



BEFORE

Independent Commissioners appointed by Tasman District Council

IN THE MATTER

of the Resource Management Act 1991

AND

IN THE MATTER

of an application by CJ Industries Ltd for land use consent RM200488 for gravel extraction and associated site rehabilitation and amenity planting and for land use consent RM200489 to establish and use vehicle access on an unformed legal road and erect associated signage, and for a discharge permit RM 220578

SUPPLEMENTARY EVIDENCE OF JEFFREY GEORGE BLUETT ON BEHALF OF CJ INDUSTRIES LIMITED (AIR QUALITY)

1. INTRODUCTION

1.1 My full name is Jeffrey George Bluett. I am a Technical Director: Air Quality at Pattle Delamore Partners Limited (PDP).

1.2 The applicant has applied for resource consents authorising the extraction of gravel, stockpiling of topsoil, and reinstatement of quarried land, with associated amenity planting, signage and access formation at 134 Peach Island Road, Motueka:

- (a) RM200488 land use consent for gravel extraction and associated site rehabilitation and amenity planting; and
- (b) RM200489 land use consent to establish and use a vehicle access on an unformed legal road and erect associated signage.

1.3 The applicant has also subsequently applied for a discharge permit (RM 220578).

- 1.4 My evidence in chief (dated 14 July 2022) detailed my qualifications and experience, provided a summary of my assessment of the effects of the dust discharged from the proposed quarry, commented on the consistency of the application with policy direction, addressed matters raised in submissions and considered matters raised in Tasman District Council's (TDC) s42A report.
- 1.5 Following on from the S42A report, TDC released an Addendum to Report Under Section 42A the Resource Management Act 1991 (TDC report number REPC22-11-21A) on 28 October 2022. This TDC report included Attachment 4: Supplementary Technical Review – Dust Assessment by Leif Pigott, (Team Leader – Natural Resource Consents, TDC).

2. EXECUTIVE SUMMARY

2.1 My supplementary evidence has:

- (a) Provided a brief summary of the findings from my site visit;
- (b) Clarified a discrepancy between my evidence in chief and the draft Dust Management and Monitoring Plan on the proposed seasonal restriction on quarrying activity near the apple orchard; and
- (c) Highlighted a correction needed in the Dust Management and Monitoring Plan;
- (d) Reviewed TDC's s42A Addendum Report and commented on TDC's reporting of:
 - (i) Key Issues – potential amenity effects of dust;
 - (ii) Proposed consent conditions which relate to the discharge of dust;
 - (iii) Supplementary Technical Review – Dust Assessment; and
 - (iv) Perceived conflict between the applicant's Dust Management and Monitoring and Soil Management Plans.

2.2 Having addressed each of these issues, I conclude that TDC's air quality and planning experts and I are in agreement that, subject to the proposed dust management strategies and recommended consent conditions being effectively implemented, that the proposed

quarry can be developed and operated without any adverse impact of dust occurring in the surrounding environment.

3. SCOPE OF SUPPLEMENTARY EVIDENCE

3.1 The scope of my supplementary evidence is to:

- (a) Provide a brief overview of the findings from my site visit;
- (b) Clarify a discrepancy between my evidence in chief and the draft Dust Management and Monitoring Plan on the proposed seasonal restriction on quarrying activity near the apple orchard; and
- (c) Highlight a correction to the Dust Management and Monitoring Plan;
- (d) Review TDC's s42a Addendum Report and comment on TDC's reporting of:
 - (i) Key Issues – potential amenity effects of dust;
 - (ii) Proposed consent conditions which relate to the discharge of dust;
 - (iii) Supplementary Technical Review – Dust Assessment; and
 - (iv) Perceived conflict between the applicant's Dust Management and Monitoring and Soil Management Plans.

3.2 In the preparation of this supplementary evidence, I have read TDC's s42A addendum report including Attachment 4.

4. SITE VISIT

4.1 I undertook a site visit on Monday 26 September 2022. The key purposes of the site visit were to:

- (a) Check the location and set up of the Riwaka Weather Station (EWS-12429) located at Plant and Food Research Motueka, Old Mill Road (3.5 km to the north-east of the proposed quarry).

- (b) Walkover the proposed quarry site to become familiar with the location and layout of each of the 3 Staged areas and the access roads to the quarry;
- (c) To identify and confirm the type, number and location of the potentially sensitive receptors which are adjacent or close to (<300 m) from the proposed quarry; and
- (d) To visit CJ Industries' Douglas Road Quarry site to observe the dust mitigation measures employed there.

4.2 In my dust assessment I was concerned that the low wind speeds recorded at the Riwaka Weather Station were an artifact of obstacle/s blocking and/or slowing wind at that site. My visit to the Riwaka Weather Station showed the site is well set up to collect wind data for the area. There is no indication that wind would be blocked from any direction. Following the site visit, my opinion is that the data collected at that Station is a good representation of the wind conditions experienced in the wider area. This finding reinforces my view that the use of the Nelson Airport data to assess the wind conditions at the proposed Peach Island Quarry (as was done in my dust assessment) provides a very conservative indicator of the frequency and duration of high-risk dust events at the proposed site.

4.3 The site walkover and drive-by of the adjacent area confirmed the assumptions I had made on the proposed operation and surrounding area based on aerial imagery and site plans.

4.4 At the time of my visit to the CJ Industries' Douglas Road Quarry the site was very damp because of the preceding rain events. There was no sign of any dust emissions. I observed dust suppression sprinklers being used as a digger was being cleaned. I noted the use of pea gravel to provide a barrier between vehicle wheels and unconsolidated surfaces in areas I assume are heavily trafficked. I understand that a water truck is sent to the site when vehicle tracks or other dust sources are discharging significant amounts of dust. I noted the proximity of houses to the east of the quarry and the flower farm to the south-east. The area to the east and south-east of the Douglas Road quarry is potentially very sensitive to the impacts of dust. The relatively low number of dust complaints, the highly sensitive receiving environment and my on-site observations

indicate to me that, for most of the time, the dust emissions from the Douglas Road quarry are likely well controlled.

- 4.5 In summary my site visit confirmed the assumptions, findings and conclusions I had made when undertaking the desktop assessment.

5. SEASONAL RESTRICTION ON QUARRYING NEAR ORCHARD

- 5.1 My evidence in chief highlighted that the dust discharges from the proposed quarry have the potential to impact the growth and/or quality of apples or kiwifruit produced by the orchards adjacent to the proposed quarry. This issue is particularly relevant for the apple orchard located on Motueka River West Bank Road, located approximately 60-95 m from the nearest active pit site.
- 5.2 As noted in my evidence in chief, apples are typically harvested at maturity in New Zealand between January and May. Kiwifruit are harvested from March until May. During these months dust has the largest potential to reduce fruit attractiveness due to dust settling on the fruit surface. To mitigate the potential impact of dust on fruit the applicant has proposed a seasonal restriction on quarry activities within 100 m of any orchard.
- 5.3 In my evidence in chief, the seasonal restriction on quarry activities within 100 m of any orchard is **correctly** defined as being 1 January through to 31 May (inclusive). In the draft Dust Management and Monitoring Plan the seasonal restriction is **incorrectly** defined as being 1 May through to 30 October (inclusive).
- 5.4 Combined with the other proposed dust mitigation measures, the seasonal restriction on quarry activities within 100 m of any orchard in the months January through to May provides protection for the fruit to avoid any adverse effects that may be more than minor. When it is finalised, the draft Dust Management and Monitoring Plan (DMMP) will be amended to reflect the correct seasonal restriction. I note that that TDC's recommended conditions of consent correctly define the seasonal restriction on quarry activities within 100 m of any orchard as being 1 January through to 31 May (inclusive).

6. CORRECTION TO THE DRAFT DMMP

6.1 Table 2 of the Draft DMMP details the sources of dust and the tiered dust controls to be employed. Tier 1 (Routine) controls for stockpiles include:

- (a) Maintain the height of gravel stockpiles to a practical **minimum** of 4 m;
and
- (b) Maintain the height of unvegetated topsoil stockpiles to a practical **minimum** of 3 m.

6.2 The purpose of these two controls is ensure that the stockpiles are not so tall that higher windspeeds are able to produce large dust clouds. Consequently the highlighted word “minimum” in these two Tier 1 controls should be replaced by the word “maximum”.

7. KEY ISSUE – POTENTIAL AMENITY EFFECTS OF DUST

7.1 Paragraphs 5.15 to 5.26 of TDC’s s42A addendum report detail TDC’s view on the key issue – potential amenity effects of dust.

7.2 Paragraphs 5.15 to 5.18 provide an accurate description of the dust concerns highlighted in the s42A report, PDP’s response to these concerns, the subsequent TDC dust review process and the mitigation measures and consent conditions volunteered by the applicant.

7.3 In the DMMP I recommended that the applicant commit to a seasonal restriction (January to May inclusive) on quarrying activities within 100 m of any orchard. The intent of this seasonal restriction is to ensure that no dust generating activities will occur in the area adjacent to the orchard when the fruit is maturing and being harvested. Paragraph 5.19 of TDC’s s42A addendum report records that the DMMP additionally provides for removal of stockpiles in the Stage 2 area within 100 m of the apple orchard boundary over the months of January to May (inclusive). Paragraph 5.19 is consistent with the information I have provided in the Draft DMMP. However, upon reflection this should say that soil stockpiles will not be placed in the Stage 2 area within 100 m of the orchard, and condition 67 should be amended to be consistent with this change.

7.4 Paragraph 5.22 correctly notes that the dust management and monitoring plan aligns with the recommendations made and best practice detailed in Ministry for the

Environment's Good Practice Guide to Assessing and Managing the Effects of Dust. Paragraph 5.23 suggests that the DMMP needs to be backed up with specific conditions of consent. I agree with this sentiment and the proposed consent conditions provide an effective pathway to achieve this.

- 7.5 Paragraph 5.25 indicates that, subject to the revised conditions of consent, TDC's air quality expert and myself concur that any adverse amenity or health effects generated from the dust discharged from the proposed quarry will be less than minor. Paragraph 5.26 confirms that the TDC planning expert adopts the advice provided by Mr Pigott and myself.

8. PROPOSED CONSENT CONDITIONS

- 8.1 Appendix B of Mr Hayden Taylor's (Planscapes) evidence in chief (15 July 2022) provides a volunteered set of consent conditions. Attachment 1 of TDC's s42A addendum report includes a copy of the applicant's volunteered consent condition with TDC's proposed amendments marked in bold and underlined text.
- 8.2 I have reviewed TDC's set of recommended consent conditions. I make the following comments on the recommended consent conditions which are relevant to the dust emissions and to which TDC have suggested amendments. I have not commented on any conditions which were included in Appendix B of Mr Taylor's evidence, but which have not been amended by TDC.
- 8.3 Recommended consent conditions 58 to 62 fall under the heading Traffic Movements. In recommended condition number 59, TDC has added a speed limit of 30 km/hr for vehicles travelling on any sealed surface on site. This proposed speed limit would potentially be effective in reducing vehicle induced dust emissions and would not adversely impact the proposed site activities, but I understand that the applicant is proposing a 15 km/h limit on site regardless of whether surfaces are sealed or not.
- 8.4 Condition 62 will prohibit crushing and screening of gravel on the site will be effective in reducing dust emissions and will not adversely impact the proposed site activities. But, in my opinion, this specific condition would better fit under the heading of Site Management rather than Traffic Movements.
- 8.5 Recommended consent conditions 63 to 75 fall under the heading Site Management.

- 8.6 TDC have amended volunteered consent condition number 64 to require dust control measures be undertaken in accordance with the best practicable option. It was always the intent of the applicant to apply the dust control measures detailed in the DMMP in accordance with the best practicable option, so I have no problem with this addition to condition 64.
- 8.7 TDC have amended volunteered consent condition number 65 to redefine “works being carried out” to “disturbing materials”. In my opinion this is a non-consequential change which I can accept.
- 8.8 Volunteered consent condition number 65 requires works (disturbing materials) to be stopped when windspeeds exceed 7.5 m/s and there is a sensitive receptor within 250 m downwind of the works. TDC have amended consent condition number 64 to require disturbing materials to be stopped when windspeeds exceed 7.5 m/s regardless of wind direction and regardless if there is a sensitive receptor within 250 m of the source or not. Given the low frequency of high windspeeds in the area this suggested change should have little impact on site operations. But in my opinion this amendment is not consistent with the objective of setting effects-based consent conditions. Potentially this change could be quite restrictive for the operator without having any benefit on the adverse dust impacts. For this reason, I do not support removing the wind direction and sensitive receptor criteria from condition 65.
- 8.9 Volunteered consent condition number 57 incorrectly defines the seasonal restriction on quarrying within 100 m of an orchard as October to May inclusive. TDC have amended volunteered consent condition number 66 to redefine the seasonal restriction on quarry activities within 100 m of any orchard to apply for the months January to May inclusive. This TDC amendment is consistent with the information I present in paragraphs 5.1 to 5.4 of my supplementary evidence, so I support this amendment.
- 8.10 TDC have added recommended consent condition number 67 which requires stockpiles in the Stage 2 area within 100 m of the apple orchard to be moved over the months of January to May (inclusive). I discuss this potential dust mitigation measure in paragraph 7.3 of my supplementary evidence and recommend condition 67 be amended.
- 8.11 TDC have added recommended consent condition number 68 which allows the use of polymers or other chemicals to stabilise surfaces to reduce dust emissions, but not waste or reprocessed oil. In my opinion allowing polymers or other chemicals to stabilise

surfaces to reduce dust emissions is a positive step as it provides the applicant with another dust suppression tool and therefore, I support this addition.

8.12 In my experience polymer and other chemical dust suppressants are expensive to purchase and take some effort to apply effectively. This combination of factors results in the use of polymer and other chemical dust suppressants being infrequent in New Zealand. In my experience their use is restricted to large dust sources, in sensitive receiving environments under challenging meteorological conditions and only when all other dust control measures are observed to not to be sufficient. My sense is that at this site the use approved polymers or other permitted chemicals to limit dust generation would be unlikely given the plentiful supply of water for dust suppression.

8.13 I have discussed their use with Mr Hill, and the use of polymers or other chemicals for dust suppression is also discussed in his supplementary evidence.

8.14 TDC have amended recommended consent condition number 69 to require that temperature and relative humidity be included in the on-site meteorological monitoring. In my experience while temperature and relative humidity are not the key meteorological factors in determining dust risk, these two variables can help refine the planning of dust mitigation measures. The two sensors required to measure temperature and relative humidity come as standard with the type of instrumentation that will be installed. For these reasons I support TDC proposed amendment to recommended consent condition number 69.

9. TDC SUPPLEMENTARY TECHNICAL REVIEW – DUST ASSESSMENT

9.1 I have reviewed Attachment 4: Supplementary Technical Review – Dust Assessment to the TDC's s42a Addendum Report by Mr Piggot.

9.2 Having reviewed Mr Piggot's analysis I highlight the following key points:

- (a) The description of on-site meteorological conditions and dust sources provided in my evidence in chief and the assessment of effects are consistent with his experience/expectations of the site;
- (b) He and I have differing opinions on the potential health impacts of total suspended particulate (TSP). I have attributed the health impacts to the

PM₁₀ fraction of TSP. Mr Piggot suggests that TSP can also cause adverse human health impacts;

- (c) Mr Piggot suggests that the dust impact on crops is more correctly considered an economic or an ecosystem effect rather than a nuisance effect;
- (d) Mr Piggot concurs with my recommendation that potential dust effects should be mitigated;
- (e) The draft DMMP has been drafted in line with the MfE good practice guide and best practical option but needs to be backed up with specific conditions of consent; and
- (f) Subject to the conditions of consent, Mr Piggot considers that dust generated will result in amenity and health impacts that are less than minor.

9.3 Given that TSP emissions from the site will be very well controlled, I do not consider the differences of opinions detailed above to be critical to the conclusions that Mr Piggot and I have independently arrived at on the potential amenity, health, economic or ecosystem impacts of the particulate discharged from the proposed quarry.

9.4 Mr Piggot reviewed TDC's recommended consent conditions and suggests amendments to conditions numbers 59, 64, 65, 66, 69, 71, and 72 and adding recommended consent condition numbers 67 and 68. I have discussed the amendments and addition in paragraphs 8.3 to 8.14 above

10. ALIGNING THE DUST MANAGEMENT AND MONITORING AND SOIL MANAGEMENT PLANS

10.1 I understand that TDC perceive that there is a conflict between the applicant's DMMP and the Soil Management Plans. The conflict is that the application of water to soil stockpiles for dust control measures may degrade the physical structure of the soil.

10.2 This issue is discussed and resolved in the supplementary evidence of Mr Reece Hill (Land Systems).

JEFF BLUETT

4 NOVEMBER 2022