunity to resolve the issue and it recommended that the agreement condition be replaced. The recommended conditions require Cristal to maintain the haulage route on public roads between the Silver City Highway and Ginkgo mine to the satisfaction of the relevant road authority. It also requires an independent road safety audit of the haulage route to be carried out and any reasonable and feasible measures to be implemented by the Proponent to address the recommendations in the audit report.

Commission's Comments

The Commission noted that the agreement was a result of a condition of the approval of the Ginkgo mine. It is of the view that the 2005 agreement between the Council and Cristal was not clearly worded and was ambiguous about the obligations of both parties and the sequence of actions that were required by both parties. This resulted in the agreement effectively not being implemented as envisaged from the commencement of mining operations.

The Commission concurs with the Department's view that given the time that has elapsed since the agreement was signed in 2005, and the mine is almost half way through the Ginkgo mine's life (approval period to 2023), the original agreement condition is now less relevant. The acquisition of land and the sealing of the haul road present some practical issues. First, the time required to acquire private land to make the whole haul road public and to seal it may not be achieved within

the mine's approval period. The haul road would terminate at the Ginkgo mine effectively making it a road to nowhere once mining ceases on the site. Finally, sealing the haul road would create a higher standard pavement than surrounding roads and would increase the future maintenance burden for ratepayers.

The Commission acknowledges Council's concerns regarding the current standard of the haul road and associated safety and public liability issues. However, it agrees with the Department's conclusion that the dispute on the agreement is a matter between the Council and Cristal. The key consideration for the Commission is given the ineffectiveness of the agreement condition in the original approval, an alternative condition should be imposed to remediate the defect to ensure Cristal will maintain the haul road to an acceptable standard that ensures road safety following a complete audit of the haul road to identify areas where road safety may be sub-standard. The Commission considers the Department's recommended conditions reasonable and appropriate in the circumstances.

6.2 Maintenance of other auxiliary roads

Council is critical of the Department's assessment of the road maintenance requirements of other local roads. It is of the view that in considering such important and contentious issues, the Department should seek independent expert traffic advice and should not rely on the earlier Tonkin Report that was commissioned by Cristal for a separate purpose. It is contended that since the commissioning of the Ginkgo and Snapper mines, there has been a significant increase in Council's road expenditure in the central section of the Shire between the Silver City Highway and Pooncarie Road. This was attributed to an increase in traffic from the mines which exacerbated road wear and surface deterioration. Council submitted that Cristal should contribute to the maintenance of nine local roads including the haul road. A negotiated voluntary planning agreement was Council's preferred approach, rather than the Department's recommended contribution formula.

The Department's assessment acknowledged that the proposed extension will increase the number of light vehicles travelling on auxiliary roads. To address traffic and transport related matters, the Department recommended a traffic management plan be prepared and implemented. The plan would include an annual traffic monitoring program to determine the proportion of mine related vehicles on four key auxiliary roads. The recommended condition requires the first annual traffic monitoring program to include other roads that are of concern to Council to determine the mine-related use of these roads. This will ensure that Cristal pays its fair share of road maintenance costs.

The Commission noted Council's concerns and considers the Department's recommended conditions are directed to meeting those concerns in an open and transparent way. The conditions include a provision for Cristal and Council to agree on the annual maintenance monitoring program, annual review of the maintenance monitoring program and road maintenance contribution to be paid until rehabilitation works are completed. The conditions also require the first monitoring program to include the other roads identified by Council. This will provide a fair and reasonable base for assessing contribution requirements. Council suggested an independent expert should carry out the road monitoring work. The Commission considered this was a reasonable request and required the Department to amend the recommended condition accordingly.

6.3 Cross operational traffic between the Atlas Campaspe mine and the Ginkgo and Snapper mines

Council directed attention to Cristal's indication that the Ginkgo, Snapper, Crayfish and Atlas Campaspe mines (when operational) will operate as an integrated complex. It felt that operational cross traffic among the mines had neither been considered nor assessed. No reference is made in the assessment that processed waste from ore generated at the Atlas Campaspe mine would be

transported from the MSP to Ginkgo or Snapper for disposal. Rehabilitation of these sites with processed waste from the Atlas Campaspe mine may require a greater number of personnel than would be necessary for normal rehabilitation purposes.

These issues were not raised in Council's previous submissions to the Department. Hence, the Commission sought further advice from the Department. The advice was received on 17 March 2015.

Regarding the potential operational cross traffic between Atlas Campaspe and the Snapper and Ginkgo mines, the Department advised that the approval of the Atlas-Campaspe mine includes a condition that prohibits project related traffic (including employees and contractors) using local roads to access the site. It restricts mine traffic to the transport corridor (haul route) identified in the EIS. The haul road does not include any local roads in the Wentworth LGA.

The Commission has carefully considered the geographic locations of the mines and found the Atlas Campaspe mine is over 100km (straight line measurement) from the Ginkgo/Snapper mines. It is therefore unlikely there would be frequent cross operational traffic between the mines, notwithstanding they are operated by the same company. The Commission is also satisfied that the traffic restriction imposed on the Atlas Campaspe mine would further limit the potential cross traffic between the mines if that is to occur.

As to the issues of increase truck movements from the MSP to the Ginkgo and Snapper mines, the Department advised that there will be no increase in truck movements because processed waste will be loaded onto otherwise empty trucks that would be returning to the mine sites.

The Commission noted the Ginkgo and Snapper mines will not be processing waste sourced directly from the Atlas Campaspe mine. Instead, processed waste from the MSP will be used as part of mine rehabilitation.

6.4 Voluntary Planning Agreement

Council expressed a strong preference for a voluntary planning agreement with the Proponent that would cover all its concerns including rates and road maintenance costs. It sought a condition requiring the proponent to enter such an agreement with Council by December 2015. Cristal would contribute to the maintenance of roads used by the mines and finalise the construction and acquisition of the haul road in accordance with the 2005 agreement.

The Commission advised Council at its first meeting that a condition of approval cannot be imposed to require a proponent to enter into a voluntary planning agreement with a third party, when a draft VPA had not been offered by the Proponent. The Commission recognised Council's interest in a VPA and therefore requested the Department to amend the recommended road maintenance conditions to include an option that if a negotiated agreement occurs between the Council and Cristal, the relevant road maintenance conditions would not apply.

7. COMMISSION'S DETERMINATION

In making this determination, the Commission carefully considered the information available including the Secretary's Environmental Assessment Report, information gathered during its site visit and meetings and additional written comments received from Council and the Department.

The Commission noted the various issues raised in Council's submissions and briefings, and considered that these issues have been adequately addressed in the Secretary's assessment report and modifications to the recommended conditions. It is not within the Commission's power to

impose a voluntary planning agreement in the approval. However, an option is made available in the revised conditions to allow a negotiated agreement to replace the road maintenance conditions.

The Commission is satisfied that the Secretary's assessment report has identified the potential impacts that may arise from the proposed extension. The proposed management and mitigation measures will minimise the potential impacts and the recommended conditions are adequate to address residual impacts. The recommendation for approval subject to modified conditions is reasonable.

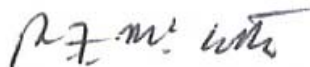
It is noted that the current approval conditions of Ginkgo and Snapper mines do not appear to include any reference to the acceptance of processed waste from the MSP. In response to the Commission's question, the Department advised that both the Ginkgo and Snapper consents were modified by the Secretary in October 2014 to allow receipt of the processed waste. Although there is no specific condition in relation to this matter, it is permitted by the reference to the EA dated November 2013 which supported the modification application (Mod 4).

The Commission found it unsatisfactory if the approval conditions include no reference to the acceptance of processed waste from the MSP. Transparency and certainty demand the consent conditions to be clear on the type and extent of the approval. The Commission therefore includes a condition that no more than 300,000 tonnes per annum of processed waste material shall be transported to the Ginkgo and Snapper Mines combined from the Broken Hill MSP. That processed waste could include waste from the Atlas Campaspe mine within this global limit.

The modification application is approved subject to the updated recommended conditions as required by the Commission.



Gordon Kirkby
Member of the Commission



Bob McCotter
Member of the Commission

MEETING NOTE

Meeting with Cristal Mining Pty Ltd		
Meeting note taken by Paula Poon	Date: Tuesday, 10 February 2015	Time: 12:45pm
Project: Snapper Mineral Sands Mine Mod 5		
Meeting place: site visit		
<p>Attendees: PAC Members: Mr Gordon Kirkby, Mr Bob McCotter, PAC Secretariat: Paula Poon Proponent: Ray Roberts (CMA), Peter Cribb (Resources Strategies)</p>		
<p>The purpose of the meeting was to visit the existing operation, proposed extension area, and haul road and hear the proponent's view on the Department's assessment report and recommendation.</p>		
<p><u>Site Visit</u></p> <p>The site visit travelled through the Low Darling Road and Nob Road South to the Ginkgo Mine and hence a small section of Nob Road towards Pooncarie. The PAC then visited the existing operation. It then drove through the proposed Ginkgo Crayfish extension area to observe the existing environment of the proposed site and its geographic relationship with the Ginkgo mine. The PAC then inspected the Snapper operation after visiting the Crayfish extension area. From the Snapper mine the PAC travelled the whole length of the haul road to reach Silver City Highway to observe the road conditions, traffic and adjacent environment.</p> <p><u>Briefing</u></p> <p>The Proponent raised the following points:</p> <ol style="list-style-type: none"> 1. The Low Darling Road <ul style="list-style-type: none"> - The PAC was advised that sealing of the first section of the road is not for the mine, but other tourist industries in the area. - The Proponent would be very comfortable with a user pay system as recommended by the Department, regarding it as a fair and reasonable way to pay road maintenance contribution. 2. Haul road <ul style="list-style-type: none"> - The road was built and will be maintained as a haul road for the life of the mine by the Proponent. - PAC questioned the frequency of the road being closed following wet weather events. Answer: about 10 times a year for a period of 1-2 days each time. - At a joint site visit with Council in February 2013, the proponent agreed to fix the road, but Council did not agree. - There is no plan to seal the road, but would look at it if a request is made even though it's unlikely that the proponent would agree to the request given the remaining life of the mine. They questioned why Council wanted a sealed road with associated maintenance cost that in the absence of the mine would go to nowhere. Also at the end of the mining, the sealed road would effectively go nowhere as it would end at the mine entrance. 		

3. Road Maintenance on other roads

- The proposed framework for maintenance of Council roads for employees and other non-ore traffic, while not ideal, is acceptable to the company.

4. Other matters

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- The PAC informed the proponent that Council has been given extra time to provide comments until Friday, 27 February 2015. The same offer is available to the proponent if required. The proponent advised that they did not have any additional comments and would confirm that by email.

Documents tabled at meeting/to be provided: Nil

Meeting closed at 7.00pm

Appendix 2



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Our Ref: DOC/15/3113

2 March 2015

Planning Assessment Commission
Attention: Paula Poon
Level 13, 301 George Street
SYDNEY NSW 2001

Dear Commissioner

SNAPPER MINERAL SANDS MINE MODIFICATION 5 – PRODUCTION INCREASE (06_0168 MOD 5)

I refer to the meeting between officers of Wentworth Shire Council (**Council**) and the Planning Assessment Committee (**PAC**) on 10 February 2015. Following this meeting, Council carried out a review of various documents, including the Assessment Report prepared by the Department of Planning (**Assessment Report**).

Council has prepared the following response to the Assessment Report with the comments correlating to the headings in the report. Council have also made recommendations on the conditions and noted these (marked-up) in the **enclosed** document.

1. BACKGROUND

Wentworth Shire Council (**WSC**) is located in the far southwest corner of NSW and covers over 26,000km². According to the 2011 Census, the population of the Shire is 7,112, remaining relatively static. The agricultural sector remains the main employment sector for the Shire.

WSC remains committed to development within its Local Government Area (**LGA**) however; WSC does not want development to place an unfair burden on its residents. Both the Ginkgo and Snapper Mines are predominately 'Drive In Drive Out' mining operations with the significant majority of the personnel and contract providers engaged by Cristal Mining residing outside the WSC LGA. Furthermore, the integration with the Atlas-Campaspe Project (located in the Balranald Shire), will see ongoing access to the mine site by Cristal employees and associated Contractors. Given the continued use of the sites for processing waste from the Atlas-Campaspe Project, it would be reasonable to expect that a number of personnel will be required on-site beyond those that would be required for site rehabilitation purposes.

As acknowledged by the Department, the significant majority of Cristal's mining-related employees and contractors reside outside the WSC LGA, in either the city of Mildura or the city of Broken Hill, or in other locations.

WSC has seen a significant increase in its roads budget since the development of both the Ginkgo and Snapper deposits, which includes a significant increase in road infrastructure maintenance and associated

costs in the northern part of the LGA. (refer attached).

WSC is seeking to progress the issue of Mineral Sand Mining in the LGA through the establishment of timeframes for both Council and Cristal mining for compliance related issues.

Cristal in its Environmental Impact Statements for the Atlas Campaspe Mine, Snapper Mine, Ginkgo Mine, Crayfish Mine and the Mineral Separation Plant (MSP) Deposits clearly states the integration of these mines once operational. WSC therefore considers it prudent that these projects are considered as a whole. At no point in the Assessment Report for Modification 5 is there any reference to the Atlas-Campaspe Mine which will utilise the Ginkgo and Snapper mines for processing waste generated at the Broken Hill MSP until such time as the Development Consent for these mines expires.

WSC is also disappointed to be informed that processing waste generated from mining operations in the Atlas and Campaspe Deposits will be hauled to the LGA and that WSC was not consulted at any point on this matter.

2. PROPOSED MODIFICATION

With reference to:

- *increasing the total haulage rate of mineral concentrate from the Snapper and Ginkgo mines to the Broken Hill MSP from 780,000 to 975,000 tpa; and*
- *changing the trucking fleet from 80% AB-triples to 100% AB-triples to facilitate the increase in production*

WSC notes that the above is not identified in the Crayfish modification (MOD 9) EAR.

In addition, there is no discussion in either the Crayfish modification (MOD 9) EAR or Snapper (MOD 5) EAR, of the Atlas-Campaspe processing waste being transported to Snapper and Ginkgo until approximately year 12 of the Atlas-Campaspe mine. The transportation of this waste increases the terms of activities at both the Snapper and Ginkgo mine sites beyond those associated with rehabilitation of the sites. WSC notes that the development consent for the Snapper Mine expires in July 2026.

WSC seeks clarification as to whether the assertion that there will be no change in the number of trucks hauling concentrate to the Broken Hill MSP is based on the assumption that approval has already been granted to utilise Tridem AB-Triple heavy vehicle combinations which have an increased carrying capacity and in turn, an increase of 2.5 tonnes on each axle-combination.

With reference to 'Transport to MSP' in Table 1: Summary of Approved Project and Proposed Modification Council note:

The utilisation of AB-triples is also subject to approval by WSC as the Road Authority and the National Heavy Vehicle Regulator (NHVR). Approval must be sought through the NHVR who then contacts the relevant road authorities.

With reference to:

'There would be an increase to mineral concentrate transport rate from the Ginkgo and Snapper mines to 975,000 tpa'

WSC notes that this is not identified in the Crayfish modification (MOD 9) EAR. This would be contingent on approval by relevant road authorities and NHVR.

With reference to:

No change to:

- *the haulage route*
- *the type of the haulage trucks (i.e. double road trains and AB triples)*
- *vehicle movements (i.e. 37 trips per day) ; and*
- *existing maintenance arrangements for the haulage route.*

WSC notes the summary under Section 2 – Proposed modification which states a change in the vehicle fleet to 100% AB-triples. This is not identified in the Crayfish modification (MOD 9) EAR. Crayfish modification (MOD 9) EAR identifies the use of double road trains only. Further, while there may not be an increase in the number of heavy vehicle movements, a change to the haulage fleet significantly increases the GVM of loaded heavy vehicle combinations which are fully laden to and from the Broken Hill MSP.

WSC also notes that at present, a formal maintenance agreement with WSC has not been entered into.

With reference to MSP Process waste management in Table 1: *Summary of Approved Project and Proposed Modification* WSC notes that this will now include processing waste generated by the Atlas-Campaspe project until the end of the life for the mine and this has not been properly assessed.

With reference to Rehabilitation and final landform in Table 1: *Summary of Approved Project and Proposed Modification* WSC notes that a preference for the final mining sequence has not at any point been indicated by the project proponent.

With reference to Access in Table 1: *Summary of Approved Project and Proposed Modification* WSC notes that the Haul Road is not the only road used to access the Snapper Mine. The Haul Road is the primary route for haulage to the Broken Hill MSP, however, it is well documented that mining-related vehicles (being both employees and contractors) utilise other roads in the region. In addition, as Cristal continues to develop the Atlas-Campaspe Project, it would not be unreasonable to expect that there will be an increase on the local roads that form the link between Ginkgo and Snapper and the Atlas-Campaspe site by both Cristal employees and contractors.

3. STATUTORY CONTEXT

3.1 Section 75W

Should approval not be granted by the relevant road authorities for the change in the haulage fleet to the use of Tridem AB-Triples, it would be reasonable to expect that a modification would be put forward to increase the number of truck movements per day.

This section indicates that both the Snapper and Ginkgo mining projects are in fact integrated (as does Modification 10) and should be treated as such. If this is the case and WSC believes it to be so, then such integration can only occur under the *Environmental Planning & Assessment Act 1979* by way of a development application for State Significant Development. It cannot be achieved by way of modification of Project Approvals or development consents.

4. CONSULTATION

WSC recognises that relevant advertisements were placed in the Mildura-based Sunraysia Daily and the Broken Hill based Barrier Daily Truth. WSC expressed their concern at the time that the exhibition period was over the school holiday and Christmas period and that it should be extended for this reason. Furthermore, given that the company has been operating in the region for a significant period of time, it would recognise that including a newspaper, such as The Land would have been ensured further

notification for local communities and landholders rather than assuming that the two abovementioned publications are widely read throughout the Wentworth Shire. It is also noted that the Wentworth produced New South Western Standard Bulletin was not utilised for advertising.

WSC queries whether consultation by way of public forum was undertaken by the project proponents to allow local residents to raise queries in relation to the modifications. WSC also queries whether residents in proximity to the mine were consulted in any way.

Under Cristal's Transport Management Plan, it specifies that a formal Community Consultation Program (CCP) will be established for Ginkgo and Snapper Mines and the Mineral Separation Plant in accordance with development consent conditions for all three sites, that will consist of regular community presentations and informal communications that will include a complaint handling protocol.

The Department has stated that ongoing consultation has occurred with WSC and Cristal. WSC has sought discussion with the Department due to a breakdown in negotiations between the project proponents and WSC and ongoing concerns with process. WSC also expresses its disappointment that while the Atlas-Campaspe project will be integrated with the both the Snapper and Ginkgo mines by way of backloads of site generated processing waste, to date Council has not been consulted on these activities (refer to the Atlas-Campaspe Mineral Sands Project Environmental Impact Statement, Executive Summary). Website accessed February 2015:

http://www.cristalmining.com/Social%20Responsibility/Environmental-Management/Environmental%20East/01.%20Atlas-Campaspe%20Mineral%20Sands%20Project%20EIS_%20Executive%20Summary.pdf

If Cristal is required to pay any costs in relation to the upgrade of the intersection on the Haul Road and the Silver City Highway, then it is not unreasonable to expect that Cristal contributes to the increased costs associated with the necessary upgrades to the local roads network to improve road safety for all road users.

While Modification 5 states that there will be no increase in employees, the fact that the Snapper mine is currently integrated with the Ginkgo mine, and will be integrated with the Atlas-Campaspe mine shows that the use of auxiliary roads to access the both the Snapper and Ginkgo mines is intrinsically linked. The reliance on the local road network within the Wentworth LGA by mine-related traffic (including employees and associated contractors) demonstrates the need to consider road maintenance provisions in relation to Modification 5.

WSC is concerned that the Department has not conducted an independent study of transport issues relating to Cristal's operations in the Murray-Darling Basin. It would appear that most of the assumptions made by the Department are based on the Tonkin Study. Furthermore, the Tonkin Report was undertaken in relation to operations at both the Ginkgo and Snapper mines demonstrating that Cristal acknowledges that both mines rely on not only the Haul Road, but also the local roads network within the Wentworth LGA for their operations given the Drive In Drive Out nature of the sites.

The Tonkin Report is a point in time study which has been shown to be flawed. WSC continues to assert that the Tonkin Study was not undertaken in relation to changes in operation at the Snapper mine.

WSC notes that Modification 10 is in fact related to Cristal's Murray-Darling Operations in Broken Hill, Wentworth and Balranald Councils.

5. ASSESSMENT

5.1 Traffic and Transport Existing Situation

The traffic assessment prepared by the applicant is fundamentally flawed and despite requests from Council, the Department has refused to have an independent assessment of traffic impacts prepared. Council questions both PAC and the Department whether it would adopt a similar approach for mine developments in the Hunter Valley and the Western Coal Fields for example?

The Department incorrectly refers to the Wentworth-Pooncarie Road as a state road managed by RMS. It is in fact Pooncarie Road (MR68N), a regional road that is managed by WSC as road authority. Maintenance of the Pooncarie Road is funded by WSC with some contributions from the NSW RMS Block Grant Program.

The department's assertion that Roo Roo, Nob and Polia Road are the direct links between the Silver City Highway and the Wentworth-Pooncarie Road, fails to acknowledge that these roads must be accessed from other roads within the Wentworth LGA local roads network and only form part of the network that connects these roads.

A number of local unsealed roads are utilised by mining-related traffic and it is important to note that the road formation types of each of these roads varies and that there is very limited gravel on these roads, most being dirt roads. Given the predominant calcareous soil types throughout the region, most are subject to erosion by wind and rain events.

All mining-related vehicles (including employees and contractors), excluding the heavy transport fleet that transport mineral concentrate to the MSP and process waste from the MSP back to the mine, are known to use the shortest trafficable routes to access the mine. Those people utilising the local roads network within the Wentworth LGA to access the mine sites, as would be expected, base their decisions on road conditions at the time of travel, which are ascertained from discussions with other mine employees and contractors.

The Department acknowledges in this Assessment Report, that the significant majority of Cristal employees are from Mildura (VIC) or Broken Hill, both of which are not located within the Wentworth LGA.

The shortest direct southern route to the mine site is via travelling from Low or High Darling Roads, and then onto the adjoining Nob Road. The road condition is dictated by the changing soil types, which includes sand hills and red clay loams.

The calcareous soils of the region are subject to erosion by wind (which is exacerbated during dry periods) and water from rain or flood events with minimal bearing capacity of the natural soils these are suitable for basic dry weather low volume traffic flow. The length of this road will require substantial gravel sheeting and it is recommended that it be 150mm minimum as the regular movement of heavy vehicles impact on the basic road formation.

The Transport Management Plan (Bemax, Sept 2007) will be applied to all traffic and transport activities associated with Ginkgo and Snapper Mines and the MSP, with particular emphasis placed on the transport of mineral concentrate and waste backfill material between Ginkgo and Snapper Mines and the MSP along the mineral concentrate transport route."

Having reviewed the Transport Management Plan it is clear that it relates to Heavy Vehicle movements on the Haul Road only and does not refer to any other roads utilised by mine-related vehicles.

Communication with WSC and BHCC will also be important in the event that public road safety is compromised. In such an event traffic control measures may be required, that would include closure of affected roads or temporary lowering of speed limits.

WSC implements road closures and/or lowering of speed limits in the event that the safety of people using the road network is compromised. Such closures are attributable to rain and flood events, and also road damage that may be as a result of erosion of heavy traffic. In the event that WSC closes any road

within its LGA Road Network, Cristal Mining receives email notification to two email addresses provided to WSC by the company.

It should be noted that a significant part of the Haul Road is a public road (being sections of Roo Roo and Nob Roads) and WSC will also close these roads in circumstances described above.

Traffic Generation

A request to change the haulage fleet to Tridem AB-Triples will see an increase in GVM, including an increase to 22.5 tonne per axle combination. Heavy vehicle combinations will undertake these trips fully laden in both directions as a consequence of the Atlas-Campaspe Project and at no stage will be empty.

Given that Cristal is seeking to upgrade the fleet to 100% Tridem AB-Triples to increase the carrying capacity of each heavy vehicle combination, it would not be unreasonable to expect that it will also seek approval to increase the annual tonnage of process waste being transported back to the Ginkgo and Snapper sites. WSC is seeking clarification on this issue and if there is to be no change, how will this be monitored to ensure that there will be no increase in the amount of processing waste returned to either the Snapper or Ginkgo sites.

With reference to:

'The proposed modification is seeking an increase in the amount of mineral concentrate allowed to be transported to the MSP from the Snapper and Ginkgo mines from 780,000 tpa to 975,000 tpa.'

WSC notes that this is not identified in the Crayfish modification (MOD 9) EAR.

With reference to:

To accommodate this increase, Cristal proposes to increase the capacity of the existing vehicle fleet by utilising larger capacity vehicles rather than increase the number of vehicle movements. Currently, Cristal's transport fleet comprises 80% AB-triple vehicles and 20% double road trains, and Cristal is proposing to use 100% AB-triple vehicles. This would allow 975,000 tpa of mineral concentrate to be transported without having to increase the approved 37 truck trips a day. In practice, the proposed changes would result in 7 of the existing heavy vehicle trips being AB-triples instead of double road trains

WSC notes that this is not identified in the Crayfish modification (MOD 9) EAR and represents an increase in load on the axle combinations for the AB-triples (application made to the National Heavy Vehicle Regulator (NHVR) to modify existing AB-triples to Tridem AB-triples to further increase the carrying capacity of the fleet).

With reference to:

Whilst the number of haulage vehicles is not proposed to increase, there would be one additional delivery vehicle to the site per day to accommodate the increased production level. The deliveries are associated with consumables to the site such as diesel, spare parts and accommodation camp supplies. The Department considers that the additional delivery per day to the Snapper mine would have a negligible impact on the existing road network.

WSC notes that this is not identified in the Crayfish modification (MOD 9) EAR.

Further, there is no identification of the types of delivery vehicles associated with the increased production levels, nor where they will originate from.

Road Safety and Maintenance

The use of AB-Triples on the Haulage Route also needs to be approved by WSC as the Roads Authority. It is noted that there has been an application to the NHVR to change the fleet to Tridem AB-Triples which would result in an increase of tonnage on each axle combination of 12.5%.

WSC objects to reliance on the Local Road Network Condition Assessment, Snapper and Ginkgo Mines (Tonkin Consulting, Nov 2013), hereafter referred to as the Tonkin Report for the determination of draft conditions for any developments and/or proposals related to Cristal's operations. As stated in the Introduction of the Tonkin Report, "Tonkin Consulting has been engaged by Cristal Mining Australia, to undertake an assessment of the local road network surrounding the Snapper and Ginkgo mines to determine the current road condition and to understand the impact that the trip generation from the mine has on the local unsealed road network.....The objective of this study is to determine the traffic generation from the mine and the distribution of these trips on the local unsealed roads."

In the Secretary's EAR for the Crayfish Deposit, the Department considers the Tonkin Study to be a Road Safety Audit. WSC holds serious concerns regarding the Department's reliance on this report as it has been demonstrated to be flawed.

The report was not commissioned to assess potential impacts on local roads resulting from the proposed developments in relation to Snapper, Ginkgo, Atlas-Campaspe or the Crayfish deposit and related increases in traffic volumes nor as a safety audit. It is inaccurate to suggest that the Tonkin Study relates to any proposals put forward by Cristal Mining.

The Tonkin Study is a 'point-in-time' report which utilises a fundamentally flawed analysis of available data which relies heavily on the surveying, by questionnaire, of mining staff and a small number of contractors to draw its conclusions.

Given the failure of Cristal to negotiate a Road Maintenance Agreement with WSC, a separate instrument to the Road Acquisition and Construction Agreement, specifications in regard to the formation and maintenance of the said private road, may not comply with WSC requirements.

WSC has been stymied in its attempts to acquire the road. WSC has always maintained that Cristal be required to seal the full length of the Haul Road given the high proportion of heavy vehicle combinations and light vehicles utilising the road and the associated safety issues.

The proposed recommended conditions as put forward by the Department, in effect, amend the Construction Certificate. WSC has requested repeatedly that Cristal enter into a VPA. It is the belief of WSC that this approach is consistent with practices elsewhere in the State (as an example, Iluka and Balranald Council).

Cristal has not contributed financially to the maintenance of local roads within the Wentworth LGA of which a high proportion of traffic is mine-related (both employees and contractors located outside the Shire area).

The existing road network has been designed to cater for the existing agricultural industry which continues to be the major employer in the Wentworth LGA.

The design criterion of the road has been developed to ensure the safety of road users.

All issues in regard to the Wentworth LGA local road network in regards to the separate operations of Cristal Mining are intrinsically linked, given Cristal's ongoing statements that the projects are in fact integrated across the Murray-Darling Basin.

WSC traffic counts show that in fact 91.2% of the traffic on auxiliary roads is mine related, not 60% as alluded to in the Tonkin Study.

6. RECOMMENDED CONDITIONS

WSC requires confirmation on whether the recommended conditions consider integration of the Atlas-Campaspe project and associated delivery of processing waste.

7. CONCLUSION

WSC recommends that the appointment of the independent road safety auditor be conducted by a panel including both NSW RMS and WSC as road authorities to ensure the independence of the auditor.

WSC considers that given that Cristal's operations in the Wentworth LGA are 'Drive In Drive Out' by a significant number of both employees and contractors that reside outside the Wentworth LGA, the cost of these operations is being borne by Council's ratepayers. Furthermore, while the company may make a significant payment of royalties to the State Government, this money is not being returned to the local area. Cristal's operations have not, as claimed, seen an increase in the population of the Wentworth Shire which continues to remain static. The 2011 Census shows that agriculture continues to be the largest employment industry in the Wentworth LGA.

For further information regarding this matter please contact the undersigned on Tel: 03 5027 5027.

Yours faithfully



Peter Kozłowski
General Manager

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
Neb Road Construction Maintenance			\$15,162	\$15,162	\$30,324	\$45,486	\$47,880	\$168,000 \$47,880	\$101,000 \$63,600	\$242,288.00 \$73,095.00	\$32,837.00	\$180,573.00 \$33,252.00
Low Darling Road Construction Maintenance	\$181,000		\$309,000 \$11,191	\$152,000 \$11,191	\$155,000 \$22,382	\$0 \$33,573	\$302,000 \$39,140	\$59,850	\$195,000 \$45,410	\$86,340.00 \$47,465.00	\$9,720.00 \$37,665.00	\$589,994.00 \$38,129.00
High Darling Road Construction Maintenance	\$6,000	\$470,000	\$11,191	\$11,191	\$22,382	\$33,573	\$104,000 \$23,940	\$101,000 \$28,860	\$60,000 \$15,960	\$89,967.00 \$55,164.00	\$106,229.00 \$13,538.00	\$128,489.00 \$13,687.00
Polia Construction Maintenance			\$7,581	\$7,581			\$23,960	\$23,970	\$31,920	\$16,153.00 \$20,337.00	\$22,143.00	\$14,297.00 \$22,359.00
Roo Roo Maintenance			\$11,191	\$11,191	\$22,382	\$33,573	\$30,780	\$15,960	\$23,940	\$46,859.00	\$10,858.00	\$10,964.00
Garston Maintenance										\$8,790.00	\$5,402.00	\$5,469.00
Old Broken Hill Road Construction Maintenance										\$8,649.00 \$81,018.00		\$15,205.00 \$7,197.00
Milkingy Maintenance			\$7,581	\$7,581	\$15,162	\$15,162	\$14,000	\$14,000	\$22,650	\$11,093.00	\$9,638.00	\$9,732.00
Total	\$187,000	\$470,000	\$372,897	\$215,897	\$282,794	\$184,110	\$585,700	\$459,520	\$559,480	\$787,218	\$255,155.00	\$1,069,347.00

MEETING NOTE

Meeting with Wentworth Shire Council		
Meeting note taken by Paula Poon	Date: Wednesday, 4 March 2015	Time: 11:40am
Project: Ginkgo Mineral Sands – Crayfish Extension Mod 9 and Snapper Mineral Sands Mine MOD 5		
Meeting place: PAC's Office		
Attendees: PAC Members: Mr Gordon Kirkby PAC Secretariat: Paula Poon and Tatjana Djuric-Simovic Wentworth Shire Council – Mayor Don McKinnon, GM Peter Kozlowski, Simon Pradhan, and Patrick Holland		
The purpose of the meeting is to discuss Council's latest written submissions dated 2 March 2015		
<p>In opening the meeting, Mr Kirkby, the Commission chair advised Council that this meeting consisted of two parts. The first part was to hear Council's additional submission on the Crayfish extension of the Ginkgo mine and the second part was to hear Council's view on the Department's recommendation on the modification to the Snapper mine.</p> <p><u>Crayfish extension of the Ginkgo mine</u></p> <p>Council expressed its disappointment with the Department's response as it felt everything Council asked was knocked back. It reiterated its desire to have a VPA with Cristal that would encompass all contribution issues including the haul road, maintenance of other roads and impact on Council's rate revenue. It could not understand why Iluka could have a VPA but not Cristal. Council considered the Ulan Road agreement in the Mid-Western Shire is a good example for the current proposal. Its first preference is to have a VPA. An alternative is to have a condition similar to that applied to the Mid-Western Council. If there is no agreement, all mine traffic should use the haul road only. Council provided 3 sets of approval conditions which included the requirement to prepare a road strategy and maintain a public road for the life of the mine.</p> <p>The Commission reiterated its earlier advice that a consent authority cannot impose a condition requiring a proponent to enter into a VPA with a third party, if none is offered.</p> <p>Council questioned why Snapper is a separate mine, and Crayfish is not, when it is further away from Ginkgo. Also it pointed out that Cristal has indicated it considered all its mine (Ginkgo, Snapper, Crayfish and Atlas Campaspe) as an integrated operation.</p> <p>Other issues concerning local roads included:</p> <ul style="list-style-type: none"> • Impact of heavy vehicles such as serviced vehicles and garbage trucks, on the haulage road. • Polia Road (between Nob Road and High Darling Road) is not included in the recommended condition for maintenance contribution. • Non-compliance of road audit requirements in current consent. • Council's road maintenance expenditures have increased significantly since the commencement of the mines. • The Department's recommended contribution formula is flawed as it relies on the data from the Tonkin report. 		

Council explained the rationale for their claim that the Council's rate for a separate mine will be higher than what they would be able to charge Cristal if Crayfish extension is approved as a modification to the existing development consent for Ginkgo mine.

Council disagrees with the Department's proposed financial contribution figure for a waste transfer station in the draft instrument of consent.

Documents tabled at meeting/to be provided:

1. A copy of calculation of Council's rate to illustrate the difference in rate income to Council if the Crayfish is treated as an extension of Ginkgo and if it is treated as a separate mine.
2. a copy each of the approval conditions of the Wilpinjong mine, Ulan mine and Moolarben mine.

Meeting closed at 12:30pm