**SUPPLEMENTARY DEVELOPMENT ASSESSMENT REPORT**

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| Panel Reference | 2019NTH017 and PPSNTH-13 |
| DA Number | DA 2019.101 |
| LGA | Tenterfield |
| Proposed Development | The proposal seeks to increase production from the current approved volume of 150,000 tonnes per year to 230,000 tonnes per year at the existing Dowe's Quarry within an expanded extraction area.  Processing activities, involving the crushing and screening of materials using mobile processing plant would also be included in ongoing operations. |
| Street Address | Mt Lindesay Road, Tenterfield.  Lots 308, 309 DP 751540  Lots 3,4 DP 42044  Lots 239, 244, 246, 260 DP 751540  Lots 1,2,3,4 DP 1092215 |
| Applicant/Owner | Darryl McCarthy Constructions Pty Ltd  PO Box 903  Oxenford QLD 4210  R & M Dowe |
| Date of Lodgement | 10 October 2019 |
| Total Number of Submissions | Round 1 -32 submissions including 1 group submission with 79 signatories  Round 2 – 14 submissions including 1 group submission with 8 signatories |
| Recommendation | Approval |
| Regional Development Criteria (Schedule 7 of the SEPP (State and Regional Development) 2011 | Clause 7 particular designated development.  Development for the purposes of extractive industries, which meet the requirements for designated development under clause 19 of Schedule 3 to the *Environmental Planning and Assessment Regulation 2000* |
| List of all relevant 4.15(1) matters | S4.15(1)(a) Matters   * SEPP 33 Hazardous and Offensive Development * SEPP 44 Koala Habitat Protection * SEPP 55 Remediation of Land * SEPP Mining & Petroleum and Extractive Industries 2007 * Tenterfield Local Environmental Plan 2013 * New England North West Regional Plan 2036 * Tenterfield Local Strategic Planning Statement 2040 |
| List all documents submitted with this report for the panel’s consideration | Annexure A – Independent Review of Human Health Assessment, Dowes Quarry, Tenterfield prepared by Todoroski Air Services  (16 March 2021 Job Number 21011234)  Annexure B – Recommended Conditions of Consent |
| Summary of key submissions | Air quality (health impacts)  Traffic  Noise |
| Report prepared by | Anthony Daintith |
| Report date |  |

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| **Summary of s4.15 matters**  Have all recommendations in relation to relevant s4.15 matters been summarised in the Executive Summary of the assessment report? | Yes |
| **Legislative clauses requiring consent authority satisfaction**  Have relevant clauses in all applicable environmental planning instruments where the consent authority must be satisfied about a particular matter been listed and relevant recommendations summarised, in the Executive Summary of the assessment report?  e.g. Clause 7 of SEPP 55 - Remediation of Land, Clause 4.6(4) of the relevant LEP | Yes |
| **Clause 4.6 Exceptions to development standards**  If a written request for a contravention to a development standard (clause 4.6 of the LEP) has been received, has it been attached to the assessment report? | NA |
| **Special Infrastructure Contributions**  Does the DA require Special Infrastructure Contributions conditions (S94EF)?  Note: Certain DAs in the Western Sydney Growth Areas Special Contributions Area  may require specific Special Infrastructure Contributions (SIC) conditions | NA |
| **Conditions**  Have draft conditions been provided to the Applicant for comment?  Note: in order to reduce delays in determinations, the Panel prefer that draft conditions, notwithstanding Council’s recommendation, be provided to the Applicant to enable any comments to be considered as part of the assessment report | Yes |

## 1.1 Reason for Consideration by Joint Regional Planning Panel

As Designated Development for the purpose of extractive industry, the Proposal is also classified as "Regional Development" under Schedule 7(7) of the *State Environmental Planning Policy (State and Regional Development) 2011* (State and Regional Development SEPP) and therefore determination of the application will be by the Northern Regional Planning Panel (RPP).

## 1.2 Public Meeting

A public meeting of the Northern Regional Planning Panel was held by teleconference on the 8 December 2020. The outcome of the meeting is as follows:

*The Panel agreed to defer the determination of the matter until an independent review of the Human Health Risk Assessment for Respirable Crystalline Silica: Expansion of Dowes Quarry has been undertaken by suitably qualified consultants engaged by Tenterfield Council at the applicant’s expense.*

*The independent review must be undertaken and reported to the panel by the 31 March 2021 and must:*

* *Consider the adequacy of the Human Health Assessment and the proposed mitigation measures for the emission of respirable crystalline silica in the workplace and in the surrounding community*
* *Identify any gaps in the documentation, analysis, assessment and recommendations*
* *Propose any other measures that could reasonably be applied to manage and mitigate the emission of respirable crystalline silica.*

*The reason for the deferral is to enable the independent review of the Human Health Risk Assessment for Respirable Crystalline Silica to be undertaken, because:*

* *The proposed expansion and changed operations, including on-site crushing, at Dowes Quarry will produce a level of respirable crystalline silica dust*
* *Residents and members of the community surrounding the quarry have made submissions expressing their concern about the management of dust emission from proposed expanded quarry operations*
* *The panel wishes to be satisfied that the proposed expanded quarry will be able to operate with acceptable measures in place to manage and mitigate respirable crystalline silica dust emissions*

*When this information has been received, the panel will hold another public determination meeting.*

## 1.3 Independent Review

An independent review of the Human Health Risk Assessment was undertaken by Todoroski Air Services (Annexure A) in accordance with the Record of Deferral by the Panel dated 8 December 2020.

This report reviews the *Human Health Risk Assessment for Respirable Crystalline Silica: Expansion of Dowe’s Quarry* (**EnRisks 2020**), and also the relevant supporting documentation for the Project that the HHRA relies on, including the *Dowe’s Quarry Air Quality Impact Assessment* (AQIA) (**Northstar, 2019**).

*The independent review must be undertaken and reported to the panel by 31 March 2021 and must:*

* *Consider the adequacy of the Human Health Risk Assessment and the proposed mitigation measures for emissions of respirable crystalline silica in the workplace and in the surrounding community.*
* *Identify any gaps in the documentation, analysis, assessment and recommendations.*
* *Propose any other measures that could reasonably be applied to manage and mitigate the emission of respirable crystalline silica.*

The independent review provides the following summary and conclusions:

# *6 Summary and Conclusions*

*Todoroski Air Sciences have reviewed the HHRA, and also the key supporting information in the AQIA which is used in the HHRA.*

*We found that the HHRA and the AQIA are adequate and conclude that the Project would meet the relevant criteria, including for respirable crystalline silica, by a large margin.*

*We found that there is no valid reason to not approve the quarry expansion as it is presently proposed, and we recommend that the Project is approved.*

*Our response to the specific questions asked in the scope of work is set out below each question, as follows.*

* *Consider the adequacy of the Human Health Risk Assessment and the proposed mitigation measures for emissions of respirable crystalline silica in the workplace and in the surrounding community.*

*Our review finds that the HHRA adequately considers the risks and correctly applies the information from the AQIA. We have also reviewed the AQIA and find that it also adequately represents the potential dust levels. The HHRA assumes that 100% of the dust is crystalline silica, which is conservative and is an overestimate of any actual crystalline silica levels and the assessed risks.*

*In terms of proposed mitigation measures, the following is noted:*

*Environmental (community) mitigation measures.*

*The AQIA sets out specific dust control measures that will be used at the quarry, as listed in* ***Section 4*** *of this report and as proposed in the HHRA and AQIA. These measures should be implemented to minimise dust generated at the site as may then disperse into the surrounding environment where the community reside.*

*The relevant proposed mitigation measures are listed below, but have been adapted to a form suitable to be included as part of any approval conditions for the quarry:*

* *Dust collection equipment on drill rigs that prevent the release of 90% or more of the dust generated from drilling must be installed on the drill rigs, and must be used when drilling.*
* *The quarry access road is to be sealed with bitumen for at least 600m from the intersection with the Mount Lindesay Road.*
* *A maximum speed of 30km/hr must be observed for heavy vehicles travelling on the quarry access road, and a maximum speed of 10km/hr when travelling on any unpaved roads.*
* *Water sprays must be used when crushing - and be suitable to achieve at least 77% control relative to not using water sprays.*
* *Water sprays must also be used when screening – and be suitable to achieve at least 91.2% control relative to not using water sprays.*
* *Water sprays must be used on transfer points – and be suitable to achieve at least 91.2% control relative to not using water sprays.*
* *As a minimum, Level 1 watering (which means applying 1 litre of water per square metre of road surface) must be used on any dry or visibly dusty unpaved haul roads when in use - and be suitable to achieve at least 50% control relative to not watering.*
* *Provided that they are at least as effective or more effective, alternative dust controls may be used with written approval from the EPA, as documented in any Environmental Protection Licence (EPL).*
* *Additional controls, over and above those listed here or in the EPL, may be used at any time.*

*Occupational (worker) mitigation measures*

*The HHRA identifies that maintenance staff at the quarry would wear personal protective equipment (PPE) including personally fitted masks (P2 type).*

* *Identify any gaps in the documentation, analysis, assessment and recommendations.*

*No gaps are identified in the AQIA, HHRA or in their assessment and analysis. However, some gaps are identified in the documented/ recommended worker mitigation measures and for blasting. These are set out the next section as recommended additional mitigation measures.*

* *Propose any other measures that could reasonably be applied to manage and mitigate the emission of respirable crystalline silica.*

*It is recommended that the following additional mitigation measures be applied at some parts of the Project to better protect workers. It is noted that many of these measures may already be done, but this was not documented.*

* *All drill rigs, and any mobile plant that handles or transports silica containing materials is to have an air-tight cabin with air filtration (and air conditioning so that there is no need to open any window). The cabin air filtration must use HEPA rated filters.*
* *All cabins with HEPA filtration must be cleaned at least weekly, along with the mating cabin and rubber seal surfaces for doors (and openable windows if applicable), which must be inspected weekly to ensure an air-tight fit. Wiping with damp microfibre towel is adequate.*
* *For drill rigs, cabins and door and window seals must be cleaned, and door and window seals inspected for leaks and deterioration at the end of each shift. Wiping with damp microfibre towel is adequate. The drill rig cabin interior must be kept free of dust, and the door and window seals must be air-tight.*
* *A spare set of door seal rubbers must be kept on hand for any site owned drill rigs and installed immediately if any break is found during a daily inspection. Contractors must not use drill rigs with ineffective, non air-tight door or window seals at any time.*
* *All HEPA cabin filters must be inspected and replaced as per manufacturer’s recommendations. This is especially important for the drill rigs.*
* *Personally fitted masks (P2 type) must be worn outdoors within 100m of any drill rig when drilling or the crusher when it is operating.*

*It is recommended that the following additional mitigation measures be applied for blasting at the Project to better protect workers and the environment:*

* *Wherever possible, blasting should be conducted between 10 am and 3 pm when the wind is not blowing towards any off-site dwelling. Blasting should be avoided when the 1-hour average wind speed is above 6m/s.*

Comment

*The review report found that the HHRA and the AQIA are adequate and concluded that the Project would meet the relevant criteria, including for respirable crystalline silica, by a large margin.*

*The report also found that there is no valid reason to not approve the quarry expansion as it is presently proposed, and the independent review recommends that the Project be approved.*

The review report also recommended the inclusion of additional conditions of consent – these have been incorporated into the draft recommended conditions of consent as follows:

1. The development shall be carried out in accordance with the details set out in the following, except where modified by any conditions of development consent:
   * Environmental Impact Statement prepared by R.W. Corkery & Co (October 2019).
   * Responses to Government Agency and Public Submissions prepared by RW Corkery & Co (March 2020 and 19/6/2020).
   * NSW EPA General Terms of Approval.
   * Independent Review of Human Health Assessment, Dowes Quarry, Tenterfield prepared by Todoroski Air Services  (16 March 2021 Job Number 21011234)

Reason: To ensure compliance with application and plans.

1. That an ongoing air monitoring program be implemented by the applicant as per the recommendations of the Human Health Risk Assessment for Respirable Crystalline Silica: Expansion of Dowe’s Quarry (Ref RWC/20/DOWR001-B).

The air quality monitoring program must be described in an Air Quality Management Plan that must be prepared in consultation with the EPA and Council and submitted for approval by the EPA prior to the commencement of project operations.

The Air Quality Management Plan must include consideration of both the environmental (community) mitigation measures and occupational (worker) mitigation measures identified in the Independent Review of Human Health Assessment, Dowes Quarry, Tenterfield prepared by Todoroski Air Services  (16 March 2021 Job Number 21011234).

Reason: To monitor potential impacts to air quality.

## 1.4 Government Submissions

The Review Report was referred to the following Government Departments:

### EPA

The EPA have provided the following comments:

*As the review appears to support the view that EPA had come to (i.e. that the HHA was appropriate and conservative) and we have already issued our General Terms of Approval on this basis, the EPA will not be providing any further comment or input with respect to this matter.*

### NSW Health (Hunter New England Local Health District)

As of the date of submission of this Supplementary Report, no formal response has been received.

# 3 Conclusion

The development application seeks consent for the continued operation and expansion of extraction operations within Dowe's Quarry, which would also include an increase to the total area of disturbance, an increase to annual production and product despatch, campaign-based on­ site processing for some products, the backloading of fines material from the Sunnyside Plant and progressive backfilling of over burden and fines within the extraction void.

The activities for which the Applicant is seeking development consent would involve the following.

* + Ongoing extraction of quartzose rock within the existing extraction area and a 4.5ha extension of the extraction area, producing up to 230,000 tonnes of rock per year.
  + Total extraction for the quarry is not to exceed 4.8 million tonnes.
  + Dispatch of not more than 120 laden trucks per week (averaged over a four-week period) with a maximum of 28 laden trucks on any one day;
  + Normal product dispatch is limited to weekdays (public holidays excluded) with contingency operations of a Saturday permitted on no more than ten (10) Saturdays per year.
  + Campaign crushing and screening on site using mobile processing equipment.
  + Transportation of extracted rock to the State road network for delivery to the Sunnyside Crushing and Screening Plant located adjacent to the New England Highway, 10km northwest of Tenterfield or on occasions to alternate locations within or beyond the New England Region.
  + Backloading of clay fines and crusher fines from Sunnyside to Dowe’s Quarry.
  + Progressive emplacement of overburden and returned clay fines within and adjacent to the extraction area.
  + Storage of surplus crusher fines from Sunnyside awaiting sale and transportation. Any subsequent transportation of crusher fines from the Quarry Site is not included in the annual production limit;
  + Period of Extraction of Material of no more than 25 years from the date of consent; and
  + Rehabilitation of the site.

An independent review of the Human Health Risk Assessment was undertaken by Todoroski Air Services in accordance with the Record of Deferral by the Panel dated 8 December 2020. The independent review concluded:

*We found that the HHRA and the AQIA are adequate and conclude that the Project would meet the relevant criteria, including for respirable crystalline silica, by a large margin.*

*We found that there is no valid reason to not approve the quarry expansion as it is presently proposed, and we recommend that the Project is approved.*

The application has been assessed in accordance with the provisions of the *Environmental Planning & Assessment Act 1979* and *Environmental Planning & Assessment Regulation 2000*. Evaluation and assessment of the application in accordance with the legislative framework has demonstrated that the proposal is satisfactory.

It is recommended that Development Application 2019-101 for continued operation and expansion of extraction operations within Dowe's Quarry located on the subject land be approved subject to the revised recommended conditions in Annexure B.