

**Before Independent Hearings Commissioners Appointed by Canterbury Regional Council and Selwyn District Council**

**In the matter of**                    The Resource Management Act 1991

**And**

**In the matter of**                    Applications by **Fulton Hogan Limited** for all resource consents necessary to establish, operate, maintain and close an aggregate quarry (**Roydon Quarry**) between Curraghs, Dawsons, Maddisons and Jones Roads, Templeton

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**EVIDENCE OF BRUCE EDGAR DAWSON  
ON BEHALF OF FULTON HOGAN LIMITED**

**VICTORIA GUIDELINES FOR SEPARATION DISTANCES**

**DATED: 23 SEPTEMBER 2019**

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## Introduction

- 1 My name is Bruce Edgar Dawson. I hold the position of Principal Environmental Consultant at Golder Associates Pty Ltd (Australia) (Golder) an environmental and engineering consultancy firm. I am located in Golder's Melbourne, Victoria, office and have been employed by Golder since November 2010.
- 2 I have been asked by Fulton Hogan Limited (**Fulton Hogan**) to provide evidence in respect of its application for resource consents to establish, operate, maintain and close the proposed Roydon Quarry (**Proposal**).
- 3 My area of expertise for this hearing is application of the Victorian Environment Protection Authority Guidelines "Recommended separation distances for industrial residual air emissions" (dated March 2013). I refer to these as the **EPA Victoria Guidelines** or just **Guidelines**.

## Qualifications and Experience

- 4 I hold the qualification of Bachelor of Engineering (Chemical) obtained from the University of Melbourne.
- 5 Prior to joining Golder I was employed by the Environment Protection Authority Victoria (**EPA**) for 24 years. During my employment with EPA I worked extensively on policy development and implementation encompassing industrial planning and assessment, auditing, policy development and stakeholder engagement. I held senior executive-level roles both in the policy development and operational areas. I have extensive experience in assessing environmental performance and impact and associated strategies for effective management of statutory obligations in industrial operations, land development and infrastructure development.
- 6 Whilst employed with Golder I have undertaken assessments regarding development proposals where separation distances have been considered for a range of industrial operations including quarrying, chemical manufacture, wastewater treatment, general industrial areas and food processing.
- 7 I am appointed as an Environmental Auditor (Industrial Facilities) pursuant to the *Environment Protection Act 1970*. As an EPA appointed auditor, I provide independent advice on whether there is a need to improve the environmental performance of an industrial process to manage or mitigate the potential effects of pollution. To be appointed as an environmental auditor, an individual needs to demonstrate a high level of qualification and skills with at least eight years' experience in environmental science and/or engineering and environmental auditing.
- 8 I have read and agree to comply with the Code of Conduct for Expert Witnesses (contained in the Environment Court Practice Note dated 2014).

## **Scope of Evidence**

- 9 In my evidence I:
- 9.1 Outline my involvement in the Roydon Quarry Proposal;
  - 9.2 Discuss the genesis of the Guidelines;
  - 9.3 Provide examples of how the Guidelines are used by the relevant regulatory authorities in Victoria;
  - 9.4 Identify submission points and/or s42A comments of particular relevance to the recommendations made in the Guidelines; and
  - 9.5 Assess whether the EPA Victoria Guidelines support the submission made or the proposition being advanced;
  - 9.6 Set out my conclusions.

## **My involvement in the Roydon Quarry Proposal**

- 10 In preparing evidence for this Proposal I have read background information and supporting documents associated with the EPA Victoria Guidelines. I have also been provided with and read background briefing information regarding the proposed Roydon Quarry development.
- 11 I have reviewed a summary of the submission points made on the application. I note that a number of submitters refer to issues associated with separation distances including the following submissions that specifically make reference to the recommended separation distances for quarries:
- 11.1 Melissa Himin;
  - 11.2 ASP Group;
  - 11.3 Jennifer Ross;
  - 11.4 Carol Greenfield;
  - 11.5 Martin Flanagan.
- 12 I have read the s42A Officer's Report of Deborah Anne Ryan and Hannah Louise Goslin, dated 28 and 30 August 2019 respectively. I have also read the Appendix D of the Resource Consent Application to Establish 'Roydon Quarry', Templeton (Golder Ref 1781870-R-001-Rev0), dated November 2018 and the evidence of Roger Cudmore regarding air quality.

## Genesis of the Guidelines

- 13 The Victorian *Environment Protection Act 1970 (the Act)* is the primary legislation in Victoria for the protection of the environment. It considers all aspects of environment (air, water, land, waste and noise). The Act aims to prevent pollution and environmental damage by enabling the establishment of environmental quality objectives and supporting implementation programs. The Act has been amended considerably since its inception in 1970 and incorporates a wide variety of mechanisms, enforcement measures and enables the development of many supporting subordinate instruments. The Act was most recently amended in September 2018 by the *Environment Protection Amendment Act 2018*, which introduces substantial changes to the legislation that will come into effect from July 2020.
- 14 Principles consistent with the Australian National Strategy on Ecologically Sustainable Development and the Intergovernmental Agreement on the Environment (**IGAE**) have been incorporated into the Act to assist with implementation and decision making.
- 15 The Act establishes the powers, duties and functions of the EPA. These include making regulations and orders, recommending State Environment Protection Policies (**SEPPs**) and Waste Management Policies (**WMP**), issuing works approvals, licences, permits, pollution abatement notices and implementing National Environment Protection Measures (**NEPMs**).
- 16 The Act also establishes the primary offences and associated penalties including pollution of air, water, land, dumping of waste.

## Planning and Environment Act 1987

- 17 The Victorian *Planning and Environment Act 1987* provides for the preparation of a set of standard provisions for planning schemes called the Victoria Planning Provisions (**VPPs**). The VPPs form a state-wide approach for planning schemes. Planning schemes set out policies and provisions for the use, development and protection of land for an area.
- 18 The *Planning and Environment Act 1987* and the VPPs require that air quality issues must be considered in planning decisions.
- 19 When preparing a planning scheme or planning scheme amendment, the *Planning and Environment Act 1987* requires a planning authority to take into account any significant effects which it considers the scheme or amendment might have on the environment.
- 20 Specific relevant clauses of the VPP include:

- 20.1 **Clause 13.06-1S** relates to protection of air quality by ensuring, wherever possible, that there is suitable separation between land uses that reduce the amenity of sensitive land uses. It requires a planning authority to consider the EPA Victoria Guidelines.
- 20.2 **Clause 53.10** specifies the minimum threshold distance for various industry types between the proposed use and a sensitive land use zone (for example residential zones). No minimum threshold distance is specified for extractive industry. Where a proposal does not meet a minimum threshold distance EPA Victoria is a referral Authority for a planning permit.
- 20.3 **Clause 17.03-2S** deals with industrial land development siting. It outlines strategies relating to appropriate threshold distances to sensitive land uses and protecting industrial uses from encroachment by sensitive land uses, which would adversely affect the industry viability. It requires a planning authority to consider the EPA Victoria Guidelines.
- 20.4 **Clauses 13.06-1S and 17.03-2S** require that a planning authority must consider EPA Victoria's recommended minimum separation distances.

#### **The State Environment Protection Policy (Air Quality Management) (SEPP (AQM))**

- 21 SEPPs are subordinate instruments made under the Act to provide more detailed requirements and guidance for the application of the Act to Victoria.
- 22 The SEPPs elaborate and expand on the objectives of the Act by identifying the environmental values and benefits to the community of various segments of the environment. These values and benefits are referred to as beneficial uses. These beneficial uses are intended to be consistent with the Victorian community's expectations for protection of the environment from the effects of pollution and waste. The SEPP of most relevance to the EPA Guidelines is the SEPP (Air Quality Management).
- 23 SEPPs embody these community expectations in a legal setting, enabling certainty and clarity for both the community and those regulated within the statutory framework.
- 24 To enable assessments to be made of whether beneficial uses are being protected SEPPs also establish environmental quality objectives and describe the attainment and management programs necessary to achieve the desired environmental quality. Environmental quality objectives are often established as numerical criteria. Attainment program measures may include general and specific requirements for government agencies and industry.

25 As SEPPs are established as legal instruments the requirements in environmental regulations, works approvals, licences and other regulatory tools, must be consistent with SEPPs. The EPA can only issue a licence or a works approval if it is satisfied that the emissions or discharges will be consistent with the requirements of the relevant SEPPs.

26 The SEPP (Air Quality Management) (SEPP (AQM)) establishes the framework for managing emissions to air, so that the air quality objectives defined separately in SEPP (Ambient Air Quality) are met. The framework and attainment program in SEPP (AQM) address ambient (or regional) air quality, and the management of particular sources of emissions and local air quality impacts.

27 Clause 13 (2)(f) of the SEPP (AQM) states that:

*(2) The Authority [EPA Victoria] will employ statutory and non-statutory instruments and measures in implementing the policy:*

*(f) including environmental planning measures, including protocols for separation distances and land use planning;*

28 Clause 17 (Separation Distances) of the SEPP (AQM) states:

1) *The Authority will develop a protocol for environmental management in accordance with this policy on the provision of separation distances between sources of emissions to the air environment and land uses that are sensitive to the potential impacts of those emissions on local amenity.*

2) *The protocol for environmental management developed for the purposes of sub-clause (1) will assist the Authority, responsible authorities and planning authorities in assessing the suitability of development proposals that may have impacts on local amenity or on the viability of existing industries.*

3) *The protocol developed under sub-clause (1) sets out the separation distances under this policy except where a protocol for environmental management developed in accordance with this policy, and in conjunction with relevant government agencies, for a particular industry or activity makes provision for separation distances for that industry or activity.*

29 Clause 40 of the SEPP (AQM) states:

1) *The Authority will develop protocols for environmental management in accordance with this policy for assessing and managing the impacts of large line and area-based sources of air quality indicators in partnership with relevant Government of Victoria agencies, local government and other stakeholders.*

- 2) *Any protocols developed for the purposes of sub-clause (1) will take into account the activities of a transitory nature in certain industries in developing best practicable approaches to controlling emissions. These industries include, but are not limited to:*
  - (a) *mining;*
  - (b) *quarrying; and*
  - (c) *road construction and operation.*
- 3) *A protocol developed under sub-clause (1) sets the conditions that apply under this policy to an industry or activity for which that protocol is developed.*
- 4) *The Authority will investigate and develop techniques for improved assessment of the environmental impacts of road proposal options*

30 EPA Victoria has published a Protocol for Environmental Management relevant to quarrying, namely: Protocol for Environmental Management State Environment Protection Policy (Air Quality Management) – Mining and Extractive Industries (Mining PEM). The Mining PEM is intended to provide guidance on the interpretation of the SEPP (AQM) and sets out the statutory requirements for the management of emissions to air from the operation of mining and extractives industry sites. The Mining PEM does not include separation distances for quarries, the source of the recommended separation distances is discussed in paragraphs 31 to 41.

#### **Environment Protection Authority Victoria Guidelines – Recommended separation distances for industrial residual air emissions**

31 The *Recommended separation distances for industrial residual air emissions*, EPA Victoria publication number 1518, dated March 2013 (EPA Victoria Guidelines) provides advice on recommended separation distances, including for quarries (discussed specifically in paragraph 37). Whilst not described as a ‘Protocol for Environmental Management’ it is consistent with the intent of Clause 17 of the SEPP (AQM). Publication 1518 replaced EPA Publication AQ2/86 Recommended Buffer Distances for Industrial Residual Air Emissions 1990, as referred to in the VPP Clauses.

32 The EPA Victoria Guidelines provide advice on recommended separation distances between industrial land uses that emit odour or dust, and sensitive land uses. It is intended to be used by planning authorities, EPA, industry, developers and the community, in the preparation and consideration of planning scheme amendments, planning permit applications, works approvals and licences.

- 33 Sensitive land use is described as *'land uses which require a particular focus on protecting the beneficial uses of the air environment relating to human health and wellbeing, local amenity and aesthetic enjoyment'*.
- 34 The EPA Victoria Guidelines contains a list of recommended minimum separation distances and it aims to minimise the off-site impacts on sensitive land uses arising from unintended, industry-generated odour and dust emissions (industrial residual air emissions **(IRAEs)**). These are not intended as a protection from normal operations, but rather are established to offer some protection in the event of non-standard or upset operating conditions.
- 35 The EPA Victoria Guidelines recognise that appropriate separation distance may vary from that recommended in the guideline as a result of site-specific operational or environmental conditions. The recommended separation distances are EPA's default minimum in the absence of a site-specific assessment.
- 36 The EPA Victoria Guideline separation distances are only recommendations and not rules, as such. They can be varied. Where it is proposed to vary from a recommended separation distance EPA expects that an assessment that satisfies EPA will be required before EPA would support such a variation.
- 37 The EPA Victoria Guidelines provide the following recommended separation distances for quarrying, crushing, screening, stockpiling and conveying of rock:
- a) Without blasting, 250 metres;
  - b) With blasting, 500 metres; and
  - c) With respirable crystalline silica, 500 metres (see paragraphs 46 and 47 for further discussion of respirable crystalline silica).
- 38 Separation distances are to be measured from the activity boundary of the industrial activity to the nearest sensitive land use. The activity boundary includes current or proposed industrial activities from which emissions may arise. The activity boundary is not necessarily the site boundary and is the area (within a polygon) that includes all current or proposed industrial activities (including the plants, buildings or other sources) from which IRAEs may arise (including stockpiles, windrows, leachate ponds and odour-control equipment).
- 39 The EPA Victoria Guidelines describe two methods for measuring the separation distance - the urban method and the rural method.
- 39.1 The urban method measures the separation distance from the activity boundary of the industry to the property boundary of the nearest sensitive land use. This method should be used where the sensitive land use is in an



urban area or township, or on a site less than 0.4 hectares, or in a zone allowing subdivision to be less than 0.4 hectares.

39.2 The rural method measures the separation distance from the activity boundary of the industry to the activity boundary of the sensitive land use. This method should be used where the sensitive land use is not in an urban area or township and is on a site at least 0.4 hectares in area, or in a zone requiring subdivisions to be at least 0.4 hectares.

40 The EPA Victoria Guidelines provide guidance on how to consider a proposal to vary from a recommended separation distance. The assessment supporting a proposed variation to the recommended separation distance is to describe why the impacts of IRAEs are such that a variation from the recommended separation distance is appropriate.

41 Criteria to be considered as a part of a site-specific variation of a recommended separation distance are (which are further considered in regards to this proposal in paragraphs 56 to 58):

41.1 **Transitioning of the industry.** Existing industry has formally indicated that it will transition out of an area and over a specified timeframe.

41.2 **Plant equipment and operation.** The industrial plant and equipment have an exceptionally high standard of emission control technology.

41.3 **Environmental risk assessment.** An environmental risk assessment of IRAEs has been completed that demonstrates a variation is justified.

41.4 **Size of the plant.** The plant is significantly smaller or larger than comparable industries.

41.5 **Topography or meteorology.** There are exceptional topographic or meteorological characteristics which will affect dispersion of IRAEs.

41.6 **Likelihood of IRAEs.** Particular IRAEs are either highly likely or highly unlikely to occur.

#### **Submitter and/or Officer comments as to separation distances**

42 I have earlier set out the submissions I have read. I confirm I have also read the relevant parts of the s42A reports.

43 I have discerned the following comments relating to what the EPA Victoria Guidelines require in the way of minimum separation distances:

43.1 The submission made by Melissa Himin states:

Evidence used in a previous application from the Canterbury District Health Board (see appendix A pg. 14) shows that they state that at a least a 500m setback between quarry boundary and residential dwellings is required, and if this cannot be achieved then the application should be declined. The 500m setback “*is in accordance [sic] with national and international best practice guidelines, including Ministry for the Environment, 2016 Good Practice Guide for Assessing and Managing Dust and the ‘Victoria Environmental Protection Agency, 2013 – Guideline for recommended separation distances for industrial residual air emissions [sic]’* “. The proposed Roydon Quarry breaches this on many accounts and based on expert information in the form of a Medical Officer of Health this application should not proceed. The Victoria EPA which is often used (due to the lack of national legislation) indicates that a 500m setback when Respirable Crystalline Silica is involved is best practice.

On ECan’s website it states that “*relevant guidelines such as the Ministry for the Environment’s Good Practice Guide for Assessing and Managing Dust’ and international guidelines such as the Environmental Protection Agency (EPA) Victoria Guidelines*” help determine if a consent is notified. These guidelines stipulate that quarrying especially with RCS should not occur within 500m of residences. How this application could be approved given the stipulations in these documents is unfathomable.

43.2 The submission made by ASP Group states:

The appropriate separation distance is 500m from sensitive uses as indicated in the 2013 ‘Recommended Separation Distances for Residual Air Emissions’ publication from the Victoria EPA.

Quarry activities are proposed well within 500m of the Quarry Site boundaries, the accepted best practice separation distance from sensitive activities under the Victorian EPA Guidelines.

Consent should be declined, unless there are a comprehensive suite of conditions to ensure that effects are properly managed in accordance with best practice, and fully address the concerns outlined above. Such conditions would include, but not be limited to:-

- 1) There is no quarry activity within 500m of any sensitive uses which currently exist or are permitted in the future.

43.3 The submission made by Carol Greenfield states, regarding conditions to be applied in the event that consent is given for the proposed quarry:

**Provide an adequate buffer distance between the quarry and existing neighbouring land-users, by ensuring a minimum set back distance of 500 metres measured from any part of the quarry site boundary to any residential property boundary. Only fixed points to be used when setting setbacks. This is in order to cover the use of mobile processing plants on site.**

43.4 The submission made by Jennifer Ross states:

**Further, Dr Alistair Humphries (Medical Officer of Health for Canterbury District Health Board) has advocated for a 500m setback from people's homes when quarrying rock containing silica. Fulton Hogan's application indicates that quarrying activities will be undertaken as little as 90 metres from one dwelling (home) and more within 250 metres. Not only has the CDHB advocated for this setback, the Australian EPA guidelines have a 500-metre setback when dust containing silica is involved.**

43.5 The submission made by Martin Flanagan states:

**The dust report states that "EPA Victoria (2013) includes a separation distance of 500 m where quarrying is undertaken for aggregate containing crystalline silica."**

44 The major points made by submissions with direct reference to the EPA Guidelines can be summarised as follows:

44.1 That the EPA Guidelines require (e.g. stipulate) that quarrying development should not occur within 500 metres of residential dwellings, and that as the proposed quarry is within 500 metres of residences, then consent should not be given.

44.2 That if consent is given that no quarrying activity should occur within 500 metres of residences.

#### **Do the EPA Victoria Guidelines support the submissions made?**

45 The EPA Victoria Guidelines are primarily intended for use in Victoria in the context of the *Environment Protection Act 1970* and the *Planning and Environment Act 1987*. They are primarily used by planning authorities (e.g. Councils) and the EPA when considering new or expanded industrial developments and the development of sensitive land uses in proximity to existing industry.

- 46 The proposed Roydon quarry does not involve blasting. Whilst the EPA Guidelines make reference to a specific recommended Separation Distance of 500 metres where there are emissions of respirable crystalline silica (**RCS**), no guidance is provided on how to determine if emission of RCS is likely to occur.
- 47 Appendix D of the *Resource Consent Application to Establish 'Roydon Quarry', Templeton* (Golder Ref 1781870-R-001-Rev0, dated November 2018 notes that many quarry and mining operations will include some amount of RCS. The Mining PEM notes that '*As many dusts from quarrying and mining can be expected to contain silica, the MEA provisions (reduction of emissions to the maximum extent achievable) apply to those activities that give rise to emissions of silica (e.g. crushing)*'. It is therefore reasonable to conclude that for quarrying generally the recommended separation distance of 500 metres should be applied from the activity boundary associated with crushing and screening. Where no blasting is proposed the recommended separation distance of 250 metres should be applied from the activity boundary of other activities.
- 48 The submissions either directly state or infer that the recommended separation distances of 500 or 250 metres are to be applied without variation, i.e. that a quarry development should not proceed if it is less than 500 or 250 metres from a sensitive land use, such as residential dwellings.
- 49 The EPA Victoria Guidelines clearly state that a variation from the recommended separation distance is possible and should be considered, where required, in a site-specific risk assessment. The Guidelines describe what matters should be taken into account when considering a site-specific risk assessment.
- 50 In effect the recommended separation distances in the EPA guidelines are not intended to be applied to as a strict requirement but rather are triggers for further assessment if required. Generally, where the recommended separation distance is met no further assessment of the separation is required. Where the recommended separation distance is not met it triggers the need for additional assessment regarding the adequacy of the actual separation on a case by case basis.
- 51 The Mining PEM sets out the requirements for assessment and management of emissions to air from mining and extractive industries. It is applicable to both new developments and where significant modification or expansion of existing developments occurs. The Mining PEM states the requirements for assessment that new or expanded facilities must undertake and includes guidance to industry and regulators (primarily EPA Victoria and the mining regulator).

- 52 The Mining PEM sets out three levels of assessment:
- 52.1 A level 1 assessment is required when developments are located close to residential areas or urban areas and require the most extensive modelling and monitoring data.
- 52.2 A level 2 assessment is required when the proposed development is in a rural location with residences in close proximity or where a small operation is located in an urban area.
- (a) *Rural area close to residences (less than 500m from the limit of work described in the approved DPI work plan or final EES).*
- 52.3 A level 3 assessment is required when the development is in a rural location with no residences nearby. One of the criteria described is as follows:
- (a) *Rural area close to residences (more than 500m from the limit of work described in the approved DPI work plan or final EES).*
- 52.4 As one of the criteria for determining the level of assessment explicitly sets out the assessment requirement for when a proposal is less than 500 metres from residences, the Mining PEM clearly recognises the potential for new or expanded developments within the recommended separation distance of 500 metres.
- 53 I am aware of a current proposal for a significant extension of an existing quarry in metropolitan Melbourne. The quarry operation will involve blasting and extraction of rock containing silica and the recommended separation distance is therefore 500 metres. The extension is estimated to net an additional 10,000,000 to 20,000,000 tonnes of rock and extend the life of the quarry by an additional five to 10 years. The nearest residences to the north west of the quarry are approximately 340 metres from the maximum extent of the existing Work Authority area, and 400 metres from the current limit of extraction. Residences are located in an area zoned General Residential and are typically medium density developments.
- 54 The quarry operator is currently preparing relevant applications for approval for the extension of the quarry. The relevant applications will be referred to the EPA for comment. The EPA has been consulted on the proposed development and the air quality investigations supporting relevant approval applications.
- 55 The EPA is aware that the proposed extension of the quarry would result in quarrying activities within 500 metres of existing residential land. The EPA has not objected to the proposed development on this basis and has provided advice on the nature of air quality impact assessment it expects in support of varying the recommended separation distance. This is consistent with the application of the recommended

separation distance as a trigger for additional assessment rather than as presenting a prohibition on development.

56 I have read Appendix D of the *Resource Consent Application to Establish 'Roydon Quarry', Templeton* (Golder Ref 1781870-R-001-Rev0) (**Appendix D**), dated November 2018 and make the following comments regarding the criteria in the EPA guidelines for site-specific variation of a recommended separation distance:

56.1 The primary criteria regarding a site-specific variation in this case are, Plant Equipment” and “Operation, Environmental Risk Assessment” and “Topography and Meteorology” and “Likelihood of IRAEs”. As this is a proposed new facility “Transitioning of the industry” is not a relevant consideration and whilst this is a relatively large quarry it is not unusually large or small in the context of considering a recommended separation distance.

56.2 An assessment of the potential dust nuisance effects has been undertaken considering **frequency** of weather conditions, **intensity** of impacts, **duration** of events, **offensiveness** of dust and sensitivity of **locations** (FIDOL). The assessment considered whether nearby receptor locations would have a high, medium or low risk of potential dust impacts due to the proposed aggregate extraction areas. This risk information was used to inform dust mitigation measures needed to control dust impacts to an acceptable level. The FIDOL assessment found that there would likely be moderate to high risks of dust impacts on some receptors if emissions were not appropriately mitigated. This FIDOL assessment is consistent with the need to consider the result of an Environmental Risk Assessment taking into account local Topography and Meteorology and Likelihood of IRAEs in evaluating a site-specific variation to the recommended separation distance.

56.3 Section 7 of Appendix D describes the mitigation and monitoring measures to be incorporated into the operation of the proposed quarry. It describes general dust suppression measures (e.g. use of water carts on haul roads, water misting/fog cannons on the processing plant), activity setbacks, vehicle movement controls, aggregate extraction and transport (including the use of field conveyors in preference to haul trucks), overburden removal, bund formation and rehabilitation, location of fixed processing plant, wind shelter and minimising of exposed areas. Additional targeted measures regarding moderate to high risk receptors are also described including continuous dust monitoring and cessation of activities under certain conditions based on monitoring of wind speed and direction. A draft Dust Management Plan (**DMP**) detailing dust mitigation measures has been prepared as part of the permit application. These measures are consistent

with consideration of Plant Equipment and Operation as described in the EPA Guidelines.

57 The evidence provided by Mr Roger Cudmore regarding air quality issues expands on Appendix D and provides further information on dust management proposed to be incorporated into the proposed quarry.

58 It is my view that the criteria described in the EPA Guidelines for consideration of a site-specific variation to a recommended separation distance have been appropriately considered in the application.

### **Conclusions**

59 The EPA Victoria Guidelines provide advice on recommended separation distances, including for quarries, and form part of the statutory framework for land use planning and environment protection in Victoria.

60 The Guidelines are intended to be applied by planning authorities, EPA, industry, developers and the community, in the preparation and consideration of planning and environmental approvals.

61 The Guidelines contain a list of recommended minimum separation distances, including for quarries, aimed at minimising the off-site impacts on sensitive land uses arising from industry odour and dust emissions.

62 The Guidelines recognise that the appropriate separation distance may vary from that recommended in the guideline as a result of site-specific operational or environmental conditions. The recommended separation distances are EPA's default minimum in the absence of a site-specific assessment and are only recommendations and not rules, as such.

63 The Guidelines describe the criteria that need to be considered when proposing a variation. Where the recommended separation distance is not met it triggers the need for additional assessment regarding the adequacy of the actual separation on a case by case basis.

64 It is my view that the criteria described in the EPA Guidelines for consideration of a site-specific variation to a recommended separation distance have been appropriately considered in the application for the proposed quarry.

Dated 23 September 2019

**Bruce Edgar Dawson**  
Principal Environmental Consultant  
Golder Associates Pty Limited (Australia)