

**Specialist Response Template – Fast-track Approvals Act 2024 –  
Substantive Application**

**Technical Specialist Memo – Air Quality**

To:

Colin Hopkins – Lead Planner & Doug Fletcher – Principal Project Lead

From:

Louis Boamponsem, Senior Air Specialist – Contamination, Air & Noise Team, Planning  
and Resource Consents Department, Auckland Council

Qualifications  
& Relevant  
Experience:

I hold a PhD in Environmental Science degree from The University of Auckland (specialising in air quality monitoring and assessment). I have 13 years' experience in air quality monitoring, research and broad environmental science lecturing including more than 20 published articles.

I am employed as a Senior Specialist within the Contamination, Air and Noise team of the Specialist Unit, Planning and Resource Consents Department, Auckland Council. I have held this role since May 2024 and am principally involved in evaluating and preparing specialist and technical input to resource consenting issues and proposals. I was previously employed by the Research and Evaluation Unit (RIMU), Auckland Council as an Air Quality Scientist.

Preparation in  
Accordance  
with the Code  
of Conduct:

I confirm that I have read the Environment Court Practice Note 2023 – Code of Conduct for Expert Witnesses ([Code](#)), and have complied with it in the preparation of this memorandum. I also agree to follow the Code when participating in any subsequent processes, such as expert conferencing, directed by the Panel. I confirm that the opinions I have expressed are within my area of expertise and are my own, except where I have stated that I am relying on the work or evidence of others, which I have specified.

Date:

17/9/2025

**1.0 APPLICATION DESCRIPTION**

**Application and property details**

Fast-Track project name:

Drury Quarry Expansion – Sutton Block

Fast-Track application number:

FTAA-2503-1037 (EPA reference) + BUN60449474 (Auckland Council reference)

Site address:

121 MacWhinney Drive, Drury; 1189 Ponga Road, Drury; 2113 and Ponga Road, Papakura

## 2.0 Executive Summary / Principal Issues

*As the Senior Air Quality Specialist, I have reviewed the proposed expansion of the Sutton Block at Drury Quarry by Stevenson Aggregates Limited. My assessment confirms that the existing quarry operations are compliant with both their air discharge consent and Ministry for the Environment guidelines. Background monitoring within the Sutton Block shows very low levels of dust, and the minimal number of complaints over the past five years suggests that current dust management practices are effective.*

*The proposed expansion introduces potential air quality risks, particularly from dust emissions such as TSP, PM<sub>10</sub>, and respirable crystalline silica (RCS), generated during earthworks, blasting, and haul road activity. Sensitive receptors, including nearby residences and a culturally significant site, may be affected during early development phases. However, modelling indicates that PM<sub>10</sub> and RCS concentrations will remain within acceptable health thresholds, and cumulative impacts are expected to be minor with appropriate controls.*

*To address these risks, Stevenson Aggregates has committed to implementing a comprehensive Dust Management Plan, including water suppression systems, speed restrictions, real-time monitoring, and progressive rehabilitation. Based on the assessment and proposed mitigation measures, I consider the air discharge effects to be minor, and I support the application subject to enforceable consent conditions.*

## 3.0 Documents Reviewed

- *Sutton Block - Air Quality Assessment' prepared by Pattle Delamore Partners Ltd, dated March 2025.*
- *Sutton Block – Assessment of Environmental Effects – prepared by Tonkin & Taylor Limited, dated March 2025.*
- *Sutton Block Quarry Management Plan, prepared by Stevenson Aggregates Limited*
- *Ministry for the Environment. 2016. Good Practice Guide for Assessing Discharges to Air from Industry. Wellington: Ministry for the Environment.*
- *Ministry for the Environment. 2016. Good Practice Guide for Assessing and Managing Dust. Wellington: Ministry for the Environment.*

#### 4.0 Additional Reasons for Consent Not included in AEE

N/A

#### 5.0 Specialist Assessment

##### **1. Introduction**

I have reviewed the Air Quality Assessment (AQA) and related reports prepared for Stevenson Aggregates Limited's (SAL) proposed expansion of the Sutton Block at Drury Quarry. The following outlines the key findings in relation to the existing environment, potential air quality effects, proposed mitigation measures, and alignment with relevant regulatory frameworks.

##### **2. Existing Environment**

The Drury Quarry currently operates under an existing air discharge consent that includes limits for Total Suspended Particulate (TSP). Long-term monitoring indicates strong compliance with both the consented 24-hour average limit of 100  $\mu\text{g}/\text{m}^3$  and the Ministry for the Environment's (MfE) good-practice guideline of 80  $\mu\text{g}/\text{m}^3$ .

A supplementary short-term monitoring site within the Sutton Block recorded very low background TSP concentrations, averaging 5.9  $\mu\text{g}/\text{m}^3$ , with no exceedances of MfE trigger values. In addition, only six dust-related complaints have been recorded over the past five years, suggesting that existing dust management measures at the Drury Quarry are generally effective.

##### **3. Potential Air Quality Effects**

The primary air quality concern associated with the proposed Sutton Block expansion is dust generation, particularly TSP,  $\text{PM}_{10}$ , and respirable crystalline silica (RCS). Key dust-generating activities include:

- Earthworks and overburden removal (e.g., wind erosion from exposed surfaces, stockpiles, and material loading)
- Aggregate extraction and blasting (release of fine and coarse particulates)
- Haul road traffic (dust entrainment from unsealed surfaces)
- Portable crushing operations (if deployed on site)

Under worst-case, unmitigated conditions, coarse dust could disperse several hundred metres—especially during strong south-westerly winds—potentially affecting nearby sensitive receptors such as residential properties on Macwhinney Drive (R1 and R2, approximately 130–300 m downwind) and the culturally significant Kaarearea pā site (R4, approximately 80 m downwind). Finer  $\text{PM}_{10}$  particulates are expected to disperse over a wider area but remain below health-based thresholds beyond approximately 200 m.

The assessment acknowledges adjacent industrial sources but does not model cumulative particulate impacts from Drury South or other nearby operations.

#### **4. Summary of Potential Air Quality Effects:**

- Short-term impacts during initial overburden stripping and bund construction pose the greatest risk, particularly to R2 and R4.
- Cumulative effects from concurrent Sutton Block and Drury Quarry operations may increase dust events at R4, though such events are unlikely to occur simultaneously.
- Health risks from PM<sub>10</sub> and RCS are predicted to remain within acceptable thresholds (e.g., RCS ≤ 2.8 µg/m<sup>3</sup>, below the 3 µg/m<sup>3</sup> guideline).

#### **5. Proposed Mitigation Measures**

SAL proposes to adopt a detailed Dust Management Plan (DMP) for the Sutton Block, modelled on the controls successfully implemented at the existing Drury Quarry site. Key mitigation measures include:

- Water carts and fixed sprays on haul roads, stockpiles, and exposed surfaces, with conditioned use during dry and/or windy periods
- Enforced vehicle speed limits of 30 km/h to minimise entrainment
- Progressive bunding and re-vegetation of overburden mounds within three months of placement
- Real-time PM<sub>10</sub> monitoring, integrated with telemetry and response triggers
- Annual DMP review to incorporate adaptive management and industry best practices

Provided that crushing activities remain confined to the existing fixed plant area, the residual risk of dust impacts on downwind receptors is expected to be minor and manageable.

#### **6. Regulatory Compliance**

The proposed activity demonstrates good alignment with applicable regulatory requirements:

- The proposal meets Auckland Unitary Plan (AUP) standard E14.6.2.2 (minimum 200 m setback for crushing operations) and complies with the Quarry Buffer Overlay provisions.
- Predicted PM<sub>10</sub> concentrations (22.6–45.1 µg/m<sup>3</sup>) are below the National Environmental Standards for Air Quality (NESAQ) 24-hour threshold of 50 µg/m<sup>3</sup>.
- The assessment applies the FIDOL framework (Frequency, Intensity, Duration, Offensiveness, Location) consistent with the MfE Good Practice Guide for Assessing and Managing Dust (2016).

#### **7. Conclusion**

The air quality assessment for the proposed Sutton Block expansion indicates that:

- The existing receiving environment is well understood and compliant with regulatory standards;
- The potential for adverse air quality effects—particularly from dust—is largely confined to early stages of site development and can be effectively mitigated;
- The proposed mitigation measures reflect best practice and are suitable to be incorporated into enforceable consent conditions;

- With appropriate implementation and ongoing monitoring, the air discharge effects of the expansion are expected to remain minor and well-controlled.

## 6.0 Section 67 Information Gap

**I have identified that there are no section 67 information gaps.**

## 7.0 Recommendation

In view of the above assessment, I support the application.

## 8.0 Proposed Conditions

The proposed air quality-related consent conditions below are appropriate to mitigate air discharge effects. They are consistent with the measures in the applicant's existing air discharge consent and reflect good practice in managing dust and particulate emissions from quarrying activities.

### ***Part F – Air Discharge Consent Conditions***

#### F1 Limit Conditions

All processes must be operated, maintained, supervised, monitored and controlled, including by adhering to the Dust Management Plan certified in accordance with the conditions of this consent, to ensure that all emissions authorised by this consent are maintained at the minimum practicable level.

F2 Beyond the boundary of the site, there must be no dust caused by discharges from the Site which, in the opinion of an enforcement officer when assessed in compliance with the Good Practice Guide for Assessing and Managing Dust (Ministry for the Environment 2016), causes noxious, dangerous offensive or objectionable effect.

Advice Note: Dust effects

*Compliance with this condition is to be assessed by suitably trained council enforcement officers in accordance with the procedures outlined in the Good Practice Guides for Odour and Dust (Ministry for the Environment, 2016), including consideration of the FIDOL factors (frequency, intensity, duration, offensiveness and location).*

F3 Discharges from any activity occurring on the Site must not give rise to visible emissions, other than water vapour or heat haze, to an extent which, in the opinion of the council, is the cause of a noxious, dangerous, offensive or objectionable effect.

F4 Beyond the boundary of the Site, there must be no hazardous air pollutant caused by discharges from the Site, which is present at a concentration that causes, or is likely to cause adverse effects to human health, ecosystems or property.

F5 No crushing activities must occur within 200 m of 359 MacWhinney Drive, within the area demarcated purple on Figure 7 of the 'Sutton Block - Air Quality Assessment' prepared by Pattle Delamore Partners Ltd, dated March 2025 and shown in Figure 1 below.

Figure 1: 200 m crushing exclusion area within the Project's footprint.

F6 The crushers must not be operated without the associated water sprayers being fully operational and functioning correctly. All dust control equipment on the Site must be maintained in good condition.

F7 All practicable measures must be undertaken as detailed by the DMP, certified in accordance with the conditions of this consent, to minimise the discharge of dust beyond the boundary of the site. These measures must include, but not be limited to:

- (a) Frequent watering of unsealed surfaces where discharges of dust are likely to arise;
- (b) Restricting vehicle speeds around the site;
- (c) Maintaining unsealed surfaces of vehicle routes where discharges of dust are likely to arise through grading and rolling to minimise dust, and stabilisation of exits from unsealed surfaces onto sealed roads;
- (d) The maintenance of wheel washing facilities at the site exit, utilised by vehicles as required to minimise the tracking of dust-generating material on paved surfaces and public road; and.
- (e) Locating and maintaining stockpiles to minimise potential wind-entrainment.
- (f) Contouring and re-vegetation of the overburden and managed fill disposal area as soon as practicable.

F8 Water supplies must be maintained at such capacity that application of water as a dust control measure is not limited.

A log must be kept of pond and dam maintenance and of weekly checks on sediment and water levels in ponds.

F9 Monitoring and Reporting Conditions

Monitoring of meteorology (wind speed, wind direction, temperature, and rainfall) in the vicinity of the site must be undertaken. The types and location of the meteorological monitoring sites must

be in accordance with the certified Dust Management Plan, as required by the conditions of this consent, and must minimise the potential for obstacles to affect the accuracy of the readings. The monitor must record the wind speed, wind direction, temperature, and rainfall continuously in real time so that the readings are immediately retrievable.

F10 Monitoring of dust (total suspended particulate and/or PM10) in ambient air in the vicinity of the site must be undertaken. The number, type, and location of the monitoring sites must be in accordance with the certified DMP, as required by the conditions of this consent. These monitors must record ambient dust concentrations continuously in real time so that the readings are immediately retrievable and so that on-site operators are immediately notified of any instance of ambient dust concentrations that exceed the trigger thresholds set by the DMP.

F11 The council must be notified as soon as practicable in the event of any significant discharge to air, which results or has the potential to result in a breach of air quality conditions or adverse effects on the environment. The following information must be supplied:

- (a) Details of the nature of the discharge;
- (b) An explanation of the cause of the incident; and
- (c) Details of remediation action taken.

F12 All air quality complaints that are received must be recorded. The complaint details must include:

- (a) The date, time, location and nature of the complaint;
- (b) The name, phone number and address of the complainant, unless the complainant elects not to supply these details;
- (c) Weather conditions, including approximate wind speed and direction, at time of the complaint;
- (d) Any remedial actions undertaken; and
- (e) Details of any complaints received must be provided to the council within one working day of the complaint.

## 9.0 Supporting Documents

N/A