

Before the Hearing Commissioners  
Appointed by Canterbury Regional Council and Selwyn District Council

Under The Resource Management Act 1991

In the matter of            an application by Southern Screenworks Limited for land use  
consents and discharge permits associated with the extension  
of, and changes to, existing quarry operations at 50 Bealey  
Road, Kirwee

### Statement of evidence of Andrew Francis Leckie

**31 March 2025**

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**anderson  
lloyd.**

## Qualifications and experience

- 1 My full name is Andrew Francis Leckie.
- 2 I have a Bachelor of Engineering (Hons) in Civil Engineering and a Master of Engineering in Transportation, both from the University of Canterbury. I am a Chartered Professional Engineer, and I am a Chartered Member of Engineering New Zealand.
- 3 After graduating I carried out a civil engineering role for Fulton Hogan as part of the Christchurch Earthquake rebuild for two years, following which I have specialised as a transportation engineering consultant for the last ten years. In my current role as a Principal Transportation Engineer with Stantec New Zealand, I am involved in transportation engineering assessment and design for a broad range of landuse activities.
- 4 My relevant experience includes carrying out transportation assessments and giving advice for multiple quarries in the Selwyn District, including Fulton Hogan's Roydon Quarry (near Templeton), Road Metals' Rolleston Quarry (Wards Road) and the Burnham 2020 Limited (Winstone Aggregates) recently consented Burnham Quarry (at the junction of Aylesbury Road and Grange Road). Assessments for these were focused on heavy vehicle effects on the safety of the local road network and State Highway / arterial road intersections. Also relevant to State Highway 73 (**SH73**), I have carried out transportation assessment for numerous residential rezonings in West Melton and Darfield.
- 5 My role in relation to Southern Screenworks Limited (**Southern Screenworks**) application to extend the existing quarry at 50 Bealey Road, Kirwee (**Application and Site**) has been to provide advice in relation to transport matters. I have reviewed year 2024 traffic generation information provided by Southern Screenworks and liaised with New Zealand Transport Authority (NZTA) in relation to effects on the SH73 / Bealey Road intersection.
- 6 In preparing this statement of evidence I have considered the following documents:
  - (a) the AEE accompanying the Application;
  - (b) submissions relevant to my area of expertise;
  - (c) section 42A report;
  - (d) various documents prepared for the Burnham 2020 Limited quarry consent applications to inform my understanding of how the surrounding road network is operating. These include transportation evidence of Mr Andrew Metherell (a colleague of mine at Stantec) and a Joint Witness Statement of

Mr Metherell (on behalf of Burnham 2020 Limited) and Mr Andy Carr (on behalf of Selwyn District Council).

### **Code of Conduct for Expert Witnesses**

- 7 While this is not a hearing before the Environment Court, I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court of New Zealand Practice Note 2023 and that I have complied with it when preparing my evidence. Other than when I state I am relying on the advice of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

### **Scope of evidence**

- 8 I have prepared evidence in relation to:
- (a) the existing quarry heavy traffic generation;
  - (b) the existing road safety;
  - (c) my assessment of effects;
  - (d) my liaison with NZTA;
  - (e) matters raised by submitters to the Application;
  - (f) matters raised in the Selwyn District Council (SDC) staff report (issued under s42A of the RMA); and
  - (g) proposed conditions of consent.

### **Executive summary**

- 9 Existing traffic movements over 2024 at Aylesbury Quarry included an average of 40 heavy vehicle movements per day across the 249 days that had quarry activity, a maximum three-month rolling average of 50 heavy vehicle movements per operating day, and a maximum of 121 heavy vehicle movements on one day.
- 10 Having reviewed crash records in the vicinity of the quarry, there are no serious road safety concerns in the area, Southern Screenworks' and other heavy traffic is not contributing to road safety concerns and the quarry access point on Bealey Road is operating safely.
- 11 The quarry heavy traffic forms part of the existing environment, on which other heavy traffic generating activities in the area have been and are being consented and Bealey Road (as an arterial road) is expected to have a heavy traffic carrying function.

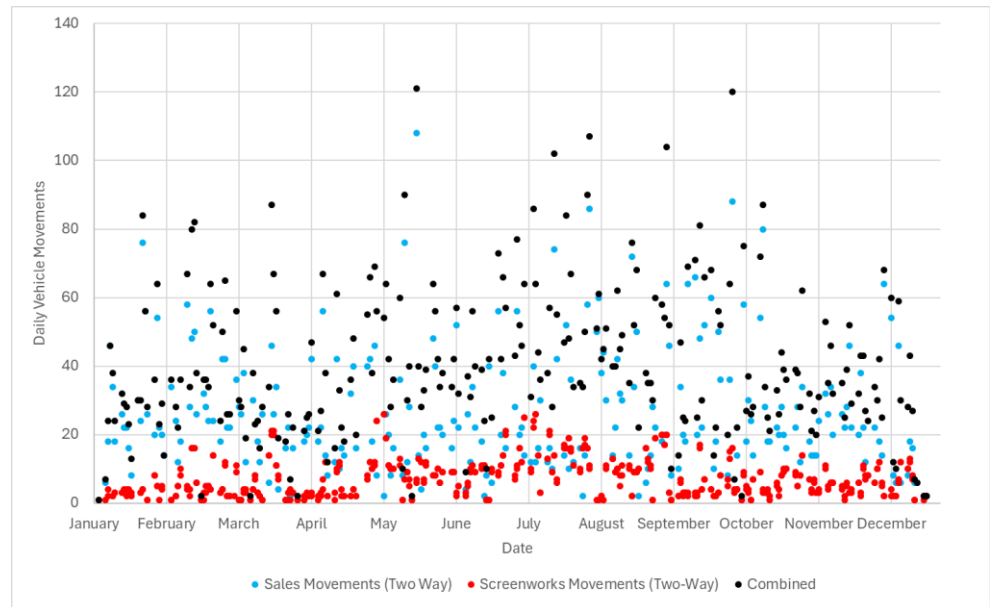
- 12 The life of the quarry will have a negligible effect on the safety and efficiency of the surrounding road network. I have also liaised with the New Zealand Transport Agency (NZTA) who have advised they have no issues with heavy vehicle numbers and that an upgrade of the SH73 / Bealey Road intersection is planned. The current proposal will not affect the need for or timing of the intersection upgrade.
- 13 Kiwirail has not raised any concerns relating to effects on the safety of the Bealey Road level crossing and has not requested a Level Crossing Safety Impact Assessment.
- 14 In relation to other matters raised in submissions:
- (a) According to NZTA's Crash Analysis System, no crashes have been reported in New Zealand between 2020 and February 2025 where dust being blown from an adjacent activity onto a sealed road has affected visibility;
  - (b) I have no concern with the ability of the road network to accommodate transporter movements between 6.00am and 7.00am on weekdays.
- 15 I support the proposal from a transportation perspective based on the proposed condition to limit heavy vehicle movements to a maximum volume of 120 vehicle movements per day, and 80 vehicle movements per operating day as an average over any three-month period.

#### **Existing quarry traffic generation**

- 16 No specific traffic generation conditions were included in the original Southern Screenworks consent decision however a maximum of 120 heavy vehicle movements per day was anticipated<sup>1</sup>. I have reviewed heavy traffic generation data provided by Southern Screenworks for the most recently available full year of data, being 2024. This data covers heavy traffic generation associated with both sales (external traffic) and Southern Screenworks' own vehicles. **Figure 1** shows the vehicle movement data.

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<sup>1</sup> Pages 5 and 7 of Commissioners Decision



**Figure 1- Summary of 2024 Quarry Traffic Generation**

- 17 There was an average of 40 heavy vehicle movements per day across the 249 days that had quarry activity. The highest three-month rolling average was 50 heavy vehicle movements per operating day during the July to September period. A maximum of 121 heavy vehicle movements occurred on one day in May.

#### **Existing road safety**

- 18 I have reviewed crash records in the vicinity of the quarry for any evidence that quarry traffic is contributing to road safety concerns. In the five-year period since the start of 2020 (and as of 17 February 2025), there have been seven crashes (two serious-injury and five non-injury) between the SH73 / Bealey Road and Bealey Road / Aylesbury Road intersections.
- 19 Two of the crashes, including one serious-injury crash, involved drivers turning right out of Bealey Road being hit by westbound vehicles on SH73. While this is not a high number of crashes at such an intersection on a rural State Highway, NZTA is planning safety upgrades as I outline later in my evidence.
- 20 One other non-injury crash occurred on SH73, involving a driver carrying out an unsafe overtaking manoeuvre clipping the vehicle they were passing.
- 21 Two non-injury crashes occurred at the curve on Bealey Road west of SH73 when drivers lost control, including one truck driver in foggy conditions. A further non-injury crash in foggy conditions occurred when a driver on Railway Road failed to notice the intersection with Bealey Road and crashed.

- 22 The other serious-injury crash involved a 14-year-old driver attempting to turn out of Aylesbury Road at high speed and crashing into a vehicle on Bealey Road. In my view, this crash does not reflect the normal operation of the intersection.
- 23 I conclude from the above that there are no serious road safety concerns in the area and Southern Screenworks heavy traffic, as well as other heavy traffic, is not contributing to road safety concerns. There have been no crashes reported at the quarry access point on Bealey Road, suggesting that it is operating safely.

### **Assessment of effects**

- 24 I have reviewed transportation assessment documentation for the recently consented Burnham 2020 Limited quarry at the junction of Grange and Aylesbury Roads. It anticipates small increases in use of the Bealey Road / Aylesbury Road and SH73 / Bealey Road intersections by heavy traffic, and no concerns with the ability of these intersections to accommodate the additional traffic were raised. Furthermore, I am aware that Fulton Hogan has recently had quarry activity on the nearby Wards Road approved. The joint witness statement of Mr Methereil and Mr Carr addressed cumulative effects of both quarries and concluded that the road network will be able to accommodate the traffic from both. These assessments were undertaken in the context of the existing Southern Screenworks quarry and associated heavy vehicle movements.
- 25 From a traffic perspective, the proposal will extend the life of the quarry but not increase the daily traffic generation of the quarry. In my opinion, the quarry heavy traffic is already being accommodated without safety concerns as demonstrated by my crash search. The quarry heavy traffic forms part of the existing environment, on which other heavy traffic generating activities in the area have been and are being consented. I also note that Bealey Road is classified as an arterial road by SDC and is therefore expected to have a heavy traffic carrying function. My view is that extending the life of the quarry will have a negligible effect on the safety and efficiency of the surrounding road network.

### **Liaison with NZTA**

- 26 I spoke with James Long, Senior Safety Engineer at NZTA, in early December 2024. He confirmed that NZTA has a design for a safety upgrade of the SH73 / Bealey Road intersection, including an 'intersection speed zone' (vehicle activated), right turn bays on SH73 and removal of the left turn lane for turns into Bealey Road. While timing was unknown, he confirmed that the project was 'on their radar' and was hopeful it would be carried out in the short term.
- 27 Given the quarry is part of the existing environment and the current proposal will not change the existing quarry traffic generation, my view is therefore that the current proposal will not affect the need for or timing of the intersection upgrade.

- 28 I outlined Southern Screenworks proposal to extend the life of the quarry without changing its existing traffic generation to NZTA later in December. Mr Long advised that he did not have 'any specific issues' 'as the vehicle numbers are not increasing and the intersection is operating as expected'. The NZTA submission has not raised any road safety issues relating to vehicle generation (heavy vehicle, or otherwise). Its submission is limited to safety concerns relating to dust on SH73 and I comment on these below.

### **Matters raised by submitters**

#### Submission Matter: Dust affecting SH73 safety

- 29 NZTA has raised concerns relating to dust from the quarry being blown onto SH73. While effects of dust are being covered by another expert and I understand that Southern Screenworks is largely accepting of NZTA's suggestions<sup>2</sup>, I have reviewed crash records across New Zealand for any crashes resulting from dust being blown onto a road.
- 30 Using NZTA's Crash Analysis System, I reviewed all crashes since the start of 2020 (as of 17 February 2025) listed to have the contributing cause factor '838 visibility limited by temporary obstruction / dust / smoke'. While there was a small number of crashes on unsealed roads with dust from the road reported as a contributing factor, no crashes were reported where dust being blown from an adjacent activity onto a sealed road has affected visibility.

#### Submission Matter: Additional traffic

- 31 The Wiig and Nunn submissions raised concerns with additional traffic. As I have outlined, no increase in traffic generation is proposed and a consent condition is volunteered to limit heavy traffic movements to current levels (described below). The Wiig submission mentions transporter movements before 7:00am. I consider there is no concern with the ability of the road network to accommodate transporter movements at this time of the day.

#### Submission Matter: Level crossing safety

- 32 I note that Kiwirail has not raised any concerns relating to effects on the safety of the Bealey Road level crossing and therefore has not requested a Level Crossing Safety Impact Assessment. They support the following condition

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<sup>2</sup> Southern Screenworks proposes that work would only stop within 100m of SH73 when wind limits are exceeded.

*“Heavy vehicle movements associated with quarrying operations shall not exceed an average of 40 return trips (80 movements), or a maximum volume of 60 return trips (120 movements) per day.”*

#### **Matters raised by SDC staff report**

- 33 I have reviewed the s42A report of Mr Hegarty. He has not raised any transport-related concerns, and concluded that the proposed conditions relating to maximum heavy vehicle movements (described below) and continued vehicle crossing use will result in the proposal having no more than minor effects on the surrounding road network. I agree with this assessment.

#### **Proposed consent conditions**

- 34 Mr Bligh has proposed a consent condition limiting heavy traffic generation of the quarry which reflects the condition supported above by KiwiRail with some improvements to include a rolling average for heavy vehicle movements across operating days.
- 35 The key components of the proposed consent condition are:
- (a) Heavy vehicle movements shall not exceed a maximum volume of 120 vehicle movements per day; and
  - (b) Heavy vehicle movements must not exceed 80 vehicle movements per operating day as an average over any three-month period.
- 36 This is intended to generally reflect what has been and is currently occurring. I note that the 80 heavy vehicle movement per day maximum rolling average is higher than the rolling average recorded in the July to September period in 2024 (50 heavy vehicle movements per day).
- 37 An extra 30 heavy vehicle movements per day would represent an extra one or two return trips per hour. This difference would be barely perceptible and would have a negligible effect on the surrounding road network. In terms of traffic effects, the daily maximum is the more critical and the 120 heavy vehicle movements per day limit is consistent with the maximum traffic generation recorded in 2024.
- 38 Providing this flexibility for Southern Screenworks, rather than setting an arbitrarily low maximum average limit, which is more likely to be exceeded without directly managing an effect, is appropriate in my view.



## **Conclusion**

- 39 The extension will not involve an increase in the heavy traffic volumes generated by the quarry currently but simply provides for a continuation of Southern Screenworks' existing activity.
- 40 I consider that the local road network can continue to safely accommodate quarry traffic. NZTA is planning a safety upgrade at the SH73 / Bealey Road intersection to ensure its ongoing safety for all users, including multiple heavy traffic generating activities in the area.
- 41 NZTA has not indicated any traffic safety concerns related to heavy vehicle movements. Southern Screenworks has offered conditions to address NZTA's concerns relating to dust. I also understand KiwiRail is satisfied with the traffic-related conditions proposed by the applicant.
- 42 I conclude that allowing the quarry to operate for a longer period of time than originally anticipated will have negligible effects on the safety and efficiency of the surrounding road network. Accordingly, I support the proposal from a transportation perspective.

**Andrew Francis Leckie**

31 March 2025