

# **AUCKLAND COUNCIL**

## **Notification Recommendation Report**

### **Discretionary Activity**

Sections 95 – 95F Assessment and Recommendation in accordance with the  
Resource Management Act 1991.

**PURPOSE:** Application by Winstone Aggregates (A Division of Fletcher Concrete & Infrastructure Limited) to discharge contaminants into air from the quarrying, crushing, screening, transport and storage of aggregate and rock at 985 Mt Eden Road, Three Kings.

**FROM:** Jared Osman, Acting Team Leader – Air Quality

**TO:** Duty Commissioner

**DATE:** 16 June 2014

## SECTION 1 – DESCRIPTION OF APPLICATION

### 1.1 APPLICATION DETAILS

Applicant's Name:	Winstone Aggregates (A Division of Fletcher Concrete & Infrastructure Limited)
Application Number:	40041
File Number:	12821
Date Application Received:	31 January 2012
Date Application Accepted:	31 January 2012
Site Address/Location:	985 Mt Eden Road, Three Kings
Date of Site Visit:	16 February 2012
Map Reference (NZTM):	1756600mE 5914200mN
Site Area:	151,841 m <sup>2</sup>
Legal Description:	Lot 1 DP37020
Further Information Required:	No
Significant/Cultural Heritage features:	Proposed Auckland Unitary Plan Sites and Places of Value to Mana Whenua Overlay - ID 2124 (Big King). All activity to occur within existing quarry area.
Tangata Whenua Significant Site:	As above - Ngati Whatua o Orakei confirmed Cultural Impact Assessment not required
Significant Natural Heritage Areas and Value Site (refer to the ARPS - Appendix B):	Area 120: Geological values at Three Kings

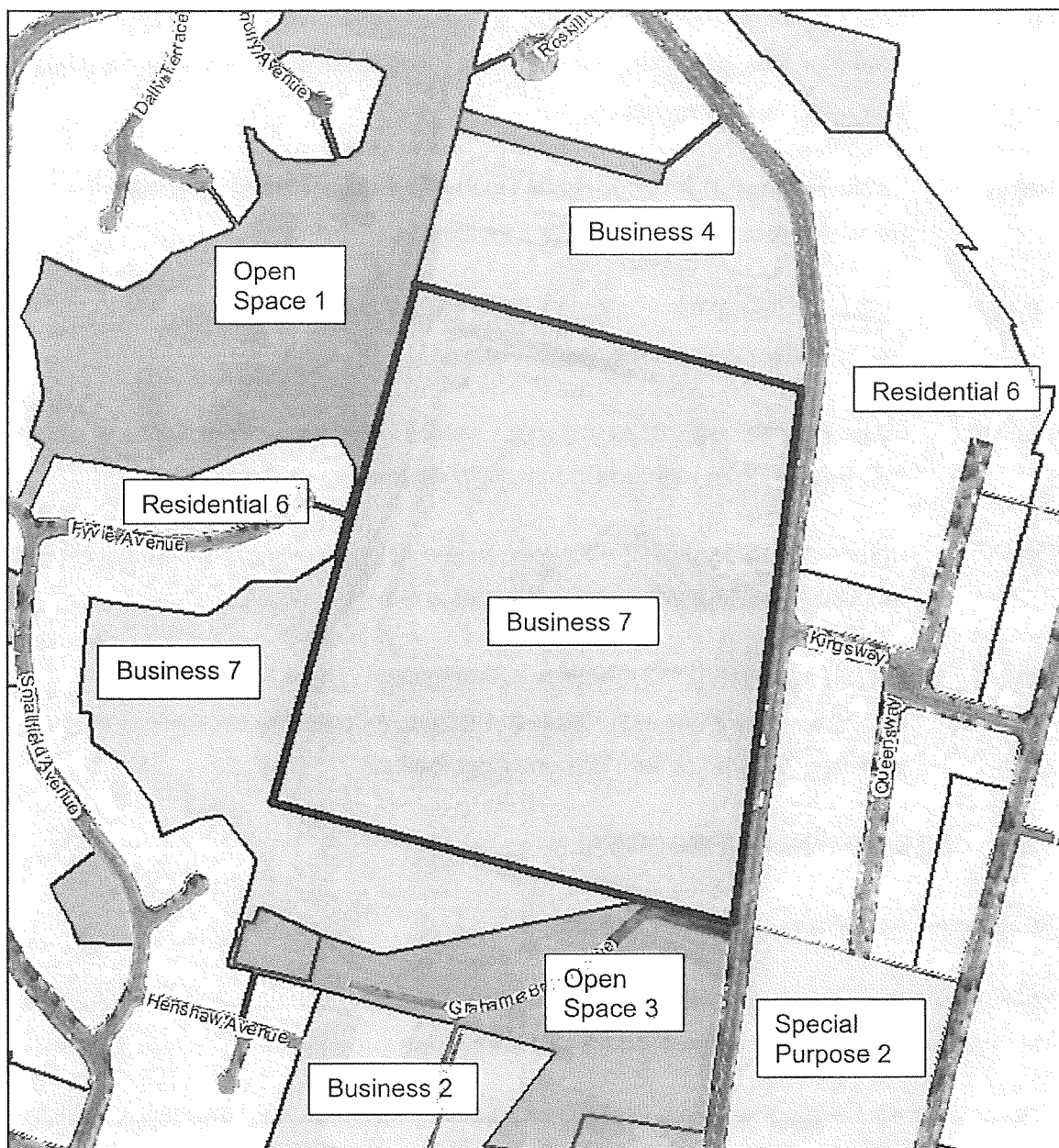
## 1.2 LOCATION MAPS



Figure 1: Location of the site in relation to Mount Roskill, Royal Oak and Balmoral.



**Figure 2:** Aerial photograph of the quarry at 985 Mt Eden Road, Three Kings.



**Figure 3:** Zoning of the area surrounding the subject site as per the Auckland Council District Plan (Auckland City Isthmus Section).

### 1.3 APPLICATION DOCUMENTS (PLANS AND REFERENCE DOCUMENTS)

Email: Dated: 28 May 2014 – 10.58am, 'Iwi responses 15 Working Day summary APP No. 40041 - 985 Mt Eden Road', from  
Natalie.Edmonds@Aucklandcouncil.co.nz.

- Letter: Dated 06 June 2013, 'Winstone Aggregates: Application for Air Discharge Permit for Continuing Activities at Three Kings Quarry', From: Richard Compton for Winstone Aggregates.
- Report: Dated 02 May 2013, 'Three Kings Quarry Air Quality Monitoring Program Review', From: URS New Zealand Limited.
- Email: Dated: 20 June 2012 – 7:26am, '*RE: 3 kings – questions*', from Andrea.Cave@Winstoneaggregates.co.nz.
- Email: Dated: 18 February 2012 – 6.21pm, '*Part 2 - Three Kings Docs and References*', from Richard.Compton@Winstoneaggregates.co.nz.
- Email: Dated: 18 February 2012 – 3.10pm, '*Three Kings Docs and References*', from Richard.Compton@Winstoneaggregates.co.nz.
- Report: Dated 27 January 2012, 'Winstone Aggregates – Three Kings Quarry Application for Renewal of Permit to Discharge Contaminants to Air', Prepared by: Richard Compton for Winstone Aggregates.

## 1.4 DESCRIPTION OF PROPOSAL

### Replacement application

Winstone Aggregates seek a replacement consent to discharge contaminants in to air from the operation of a scoria and basalt quarry at Three Kings, Auckland.

The previous air discharge consent (21875) expired on 1 August 2012. The site is continuing to operate under the provisions of the expired consent as permitted by section 124 of the Resource Management Act 1991 (RMA). The applicant seeks a five year term to continue the extraction of rock whilst simultaneously undertaking consented cleanfilling operations.

Cleanfilling at the site commenced in April 2012 subject to the conditions of consents 36221, 36222, 37770 and R/LUC/2009/743 ('the cleanfill consents') as granted by the Environment Court on 26 July 2011. These consents relate to earthworks, land use and the discharge of contaminants to ground; the cleanfilling operation is a permitted activity under the air quality provisions of the Auckland Council Regional Plan (Air, Land and Water) (ACRP(ALW)).

No expansion of the quarrying activity is sought by the replacement application. The application is to enable the site to continue to extract and process aggregate in the manner

outlined in the plans and information considered by the Environment Court for the cleanfill consents; i.e. for quarrying to continue for the first five years following commencement of filling. The applicant has advised that (in general) quarrying will occur in the south/south east of the site, with filling occurring in the north.

The application has been made on the basis that the quarry will continue to operate under the same consent conditions as the existing consent, albeit with some minor updates. The most significant proposed change is to discontinue use of the Hi-Vol ambient dust monitors. It is proposed that total suspended particulate (TSP) in the ambient air around the site will be exclusively monitored by two continuous beta attenuation monitors (BAM) which are already in place (the newest of which was installed in 2012). The two BAMs' used at the site are the same model as those used for monitoring at other sites across the region by Auckland Council. Along with this change, the applicant is also proposing to lower the trigger level for investigation of elevated total suspended particulate concentrations to  $60\mu\text{g}/\text{m}^3$  from  $80\mu\text{g}/\text{m}^3$ .

### **On-site processes**

Scoria extracted from the quarry is used as aggregate for building, construction and roading.

The following is based on information provided in Appendix 1, section 4.2 of the application report:

#### Rock Extraction

Raw material is generally excavated by diggers, however areas of harder basalt material require drilling, blasting and breaking to fragment the rock to a workable size. The extracted basalt is subsequently processed in the same way as scoria, or sold in large pieces (depending on customer demand).

In-situ scoria at the quarry is generally in a damp condition. Dust suppression for blasting basalt includes wetting of rock prior to blasting, and the use of blast hole drilling rigs with dust suppression and collection equipment. Blasting at the site is undertaken by specialist contractors.

#### Loading and transport to mobile crushers

Loose or fragmented rock is loaded into dump trucks and transported to the mobile crushing and screening plant which will be positioned on the quarry floor, close to the extraction area.

Some rock will not require additional processing (if it fits the sizing of a desired grade) and will be stockpiled.

#### Crushing and Screening

Rock from the quarry face is generally too large for most products and is therefore crushed to a desired size/grade by the mobile rock crusher. Screening of the crushed material sorts the product into different grades for sale and/or for additional crushing. The material crushed at the quarry is generally damp, however the crusher does have water sprays which can be utilised in the event that dust is being generated from the crushing. Water for the sprays is provided by connecting the site's water cart to the crusher.

#### Stockpiling

Processed material is removed from the crushing and screening plant as it is produced and is stockpiled within designated areas according to size grade of the aggregate; the stockpiling can occur on the quarry floor or on benches. Haulage routes from the processing plant are watered as needed to minimise emissions from vehicle movements.

#### Loading and transport from the site

Trucks are weighed as they enter the site. After loading at the appropriate stockpile they are re-weighed as they leave the site. The haul roads within the quarry are regularly dampened by the site's water cart; especially when visual checks have identified that dust is rising from vehicle movements. A fixed sprinkler system around the main haul road also ensures that this remains in a dampened state. The sprinkler system was upgraded in 2010; this is discussed further in section 1.7 of this report.

The site is sealed from the quarry entrance to the weighbridge at the top of the haul road. This sealed area is swept and maintained as required to ensure dust material is not tracked onto Mt Eden Road. To assist in reducing dust tracking, two wheel washes are used at the site – one at the top and one at the bottom of the internal haul road.

#### **Hours of operation**

The applicant's preference is to avoid operation on Sundays and Public Holidays, and in consultation with the local community there is an undertaking to avoid operation of the quarry outside of 7am – 8pm Monday to Saturday, and 9am – 6pm on Sundays and Public Holidays.



## 1.5 REASON FOR APPLICATION

Consent for the discharge of contaminants to air from the operation of the quarry is required under the provisions of the ACRP(ALW) and the Proposed Auckland Unitary Plan (PAUP).

The site's discharges of contaminants to air are considered to be a discretionary activity under ACRP(ALW) Rule 4.5.63 which states:

*"The discharge of contaminants into air from any process that includes open-cast extraction or quarrying or mining or crushing or screening, or processing of minerals, ores and/or aggregates including coal or coal products at a rate that exceeds 200 tonnes per hour from any one of these activities or at a rate exceeding 5 tonnes per hour but not exceeding 200 tonnes per hour from any one of the activities that does not comply with Rule 4.5.55 is a Discretionary Activity."*

The site has a crushing rate of up to 175 tonnes per hour is located within an Urban Air Quality Management Area (UAQMA), therefore the on-site activities do not comply with controlled activity Rule 4.5.55.

The PAUP was notified on 30 September 2013 with rules related to the protection of air taking immediate legal effect in accordance with sections 86A to 86G of the RMA. The PAUP rules relevant to this site's discharges of contaminants into air are contained in Chapter H.4.1 Air Quality, Dust generating activities.

Under the PAUP, quarrying at a rate:

*"Exceeding 200 tonnes/ hour from any one quarrying process; or between 5 and 200 tonnes/ hour and occurring within 200m of any dwelling."*

Is a discretionary activity in a special purpose - quarry zone (within which the Three Kings Quarry site is located).

Pursuant to section 15(1)(c) of the RMA, no person may discharge any contaminant from an industrial or trade premises into air unless the discharge is expressly allowed by a national environmental standard or other regulations, a rule in a regional plan as well as a rule in a proposed regional plan for the same region (if there is one), or a resource consent.

Overall, the application is considered as a discretionary activity.

## 1.6 SITE AND NEIGHBOURHOOD / ENVIRONS DESCRIPTION

### Site zoning

The Three Kings Quarry is located at 985 Mount Eden Road, Three Kings. Approximately 1 ha of the north-eastern area of the site is sublet to retail, manufacturing and warehousing operations.

As shown in Figure 3 of this report, the quarry is located on land zoned Business 7 in the Auckland Council District Plan (Auckland City Isthmus Section). The purpose of the Business 7 zone is defined as follows:

*“The Business 7 zones are applied to long established quarry operations within the City; the Mt Wellington and Three Kings quarries which supply a significant proportion of the region’s quarried stone and the Blockhouse Bay quarry which involves the winning of clay material and its processing into pipes and related products. The Mt Wellington and Three Kings quarries are worked continuously as major quarry operations, involving the frequent use of explosives and the on-site crushing and screening of stone.”*

Furthermore the plan goes on to make the following points of relevance in relation to Business 7 zones:

*“The existing quarry operations were established in their current locations long before neighbouring residential development occurred. The Plan recognises this by applying zoning provisions which encourage quarry activity, and which do not unduly restrict its operation. In addition any requests to rezone land in the vicinity of the existing quarries will be considered against the effect such a rezoning will have on the quarry operation...”*

*“..It is expected that the zone’s provisions will enable the continued and efficient operation of the city’s existing quarries. The need for the extraction of the mineral resource will be balanced against amenity and environmental concerns. The public in the vicinity of Three Kings Quarry and in the vicinity of extensions on the southern edge of Mt Wellington Quarry should become better informed of the exact nature of the quarry operations through the management plans. This in turn should allay concerns over potential effects.”*

As mentioned in section 1.5, the Three Kings quarry is also located within an UAQMA in the ACRP(ALW). The purpose of UAQMAs, as described in Chapter 3 of the ACRP(ALW), is to;

*“...Ensure a high level of amenity commensurate with the relevant provisions of the underlying District Plan zones and to protect human health, particularly for sensitive sectors of the population from the adverse effects of air discharges.”*

The UAQMA extends at least 2 km in every direction from the quarry boundaries.

Under the PAUP provisions, the site is zoned special purpose - quarry.

The location and nature of the proposal also triggers the need to determine whether there may be adverse effects on Mana Whenua values as the application is subject to:

- Rule 2.7.4.1 as the site the application applies to intersects a Historic Heritage: Sites and Places of Value to Mana Whenua Overlay - ID 2124 (Big King), and
- Rule 2.7.4.4 as the application is for a discharge to air.

### **Zoning of the receiving environment**

The site is bounded by Mt Eden Road to the east, beyond which are dwellings zoned Residential 6a (see Figure 3). South-east of the site is the Three Kings School (zoned Special Purpose 2). Immediately south and south-west of the quarry site is council-owned reserve land which, like the applicant's site, is also zoned Business 7 (for quarrying activities).

South of the quarry and the council owned reserve land, is the Three Kings Reserve (zoned open Space 3). Further south, beyond Graeme Breed Drive (approximately 135m south of the quarry boundary) is the Three Kings Shopping plaza, zoned for Business 2 activity.

South-west of the council-owned Business 7 area, and adjoining the quarry site boundary to the west of the main haul road, are dwellings zoned Residential 6a. North-west of the site is the Open Space 1 (conservation) land of Big King Reserve. The Business 4 zoned area immediately north of the site contains commercial / light manufacturing processes and residential townhouses. The nearest townhouses are 56 m north of the site boundary.

It is noted that a wide range of activities are permitted in Business 4 zones. Examples of these activities include industry, bulk stores, horticulture and warehousing as well as facilities

for community welfare, education and healthcare. The zone allows accommodation facilities for those whose duties require them to live on site as a permitted activity; however residential units are a non-complying activity.

Of the zones in the vicinity of the quarry, only the residential zone allows for dwellings as a permitted activity.

Under the PAUP, the zoning for the area is similar with no predicted significant changes to the sensitivity of the receiving environment. The existing business operations to the north of the site (currently Business 4) are zoned 'General Business' while the townhouses in this area are zoned 'Mixed Housing Urban'. All the residential properties on the immediate eastern side of Mt Eden Road, beyond the eastern boundary of the quarry site, are also zoned 'Mixed Housing Urban'.

## **1.7 BACKGROUND / SITE HISTORY**

### General

Winstone Aggregates has operated a scoria quarry at Three Kings since the 1920s. Quarrying has occurred in the general location for over 150 years. The purpose of the quarry is to extract volcanic rock (mostly scoria) from the ground and to process it for use in building, construction and roading aggregates.

The previous consent to discharge contaminants to air (21875) was processed by the former Auckland Regional Council. The application was notified on 21 July 1999 and 113 submissions were received; three were in support, two gave conditional support and 108 were in opposition to the application. Consent was granted by the Environment Court for a ten year period commencing August 2002.

Winstone Aggregates commenced filling operations at the site in April 2012. Filling of the site is expected to take approximately ten to twelve years. Additionally (until filling is completed) the site has consent to operate as a distribution yard for aggregate material imported from other quarries. The filling operation means that quarrying will cease at some point and the applicant predicts this will be approximately five years after the commencement of filling.

The current application to replace the discharge to air consent for quarrying operations was lodged more than six months before the expiry of the existing discharge to air consent (21875). Under section 124 of the RMA the applicant is permitted to continue to discharge

contaminants to air subject to the conditions of consent 21875 until a decision on this renewal application is made.

The quarrying activity is permitted by the District Plan within the Business 7 zone, and the site holds other consents which expire in 2030. These consents authorise earthworks and drawdown of the groundwater surface below the quarry pit, allowing extraction of rock down to RL 0m; approximately 34m below the lowest part of the present pit floor. The applicant states that quarrying will now only continue to a depth of RL 34 - 30m, i.e. remaining extraction may lower the quarry pit floor by up to a further 4m compared to the February 2012 level.

The site has undergone a number of changes since consent 21875 was granted in 2002. The fixed processing plant has been dismantled and replaced by mobile crushing and screening equipment which are operated near the working face of the quarry. The site's sprinkler control system was upgraded in 2010 to address previous poor reliability and to enable greater control over the sprinkler zones; the new system also has capacity for additional zones to be added if more sprinklers are needed to control dust from filling.

In 2007 an independent review of the site's total suspended particulate (TSP) monitoring plan was completed in line with the requirements of the expired consent. The review's primary recommendation was to introduce a 'real time' continuous TSP monitor to operate in conjunction with the site's existing monitoring equipment. Since April 2008, a beta attenuation monitor (BAM) has been operating at the quarry, and is co-located with a high volume TSP sampler (Hi-Vol) at the site office. An additional BAM has been operating near the south-western boundary of the site since filling commenced in 2012. The site proposes to decommission the Hi-Vol TSP monitors and to solely use the two BAMs for dust monitoring and management purposes.

### Complaints

There have been three complaints relating to dust emissions since consent 21875 was granted in 2002. These complaints were all received by the former ARC. None of the complaints were validated as a breach of the conditions of consent by council officers.

A complaint received in 2004 related to dust from the quarry access road; however the complainant's address appears to be over 1 km from the quarry. In 2007 the ARC received a complaint from a property approximately 120 m from the quarry regarding 'dust pollution'; the complainant was advised to call when dust discharges were visible. The most recent

complaint related to the build up of quarry dust in the spouting of a property; this was received in May 2010 from the same property that complained in 2007. ARC officers met with the complainant although the dust could not be verified to represent a breach of the quarry's conditions of consent.

### Compliance

The site has been visited by council officers to check compliance with the discharge to air consent on eleven occasions since 24 January 2003. The site has been assessed as fully compliant on every visit.

### Monitoring

Dust monitoring has occurred at the site since 2002. As per Table 1, the site has two Hi-Vol's which measure TSP on a one in three day basis between 1 November and 30 April each year. One Hi-Vol is installed at the northern boundary and the other at the site office. From 1 May to 31 October the Hi-Vol on the northern boundary operates on a one in six day basis.

The site also operates a weather station (for wind speed/direction and rainfall) and two BAMs for measuring dust on a continuous basis. The location of the site's monitoring equipment is set out in Section 1.2, Figure 2 of this report.

**Table 1:** Dust and meteorological monitoring equipment at Three Kings Quarry

Name (purpose)	Location	Frequency	Period
Hi-Vol (TSP)*	Northern boundary	24 hours, 1 in 3 days.	1 November to 30 April
		24 hours, 1 in 6 days.	1 May to 31 October
Hi-Vol (TSP)*	Site office	24 hours, 1 in 3 days.	All year round
BAM (TSP)	Site office	Continuous	
BAM (TSP)	South-west corner	Continuous	
Meteorological station	Site office	Continuous	

\*The applicant proposes to discontinue further use of the Hi-Vol monitors.

In addition to the measuring equipment discussed above, the site records all blasting events in video format, and has two movement-activated time lapse video cameras. These video records can be used to identify the potential reason / dust sources for any TSP trigger level exceedances and/or complaint.

Between January 2006 and 01 March 2014 there have been 18 days where monitoring has indicated an exceedance of the sites TSP trigger level of  $80\mu\text{g}/\text{m}^3$  as a 24-hour average (excluding one exceedance caused by the calibration of the BAM). Prior to January 2006 the crushing and screening of rock was undertaken at a fixed processing plant in the north-eastern part of the site, at the same elevation as Mt Eden Road.

Nine of the days between January 2006 and 01 March 2014 when the trigger level was exceeded may have been a result of quarrying processes (i.e they happened on days when quarrying was occurring, when the wind was blowing from the operational area towards the monitor and when off-site dust generating events were not known to have contributed). Of these nine exceedances (shown in Table 2), two were recorded at the northern boundary Hi-Vol and six at the site office Hi-Vol. On one day (16 January 2009) the trigger level was exceeded at both locations.

**Table 2:** TSP exceedances Jan 2006 – November 2012 potentially attributable to the site

TSP Monitor Location	Date	TSP concentration ( $\mu\text{g}/\text{m}^3$ )	Average wind direction (deg)	Average wind speed (m/s)	Quarry operating
North & Office	16/01/09	111.5 & 81.8	225°	4.1	Yes
North	20/01/09	99.8	233°	4.1	Yes
North	29/01/09	137.6	190°	2.3	Yes
Office	29/10/09	96.0	227°	6.0	Yes
Office	25/11/09	112.6	219°	4.8	Yes
Office	21/12/09	84.8	223°	4.4	Yes
Office	02/02/11	82.3	247°	3.2	Yes
Office	08/01/13	119	232°	5.1	Yes
Office	14/01/14	93	218°	5.4	Yes

A further nine trigger level exceedances were not directly related to quarrying activities; on three occasions the quarry was not operational, including one day where the monitor that recorded the exceedance was upwind of the quarry. On another occasion only the sale yard was operational and time lapse video does not support the quarry as the cause of the exceedance. An exceedance recorded by the BAM on 25 September 2009 is likely to have been a result of dust storms in Australia which affected particulate monitors across the region. An exceedance on 17 February 2012 was likely caused by a sweeper truck operating in close proximity to the TSP monitor. Additional exceedances on 18 October, 13 November and 27 November 2012 have been attributed to the sanding of wooden furniture undertaken at a neighbouring property near the northern boundary.

It should be noted that a trigger level exceedance does not indicate non-compliance with the requirement of the existing consent for no offensive and objectionable emissions of dust beyond the site boundary. The determination as to whether an emission of dust is offensive and objectionable can only be made by a council enforcement officer. Such a determination will take into account the frequency, intensity, duration, offensiveness and location of the discharge. The trigger level is in place to require the site to investigate elevated dust levels before they become problematic to neighbours.

As part of the cleanfill consent application process, the site's TSP monitoring records (as measured by the office BAM) were compared with those for fine particulate matter with an aerodynamic diameter less than 10 microns ( $PM_{10}$ ) recorded at Auckland Council monitoring sites within the UAQMA. It was determined that TSP levels monitored at the office BAM are similar to the  $PM_{10}$  concentrations recorded elsewhere in Auckland. The site's air quality expert provided the following in his evidence to the Environment Court:

*"...there is generally an extremely high degree of correlation across the data from all the locations. Consequently, the data indicates that a significant proportion of the TSP measured at Three Kings is actually general Auckland  $PM_{10}$  and totally unrelated to activities in the Quarry.*

*There are obvious occasions (particularly in November and December) when on-site activities are responsible for increase levels of TSP, however the data does not appear to indicate that particulate levels in the area around Three Kings are significantly different than elsewhere in Auckland."*

I have viewed the graphical information plotting site TSP and general Auckland  $PM_{10}$  (as supplied with the above information) and concur with the quoted assertion.



As mentioned above, the applicant seeks to use the continuously sampling BAM monitors for TSP monitoring in the vicinity of the site. The applicant has provided a report that compares and contrasts the usefulness of this monitoring method and the Hi-Vol method, and discusses why BAM monitors are preferable for use at this site. The main points from this report are reproduced as follows:

- The current Hi-Vols are very old, out-dated technology (Lear Seigler 1990's model, no temperature/pressure compensation for flow regulation).
- Auckland Council no longer uses Hi-Vols for measurement of ambient TSP concentrations and therefore there is little value in utilising this dated method with no basis for comparison.
- Some studies and site records have indicated that TSP Hi-Vols can over represent TSP concentrations.
- The TSP Hi-Vol results are not available for a number of weeks after the monitoring occurs which limits the ability to effectively investigate any exceedances.
- The two continuous TSP BAMs can provide near real-time monitoring and enable reactive mitigation measures (i.e. they send text alerts to the operators when elevated readings are measured).
- The two BAMs are located at appropriate locations to detect upwind (background) and downwind (background plus site contribution) concentrations during predominant wind directions.
- Historical data analysis has indicated that other sources of TSP in some cases may be contributing to the elevated concentrations detected at the site, therefore continuous analysis in conjunction with continuous meteorological and video monitoring is one of the best methods for identifying the potential contributors to elevated TSP levels.

I concur with the above points and am of the opinion that the BAMs provide more timely and useful information for the purpose of managing dust. In addition to the above points it is noted that the current Hi-Vols operate at a maximum frequency of once every three days compared to the continuous BAM readings which can be checked in near real time.

It is noted that the Hi-Vols at the site have commonly measured higher readings than the BAMs'. Many calibration and operational factors that can lead to this, however as the Hi-Vols are located a little closer to the sites main haul road than the BAMs it is not unexpected that

they would measure more. As an acknowledgement to the traditionally lower BAM readings, the applicant proposes a lower trigger investigation level of  $60\mu\text{g}/\text{m}^3$ , significantly less than the existing trigger level of  $80\mu\text{g}/\text{m}^3$ .

## SECTION 2 – ASSESSMENT OF THE ADVERSE EFFECTS OF THE ACTIVITY ON THE ENVIRONMENT

### 2.1 STATUTORY CONSIDERATIONS

In addition to the overall assessment of the environmental effects, section 95D of the RMA sets out criteria to be used by Council when forming an opinion as to whether adverse effects are minor or more than minor.

*A consent authority that is deciding whether an activity will have or is likely to have adverse effects on the environment that are more than minor—*

- (a) must disregard any effects on persons who own or occupy—
  - (i) the land in, on, or over which the activity will occur; or*
  - (ii) any land adjacent to that land; and**
- (b) may disregard an adverse effect of the activity if a rule or national environmental standard permits an activity with that effect (permitted baseline); and*
- (c) in the case of a controlled or restricted discretionary activity, must disregard an adverse effect of the activity that does not relate to a matter for which a rule or national environmental standard reserves control or restricts discretion; and*
- (d) must disregard trade competition and the effects of trade competition; and*
- (e) must disregard any effect on a person who has given written approval to the relevant application.*

No rule in a National Environmental Standard or Regional Plan requires or restricts notification of this application.

Winstone Aggregates has not sought nor received any written approvals for the application and has not requested that this application be notified.

## 2.2 SECTION 95D - ASSESSMENT OF PERMITTED BASELINE

The permitted baseline only applies to permitted activities on the subject site. If the baseline is applied, then the relevant operative permitted activity Rules are 4.5.44, 4.5.46 and 4.5.51 as set out below:

4.5.44: *"The discharge of contaminants into air from the storage, handling, redistribution, or repackaging of minerals, ores and/or aggregates is a Permitted Activity, subject to conditions (a) to (c) of Rule 4.5.1."*

4.5.46: *"The discharge of contaminants into air from cleanfills is a Permitted Activity, subject to conditions (a) to (c) of Rule 4.5.1."*

4.5.51: *"The discharge of contaminants into air from the open-cast extraction, or quarrying, or mining, or crushing, or screening or processing of minerals, ores and/or aggregates (including coal and coal products) at a rate not exceeding 5 tonnes per hour from any one of these activities is a Permitted Activity, subject to conditions (a) to (c) of Rule 4.5.1."*

In this case, the type and complexity of the potential cumulative effects associated with air discharges from the quarrying and aggregate processing activity are such that the permitted baseline rules 4.5.44 and 4.5.51 do not provide a useful comparison for the purpose of discounting effects.

The cleanfill consents were granted by the Environment Court on the basis that quarrying would continue for five years; dust effects from cleanfilling will not be re-considered in this application, and I note that this is a permitted activity under the ACRP(ALW) rules for air quality. Therefore, I consider that the permitted baseline does apply to the site's actual and potential air discharges from the filling operation and no further analysis from this source shall be undertaken as part of this assessment.

## 2.3 ASSESSMENT OF EFFECTS (TO DETERMINE NOTIFICATION)

The primary contaminant discharged to air from the operation of the quarry is suspended particulate matter, i.e. dust, associated with quarrying processes. These processes primarily include: drilling and blasting; extraction of rock material, and the crushing, screening, transfer and stockpiling of aggregate products. There is also the potential for dust to be generated by site vehicles as they travel on the unsealed haul road and around the quarry floor to the product stockpile areas.

Chapter 4 (Air Quality) of the ACRP(ALW) contains an explanation note (beneath Rule 4.5.51) outlining the councils expectations as to what constitutes adequate dust suppressions measures. These measures are:

- *“A Dust Management Plan detailing methods for minimising and monitoring dust emissions;*
- *Retain shelter belts;*
- *Erect temporary windbreaks;*
- *Keep piles, including stockpiles, adequately watered, covered or protected, to prevent windblown dust;*
- *Enclose any conveying equipment or have adequate dust minimisation;*
- *Cease dust generating operations, e.g. vehicle movements, in windy or dry conditions;*
- *Water exposed surfaces, including by water carts or sprinkler systems, in windy or dry conditions; and*
- *Undertake early re-vegetation/surfacing of exposed soils.”*

The site has an Air Quality Management Plan and complies with the other recommendations where relevant. Temporary windbreaks and the enclosure of conveyor equipment are unnecessary at the site in my opinion as the high surrounds of the operational area provides a permanent wind break, and the only conveying equipment is built into the crushing/screening equipment. The dust mitigation measures carried out at the site are discussed in greater detail below.

### **Dust mitigation measures**

The following is based on information provided in sections 4.2 and 4.3 of Appendix 1 of the application report.

#### Blasting and extraction

The in-situ scoria is generally in a damp condition and thus dust emissions during extraction are minimal. Generally the scoria can be loosened by excavator; harder areas (such as

basaltic rock) require blasting from time to time. Blasting on the site recommenced from July 2011 and is undertaken by subcontractors on an as needed basis.

Dust suppression during blasting involves wetting of the rock prior to blasting. An Auckland Council officer observed a blast on 12 September 2011 and noted that there were no excessive emissions of dust. They noted the following:

*"Actual blast was small with very little evidence on surface with effects being;*

*1) noise of blast, it would be not be heard far from the quarry;*

*2) slight smoke from explosions; and*

*3) some movement of rock at blast site.*

*No dust created by blast."*

Only two TSP trigger level exceedances have been recorded since blasting recommenced in 2011 and neither trigger was associated with blasting activities. No complaints have been received by Auckland Council in relation to dust from blasting.

#### Crushing, screening and stockpiling

There is the potential for some dust emissions to arise from the operation of the mobile crushers and screening plant. These sources are located at the quarry floor and/or near the working face of the quarry which is at least 30m below the level of the site boundary; the location of the equipment therefore offers some protection from wind.

The material being crushed is usually damp which limits dust generation. Water sprays are fitted on the crusher and these are used on an as needed basis by connecting up hoses to the water cart. Screened material is removed from the plant and stockpiled. The water cart has a fogging ability which can be used to suppress any dust arising from the stockpiles.

#### General operational area

The site has a dedicated 12 m<sup>3</sup> capacity water cart which is used to suppress dust at the quarry-floor area, stockpiles and haul roads during dry and/or windy weather conditions, or whenever dust emissions are observed. A record is kept of all dust emissions identified by visual inspections.

The water cart is operated both during and outside of normal working hours, including on the weekends and public holidays. The frequency of watercart usage, and the amount of water used, is recorded on a daily basis.

An automated sprinkler system is positioned around the perimeter of the quarry working area and on some of the upper ledges to suppress dust and maintain vegetation cover. The sprinklers are spaced at 10 – 15 m intervals to maximise their area of effect, and those adjacent to the haul road have 360° rotating heads. The automation system operates individual sectors of sprinklers on a continuous rotation around the perimeter of the site. The timing and duration of the rotation can be altered if necessary to ensure that some areas of the quarry receive more water than others. The sprinkler control system was upgraded in 2010 to address previous poor reliability and to enable greater control over the sprinkler zones. The sprinklers are able to be used on a 24/7, 365 day per year basis.

The site has a bore on site and utilises water removed from the quarry (as part of the dewatering process) for dust suppression. From 27 October 2010 – 26 October 2011 the site used 114,032 m<sup>3</sup> of water for dust suppression by cart and sprinkler, which equates to approximately 312 m<sup>3</sup> (312,000 litres) per day (assuming the use of water on a seven days per week, 52 weeks per year basis). Roughly, this equates to 2 litres per square meter of the site per day. This calculation doesn't account for rainfall or the significant proportion of the north eastern part of the site that is covered by buildings.

Water usage is higher during summer months and lower over the winter months due to winter rainfall and/or reduced evaporation which keeps the site haul roads and stockpiles adequately damp.

The water cart used 4,056 m<sup>3</sup> over the summer months between December 2010 and March 2011 (inclusive). This equates to 84 - 85 loads per month or an average of two - three of the 12 m<sup>3</sup> loads per day, which is considered reasonable for the size of the quarry, the scale of the activities and the potential for dust emissions to occur from the haul roads.

Vegetation is planted and maintained to minimise dust emissions from the upper parts of the quarry and to provide a visual screen for neighbouring properties. Re-vegetation of operational areas within the quarry is undertaken on an ongoing basis where the resource is depleted or not currently required. Areas for replanting are planted, grassed or hydroseeded as soon as practical. Vegetated areas are monitored with watering and maintenance occurring as required.

### Vehicle movements

The sign posted speed limit on the site is 20 km/hr, which is in place to minimise dust from vehicle movements. Vehicles owned by the applicant do not have downward facing exhausts as Winstone Aggregates have identified that this can raise dust.

All vehicles leaving the quarry area are required to pass through wheel washes' at the top and bottom of the haul road. The wheel wash at the bottom of the haul road was installed to assist in the removal of finer clay material that could be introduced from the site from the cleanfilling operation. The wheel washes' use jets of water to remove grit and fine material from the wheels and undercarriage of vehicles.

Material could be spilled from trucks within the site, or on the road outside of the site. Spilled material has the potential to create a dust nuisance where it is crushed by other vehicles and tracked from the point of the initial spill. The site ensures that trucks are correctly loaded and Winstone Aggregates require their own drivers to cover their trucks prior to leaving the site. Other drivers are asked by signage at the quarry exit to cover loads if there is a potential for their loads to create a dust nuisance.

The site entrance is sealed from the Mt Eden Road gate until the start of the haul road. Regular sweeping and repairing of potholes minimises dust nuisance from vehicle movements through this area and site staff clean up any material spilt, or tracked on to, the road outside the quarry entranceway.

### **Assessment of Effects**

The current application is for the continuation of quarrying activities for a five year period, therefore this assessment of effects will consider only the potential effects likely to manifest over this term. As this is an existing activity, the site's compliance history and performance against monitoring targets should be viewed as an indicator of future performance. In the case of the Three Kings Quarry, it is noted that the potential for nuisance dust effects will gradually reduce as the pit floor and working area is further lowered below the level of surrounding properties (up to 4m lower than the pit floor level in February 2012).

### Review of monitoring data

The application has focused on monitoring data recorded between January 2006 and November 2011 (primarily because prior to this crushing was undertaken at a fixed facility near the site office). For ease of analysis I have also focused on this period, as well as data

from November 2011 to 01 March 2014 which was supplied by the site (for compliance purposes) after lodgement of the application. It is noted that this eight year period is greater than the term of consent sought.

#### *Trigger levels and receiving environment*

The Ministry for the Environment (MfE)<sup>1</sup> recommends various 'trigger' level concentrations for TSP. The trigger levels are not mandatory standards, rather they indicate an expectation of air quality commensurate with the amenity expectations of the receiving environment; anything exceeding the trigger level may indicate that dust is causing a nuisance and that an investigation into the source of the trigger is necessary. As discussed in section 1.7 of this report, trigger level exceedances should not be considered as incidents of non-compliance with the existing consent requirement for no offensive and objectionable emissions of dust beyond the site boundary.

For the Three Kings Quarry, the existing consented trigger level is 80 µg/m<sup>3</sup> averaged over 24 hours – any recorded exceedance of 80 µg/m<sup>3</sup> triggers an investigation by the site into the possible reasons for the higher dust recordings. The magnitude of the MfE trigger levels is dependent on the sensitivity of the receiving environment; the various triggers are outlined in Table 3 below.

**Table 3:** MfE recommended trigger levels for TSP as a 24-hour average.

Sensitivity of receiving environment	TSP trigger level (µg/m <sup>3</sup> )
Sensitive	80
Moderate	100
Insensitive	120

As discussed previously, the applicant proposes a reduced TSP investigation trigger level of 60 µg/m<sup>3</sup> with monitoring by two continuously operating BAMs.

The closest sensitive receptors to the quarry are the Three Kings School to the southeast and the residential properties east and west of the site; across Mt Eden Road and Fyvie Ave respectively (as shown in Figure 3).

<sup>1</sup>New Zealand Ministry for the Environment, *Good Practice Guide For Managing And Assessing The Environmental Effects Of Dust Emissions*, September 2001



The manufacturing and commercial premises in the Business 4 zone immediately north of the site are considered to be moderately sensitive to dust emissions. However, 56 m north of the site boundary (but still within the Business 4 zone) are residential townhouses which are considered sensitive to dust emissions.

The off-site areas zoned Business 7, and Open Space 1 and 3 are either infrequently and/or temporarily occupied as well as being grassed/vegetated. Ordinarily open areas of grass would not be considered particularly sensitive to discharges of dust; however, as they fall within the UAQMA (and as Big King has recreational and cultural significance) I consider that on balance these areas should be considered moderately sensitive.

As per Table 2 of this report, nine exceedances of the sites  $80 \mu\text{g}/\text{m}^3$  trigger level since January 2006 may have arisen from quarrying processes; i.e. they happened on days when quarrying was occurring and when the wind was blowing from the operational area towards the monitor (refer section 1.7 of this report). Of these nine exceedances, two were recorded at the northern boundary Hi-Vol, six at the site office Hi-Vol and one was recorded at both monitors.

Of the nine exceedances, four - 16 January 2009 (Northern boundary), 29 January 2009 (Northern boundary), 25 November 2009 (Office Hi-Vol) and 8 January 2013 (Office Hi-Vol) - also exceeded the  $100 \mu\text{g}/\text{m}^3$  MfE trigger for moderate sensitivity receiving environments, and of these four exceedances, one ( $137.6 \mu\text{g}/\text{m}^3$ , 29 January 2009) was also higher than the  $120 \mu\text{g}/\text{m}^3$  trigger for insensitive areas.

There have been only three recorded exceedances potentially attributable to the quarry since 31 December 2009; these were on 2 February 2011 ( $82.3 \mu\text{g}/\text{m}^3$ ), 8 January 2013 ( $119 \mu\text{g}/\text{m}^3$ ) and 14 January 2014 ( $93 \mu\text{g}/\text{m}^3$ ) – all recorded at the site office Hi-Vol monitor. As mentioned earlier in the report, there have been three complaints in relation to dust from the site since the last discharge to air consent was granted in 2002, none of which were validated and none of which coincided with trigger limit exceedances. Given the sensitivity of the receiving environment, this low number of complaints indicates that dust mitigation measures have operated effectively at the site.

#### *Evaluation of monitoring record*

The frequency, intensity, duration, offensiveness and location of any dust emissions need to be considered when determining the potential nuisance.

As shown in Table 2 above, of the nine TSP trigger threshold exceedances recorded since 2006, six occurred during 2009 and three have occurred over the years 2011, 2013 and 2014. This indicates that discharges of dust from the site are generally well-controlled, aside from some infrequent instances where the trigger thresholds have been breached.

The duration of the exceedances are for a 24 hour period as this is the sample length / averaging period over which measurements are recorded. In reality, a short term event of sufficient magnitude (such as a cloud of dust from the operating area, or a sweeper truck operating close to the monitor) could result in an exceedance of the 24-hour average guideline.

The nature of the dust likely to be discharged from the quarry can potentially cause a nuisance through soiling and accumulation, although is not considered to be particularly harmful to property or human health. The quarry dust is likely to be predominantly in a coarse fraction above that which can easily be drawn into the lungs. Unlike metal or cement dust, the nature of the quarry dust means it is not likely to cause significant damage to paint work on cars or buildings on neighbouring sites.

The overall offensiveness of dust discharges is intimately linked to the intensity and area affected by the discharge. The intensity in this case is considered to be the magnitude of the recorded TSP concentration. The site's TSP trigger level is set in the existing consent at  $80 \mu\text{g}/\text{m}^3$  (i.e. the trigger for sensitive receiving environments); on four occasions the site recorded TSP concentrations that were also in excess of the  $100 \mu\text{g}/\text{m}^3$  MfE guideline for moderate receiving environments. Dust at this level could result in nuisance effects for any of the receptors surrounding the quarry; however, as noted previously, no complaints were received by the council on, or around, any of these days in relation to the site.

On balance, I consider that the frequency and magnitude of trigger level exceedances indicate that dust from the quarry has had a less than minor effect on the receiving environment since January 2006. Only three trigger level exceedances are potentially attributable to the quarry since the sprinkler system was upgraded in 2010. I predict that even with the proposed lower trigger level, there will be less trigger level exceedances potentially attributable to quarrying over the next five years than there were over the period from January 2006 – March 2014 because;

- Only three exceedances potentially attributable to the quarry have occurred since the sprinkler system was improved; and

- The pit floor and operational area of the quarry will be further below the level of the TSP monitors (and site boundaries) than it has been over the eight year period up to March 2014.

The new BAM monitor installed in the south-west of the site (as per the requirements of the clean fill consents) will provide greater clarity of the site's contribution to trigger level exceedances. The exceedances potentially associated with quarrying (i.e. the nine as discussed above) have been determined on the basis of wind direction and the operational status of the quarry. The wind direction must be from the south-west, or south for the existing TSP monitors to be downwind of the quarry. When winds are from the predominant south-west direction, the readings of the new BAM will provide a reading upwind of the quarry's operational areas. This reading will indicate whether TSP measured at the site office BAM is generated from the site, or whether the TSP is already present in the ambient air arriving at the site from the south, south-west.

#### Potential for dust emissions

Appendix 1, section 4.1 of the application report discusses the potential for dust to become airborne at the quarry. The following is based on this information.

There are four identified factors which influence whether dust is likely to become airborne and/or create a nuisance; particle size, particle density, wind speed and wind direction.

The following statements can be made regarding the potential for dust emissions:

- Heavier and larger particles require greater wind speed to become airborne;
- Large particles will deposit faster than small particles (of a similar density);
- More dense particles will deposit more rapidly than less dense particles (of a similar size); and
- Particles will travel further before depositing with a strong wind blowing than with a light wind blowing.

The typical composition of dust associated with the Three Kings quarry are fine particles of crushed scoria and basalt which have a density of approximately 1.6 and 2.8 – 3.0 g/cm<sup>3</sup> respectively. The applicant has calculated the potential distance that a 50 µm diameter particle of scoria and basalt could travel from a notional height of 3 m above ground level

(Table 4). The MfE good practice guide for dust management notes that particles deposited on a surface will only become individually visible when over a size of about 50 µm.

**Table 4:** Estimated distance a 50µm diameter particle can travel with varying wind speed

Dust type and wind speed	Estimated distance of travel at 3.0m drop height (m)
Basalt (2.8g/cm <sup>3</sup> ) at 5m/s	70
Basalt (2.8g/cm <sup>3</sup> ) at 10m/s	140
Scoria (1.6g/cm <sup>3</sup> ) at 5m/s	125
Scoria (1.6g/cm <sup>3</sup> ) at 10m/s	250

The consideration of wind speeds of 5 m/s and 10 m/s has some significance. The MfE notes that these speeds can be used as a trigger for increased dust control activities (winds above 5 m/s), or even as a signal for work to cease (winds above 10 m/s). The USEPA considers that entrainment of dust may occur where wind speeds exceed 5 m/s)<sup>2</sup>.

The applicant has provided a windrose based on meteorological data recorded at the site between 2006 and 2012. This windrose indicates that wind only exceeded 5 m/s for approximately 13% of the time. Of this, the prevailing south westerly wind accounts for half the time that the wind speed is over 5 m/s. From this direction the wind is towards the site's monitoring equipment. While likely to occur on some occasions, wind speeds over 10 m/s are so infrequent at the site that they are not represented on the windrose.

The distances in Table 4 are considered to be indicative only. Scoria and basalt particles smaller than 50 µm would likely fall out of suspension at a slower rate and thus may travel further, however individual particles smaller than 50 µm would be unlikely to cause a visible nuisance. Conversely, larger particles with more likelihood of causing visible nuisance will be heavier and therefore won't travel as far as Table 4 suggests.

At the Three Kings Quarry the only likely sources of dust with a 'starting height' greater than 3m above local ground level would be dust blown from ledges within the quarry, dust from the higher parts of stockpiles and, potentially, dust raised into the air by vehicle movements. The depth of the quarry alone (i.e. the height of the quarry walls containing these activities)

<sup>2</sup>USEPA AP-42, Volume I, Fifth Edition, 1995 - Chapter 13 Miscellaneous Sources, Section 13.2

will mean that most dust is well contained. Previously discussed mitigation measures such as the sprinklers and water carts will further minimise emissions from these areas and reduce the number of particles becoming airborne in the first instance. Less airborne particles will result in a lower intensity of any dust deposited beyond the site boundary, which subsequently reduces the likelihood of the dust being considered a nuisance. The applicant predicts that any nuisance deposition of visible dust from the Three Kings Quarry site is unlikely to occur any more than 50 m from sources that are located at ground level; however the majority of the site is well below the ground level of neighbouring properties.

Figure 4 below shows which neighbouring properties are within 50 m of the current operational areas of the quarry. The site plan submitted with the application indicates that the consented limit of extraction extends to the site boundary in the south, south west and east near Mt Eden Road (i.e. beyond the red line in Figure 4). I understand that extraction over the next five years is unlikely to involve an expansion of the existing operational footprint in the east of the site. No quarrying will occur in the area leased to commercial occupants.



**Figure 4:** Operational area of the quarry (including haul roads) designated by red line. Yellow highlighting beyond the site boundary indicates areas within 50m (horizontally) of the operational area.

As shown by Figure 4, only a small number of residential properties are within 50m of the quarry working areas. The diagram does not account for the significant difference in relative height between the operational area and the neighbouring properties. Adjacent to Fyvie Avenue, the nearest operational area is the haul road which is 20 – 30 m below the level of the site boundary. In the east, near Mt Eden Road, the operational area is 30 – 35 m below the level of the site boundary. The effect of the height difference is better imagined by considering a rock crushing activity at the same elevation as surrounding properties, but shielded by a wall up to 35m high. The walls and boundaries of the site are also heavily vegetated which increases the effective difference in height whilst providing some screening of dust emissions.

It is not expected that any appreciable quantities of dust will migrate beyond the operational area of the quarry (due to the vertical and horizontal separation distance to neighbouring properties from operational areas). I note that this determination is consistent with the site's monitoring, complaint and compliance history.

Fine particulate with a diameter less than ten microns ( $PM_{10}$ ) is most often associated with combustion emissions (i.e. home fireplaces, vehicle emissions) however some could be generated from rock extraction and crushing activities. The same measures used to minimise nuisance dust will be effective for minimising  $PM_{10}$  emissions. It is expected that  $PM_{10}$  would only make up a relatively small proportion of the total particulate emissions from the quarry.

The BAMs at the site measure total suspended particulate which includes  $PM_{10}$  and, as discussed earlier, it was shown at the Environment Court hearing for the cleanfill consent that the TSP levels at the site correlate well with  $PM_{10}$  monitoring undertaken by Auckland Council at other sites. On this basis,  $PM_{10}$  (as a fraction of the TSP recorded at the BAMs) is likely to be at a similar level to other parts of Urban Air Quality Management Area. The potential effect on the receiving environment from  $PM_{10}$  generated from the quarrying activities is predicted to be less than minor. It is not anticipated that there will be any breach of the National Environmental Standards, New Zealand Ambient Air Quality Guidelines, Regional Air Quality Targets at or beyond the site boundary as a result of  $PM_{10}$  emissions generated from quarrying at the site.

In summary, I consider that the proposed dust mitigation measures are commensurate with the scale of the quarrying activities and sensitivity of the receiving environment beyond the site boundary. The potential air quality effects associated with dust emissions from the site are predicted to be less than minor for a five year term of consent, on the basis that the existing consent conditions are applied, dust mitigation measures continue to be effectively implemented, and a lower TSP investigation trigger level is used with TSP monitoring undertaken with BAMs.

### Cultural Impact

Iwi were consulted in relation to the cleanfill consents and the applicant has referenced this and provided a summary in Appendix 9 (section 1.2) of the current discharge to air consent application. Iwi did not submit on the cleanfill consent applications when they were notified, however following the notification period Winstone Aggregates contacted 7 iwi groups in relation to the cleanfilling and four indicated they wished to have on-going consultation. A

cultural impact assessment report (for the cleanfilling) was commissioned and received from one - Ngati Whatua o Orakei.

For the current application to discharge to air, the following iwi in the Puketapapa local board area were contacted by Auckland Council. They were provided with 15 working days to consider whether the application has adverse effects on Mana Whenua values, and therefore whether a Cultural Impact Assessment is required.

- Te Runanga o Ngati Whatua,
- Ngai Whatua o Kaipara,
- Ngati Whatua o Orakei,
- Te Kawerau a Maki,
- Ngai Tai ki Tamaki,
- Ngati Tamaoho,
- Ngati Te Ata Waiohū,
- Te Akitai Waiohū,
- Ngati Paoa,
- Ngati Whanaunga,
- Ngati Maru, and
- Ngati Tamatera.

A response from Te Runanga o Ngati Whatua was received, confirming that they would defer to Ngati Whatua o Orakei. Ngati Whatua o Orakei responded as follows:

*"We confirm that the works occur within our rohe and that we do not require a CIA for the renewal of the consent.*

*We note the reference to the cultural values assessment (in the final pages of the large scanned document that forms the application), done in 2008 by Ngati Whatua Orakei, authored by Malcolm Paterson.*

*We maintain our position on the cultural value of the Maunga and the significance of the site as described in that report. As a corollary, we are continuing to work with Fletchers going forward into the new phases of the development at Three Kings.*



*The applicant has a good relationship with Iwi on matters relating to the quarry, both for current operations and for its future plans.*

*We therefore see no need to re-consider the application and instead maintain our original assessment and consent for the operations."*

### 2.3.1 Conclusion

Overall, for the reasons described above, the adverse effects arising from the proposal are considered to be less than minor.

## SECTION 3 – RECOMMENDATION ON NOTIFICATION

### 3.1 IDENTIFICATION OF WHO MAY BE ADVERSELY AFFECTED

The effects of the proposed activity on the environment would be less than minor. It is considered there are no persons who may be adversely affected by the proposal for the following reasons:

- The applicant has appropriate dust mitigation methods and monitoring equipment in place, including BAMs that provide warnings in real time when dust emissions are elevated;
- Dust mitigation measures are commensurate with the scale of the quarrying activities and appropriate in light of the sensitivity of the receiving environment beyond the site boundary;
- Based on observations, monitoring and complaint history it is evident that there is an adequate horizontal and vertical separation between the operational areas of the site and the neighbouring sensitive receptors provided dust minimisation measures are in effect;
- The likelihood for dust nuisance to arise from quarrying activities over the next five years is expected to be less than that for the previous twelve years during which time no dust complaints were validated as offensive and objectionable by the council;
- The continuation of quarrying at the site was assumed, and referred to extensively, in documentation submitted to, and approved by the environment

court for the operation of a cleanfill at the subject site. The current application seeks to enable the quarrying component of the approved cleanfill activity; and

- Iwi have not raised any concerns or requested a Cultural Impact Assessment in relation to the current proposal.

### 3.2 DO SPECIAL CIRCUMSTANCES EXIST?

There are no special circumstances that exist in relation to this application which would require the application to be publicly notified.

### 3.3 RECOMMENDATION

It is recommended that this application be processed on a **non notified** basis for the following reasons:

- The adverse effects on the environment of the activity for which consent is sought will be less than minor because of the reasons given in section 2.3 of this report; and
- There are no persons considered adversely affected by the granting of this consent.

### 3.4 NOTIFICATION RECOMMENDATION PREPARED BY

Reviewing Officer: Paul Crimmins  
Title of Reviewing Officer: Senior Consents & Compliance Advisor – Air Quality

Signed:



Date:

16/6/2014

Reporting Officer:

Jared Osman

Title of Reporting Officer:

Acting Team Leader – Air Quality

Signed:



Date:

16/06/2014

## SECTION 4 – DEFINITIONS

ACRP:ALW	Auckland Council Regional Plan (Air, Land and Water) (operative)
AQMA	Air Quality Management Area, as defined in Chapter 3 of the Auckland Council Regional Plan (Air, Land and Water)
Council	The Auckland Council
MfE	Ministry for the Environment
NES	National Environmental Standard
NES:AQ	Resource Management (National Environmental Standard for Air Quality) Regulations 2004 and all amendments
PAUP	Proposed Auckland Unitary Plan (notified 30 September 2013)
Regional Plan	Auckland Council Regional Plan (Air, Land and Water) (operative in part)
RMA	Resource Management Act 1991 and all amendments
TSP	Total Suspended Particulate

