

# Submission in respect of the proposed Snowy 2.0 Main Works

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## 1 Executive Summary

This submission in respect of the Snowy 2.0 Main Works addresses traffic and the impacts on Cooma and the Snowy Mountains Highway.

The EIS does not clearly explain what things are like now and how they will change because of the project – in language that is easily understandable.

The EIS estimates the project related traffic generation and notes that it increases average daily traffic volumes by less than the seasonal increase in the winter snow season. The EIS states that the current network has the capacity to absorb the increase in traffic.

The EIS does not explain the real impact of the project traffic. Sharp Street in Cooma and the Snowy Mountains Highway have extremely low current volumes of heavy vehicle traffic - they are almost negligible. The project will generate up to a 100-fold increase in heavy vehicle traffic on current levels for Sharp Street and the Snowy Mountains Highway. Impacts will reach intolerable levels. A summary of impacts is:

- Every two minutes on average, and every minute at project peak times, there will be a heavy vehicle along Sharp Street. There are currently almost no heavy vehicles.
- The 'community meeting place', the café ambience and the general environment that currently characterises Sharp Street will be severely impacted.
- Traffic congestion, queues and delays on Sharp Street (and its major cross streets, Bombala and Vale Streets) will be significantly more severe than projected by the EIS.
- The safety of road users and pedestrians in Sharp Street will rise to high and intolerable levels.
- Snowy 2.0 heavy vehicle project traffic will cause a major and detrimental change to the current quiet country town noise profile for the people of Cooma. Noise will come from heavy vehicle traffic that is up to a hundred-fold increase on current heavy vehicle traffic.
- Every two minutes on average, and every minute at project peak times, there will be a heavy vehicle along the Snowy Mountains Highway. There are currently almost no heavy vehicles.
- Travel times on the Snowy Mountains Highway between Cooma and Adaminaby will increase significantly compared to the present.
- Road safety risk on the Snowy Mountains Highway between Cooma and Adaminaby will deteriorate significantly, rising to intolerable levels.

These impacts can be mitigated. Use of an alternative route by heavy vehicles, including Yallakool, Mittagang, Shannons Flat and Bobeyan roads, avoids Cooma and the majority of the Snowy Mountains Highway between Cooma and Adaminaby. Snowy Hydro have already investigated this route in consultation with the Snowy Monaro Regional Council and the state government.

## 2 Sharp Street, Cooma

### 2.1 Introduction

Cooma is the centre of the Monaro region and the largest town directly affected by the Snowy 2.0 project.

Sharp Street between the Baron Street and Soho Street intersections is the commercial and social hub of Cooma. It features angle parking right up to each intersection on both sides of the road and two tight roundabouts (with angle parking right up to the roundabouts also the side streets). Sharp Street resembles a car parking aisle rather than a through highway.

Sharp Street contains the majority of Cooma's shops, cafes and service businesses plus two hotels. Its footpaths serve as meeting and talking places and outdoor seating for cafes.

Traffic is almost universally light vehicle, much of it looking for a parking space. Snow season days see an influx of minibuses and coach buses, but relatively few of them.

Figures 1 and 2 show typical Sharp Street – and not a heavy vehicle in sight.



*Fig 1 - Sharp Street looking NE across Vale Street roundabout*





Fig 2 - Sharp Street looking NE across pedestrian refuge towards Bombala Street

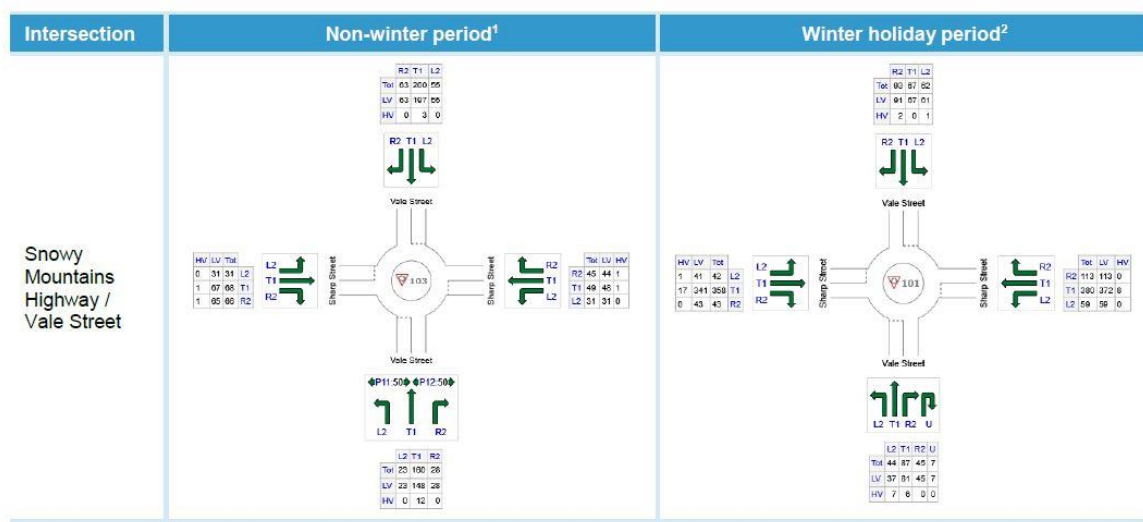


Fig 3 - Weekday peak hour intersection traffic volumes (Table 3-3) from Snowy 2.0 Main Works Traffic and Transport Assessment

Figure 3 is an excerpt from Table 3-3 of the Snowy 2.0 Main Works Traffic and Transport Assessment and shows the peak hour traffic at the Sharp Street and Vale Street intersection. It demonstrates that almost all traffic is light vehicle. And taking account of the fact that HV vehicles include minibuses, light trucks (delivery vans) and coach buses, it is most probable that what HV vehicles were recorded did not include a single heavy truck.

In summary, the main characteristic of Sharp Street traffic is that there are very few trucks and almost no large trucks (eg semi-trailers).

## 2.2 Project Traffic

The impacts of project traffic are shown in Figures 4 and 5 which are excerpts from Annexure D Construction traffic volumes of the Snowy 2.0 Main Works Traffic and Transport Assessment.

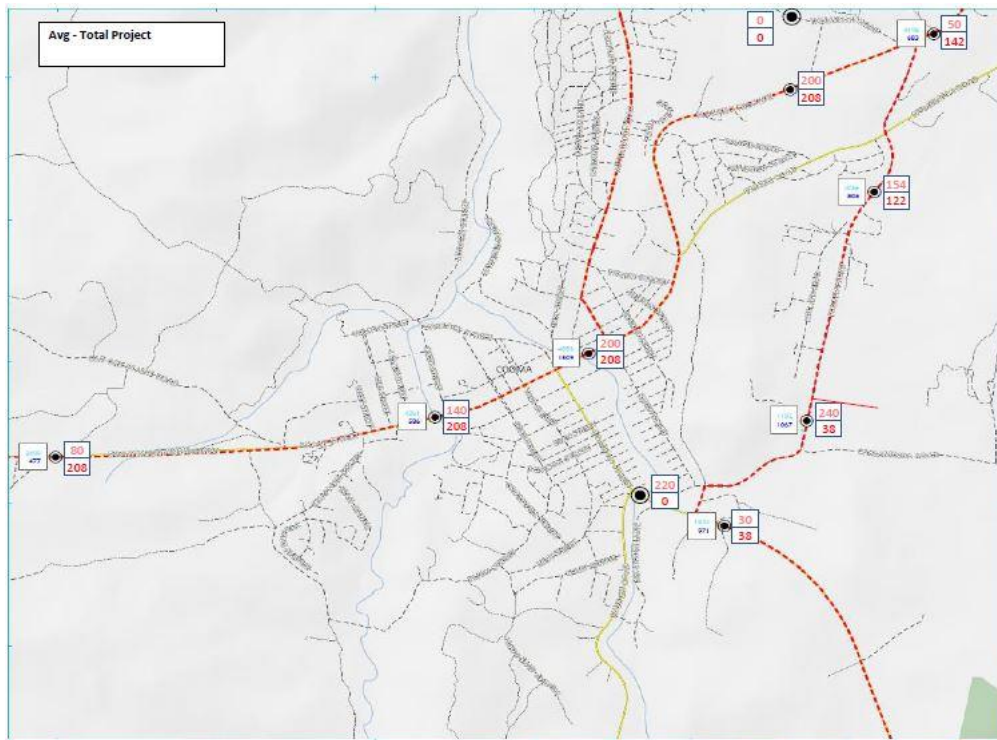


Fig 4 - Average Total Project Traffic from Annexure D Construction traffic volumes of the Snowy 2.0 Main Works Traffic and Transport Assessment

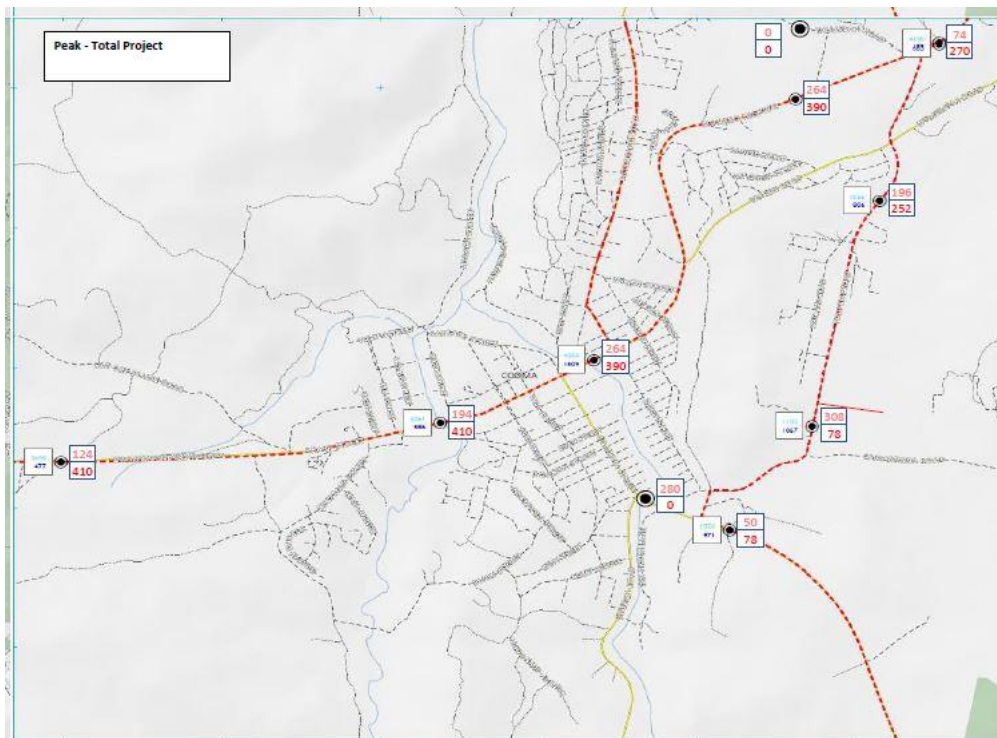


Fig 5 - Peak Total Project Traffic from Annexure D Construction traffic volumes of the Snowy 2.0 Main Works Traffic and Transport Assessment

Figures 4 and 5 show the average daily project traffic along Sharp Street will include 208 heavy vehicles and the peak daily traffic will include 390 heavy vehicles. These are one-way movements – almost all heavy vehicles will have a return journey. In total, therefore, Sharp Street will have to cope with over 400 daily heavy vehicle movements on average across the project and almost 800 daily heavy vehicle movements at the peak of the project.

The traffic assessment notes approximately 20% of project traffic would be at night. Taking 80% of the traffic and based on 10 hours of daytime, at average times, there would be over 30 heavy vehicles along Sharp Street every hour. At peak times, 60 heavy vehicles.

**THAT MEANS EVERY TWO MINUTES ON AVERAGE, AND EVERY MINUTE AT PEAK TIMES, THERE WILL BE A HEAVY VEHICLE ALONG SHARP STREET. CURRENTLY, THERE ARE ALMOST NO HEAVY VEHICLES.**

This is a huge difference to the environment, amenity and safety of Sharp Street.

### 2.3 Characteristics of Project Heavy Vehicles

The traffic assessment does not explain the characteristics of the project heavy vehicles or construction traffic.

What can be assumed is that heavy vehicles heading towards the Snowy Mountains will be heavily loaded. And given that a significant part of the heavy vehicle traffic along Sharp Street will be carrying tunnel segments, a large proportion of the heavy vehicles will be semi-trailer or larger configuration.

This means project heavy vehicles will be large and ‘take up’ the road. They will be heavily laden. They will be noisy. They are not ‘nimble and responsive’ like a car or light vehicle, they take time to slow down to stop and they take time to start moving. They must travel very slowly along Sharp Street – they must be able to stop if someone reverses out of a car parking space in front of them.

At the roundabouts, large heavy vehicles take up the space of three cars. They must move through a roundabout very slowly. Their movement will be severely impacted if someone reverses out of a parking space immediately adjacent to the roundabout.

Heavy vehicles will not travel in a metronomic manner – they will not be evenly spaced every minute or two. Heavy vehicles will bunch up and form platoons as they travel. There will frequently be two vehicles in a row, often three vehicles in a row and maybe more. This will happen in both directions at the same time.

**THE ‘COMMUNITY MEETING PLACE’, THE CAFÉ AMBIENCE, THE GENERAL ENVIRONMENT, THE AMENITY AND ESPECIALLY THE SAFETY OF SHARP STREET WILL BE SEVERELY IMPACTED.**

### 2.4 EIS Traffic Analysis

The Snowy 2.0 Main Works Traffic and Transport Assessment does not list Sharp Street as a key road network section. Yet Cooma is the centre of the Monaro region and the largest town directly affected by the Snowy 2.0 project.

The traffic assessment sets out baseline average daily traffic volumes for the Cooma area in Annexure A Existing Traffic Data, shown in Figure 6.



## Baseline average daily traffic numbers – Cooma and Polo Flat



Fig 6 – Baseline average daily traffic for Cooma area from Annexure A Existing traffic data of the Snowy 2.0 Main Works Traffic and Transport Assessment

Figure 7 shows the average daily traffic volumes from the RMS permanent counter on the Monaro Highway, 400m east of the Polo Flat intersection.

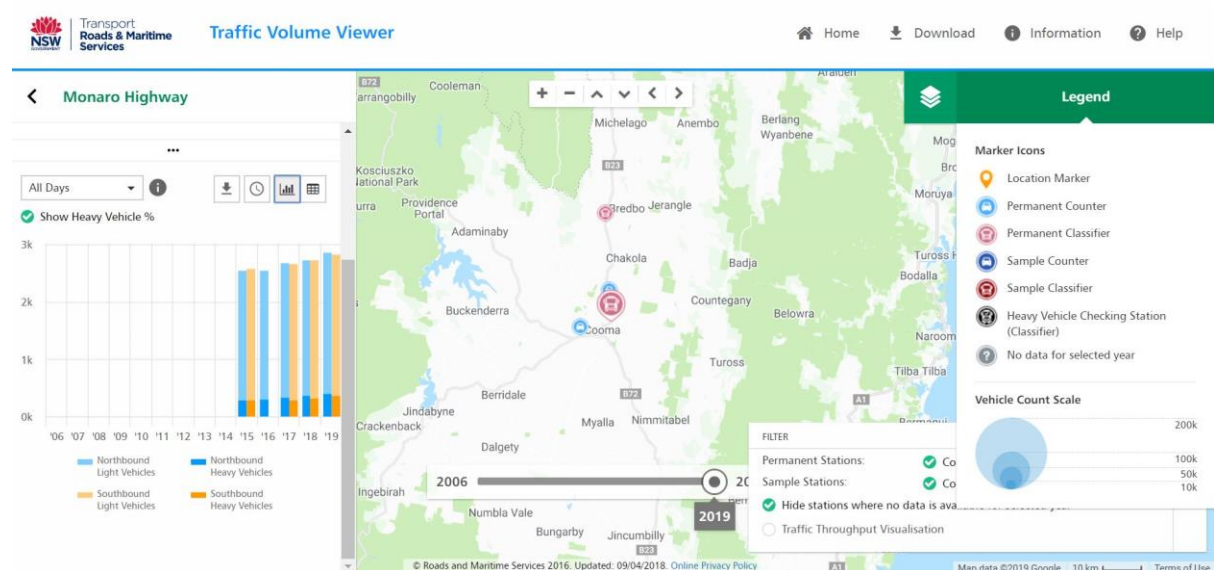


Fig 7 – RMS average daily traffic count on Monaro Highway, 400m east of Polo Flat Road

The RMS average daily traffic count for 2019 is 5704 total vehicles which includes 790 heavy vehicles.

The EIS baseline average daily traffic volumes are clearly inconsistent with the volume measured at the RMS permanent counter. In particular, the EIS shows 1509 heavy vehicles per day on Sharp Street on the north eastern approach into Cooma and 586 heavy vehicles per day on the south western approach to Cooma. Assuming the majority of 1509 vehicles travel across 10 hours of the day, the hourly volume of heavy vehicles on Sharp Street is 150, or a heavy vehicle less than every 30 seconds across a whole day. This is not correct and calls into question conclusions reached in the traffic assessment.

The actual volume of heavy vehicle traffic on Sharp Street is light. Figure 3, peak hour traffic data at the Sharp Street/Vale Street intersection from the traffic assessment, shows just four heavy vehicles on Sharp Street across a whole hour. This is realistic.

The intersection data in the assessment demonstrates that Sharp Street currently has effectively no heavy truck traffic. This is critical, this is the baseline.

The assessment shows that Sharp Street will be subjected to project heavy vehicle traffic up to a heavy vehicle **EVERY MINUTE** at peak construction time.

Yet the assessment does not have a specific analysis of Sharp Street. It does not analyse Sharp Street for what it is - effectively an aisle through a car park. It does not analyse what will happen with platooning of heavy vehicles.

**WHAT DOES THIS MEAN? TRAFFIC CONGESTION, QUEUES AND DELAYS ON SHARP STREET (AND BOMBALA AND VALE STREETS), WILL BE MORE SEVERE THAN PROJECTED.**

## 2.5 Road Safety

Sharp Street will have to cope with over 400 daily heavy vehicle movements on average across the project and almost 800 daily heavy vehicle movements at the peak of the project. Sharp Street is effectively a main car park with a through aisle for traffic. Current traffic has almost no heavy vehicles compared to the project traffic. Pedestrian visibility and driver visibility (reversing from car-parking space) is currently relatively good because traffic is all light vehicle. That visibility will reduce dramatically with heavy vehicle frequency in both directions blocking lines of sight.

The road safety audit in the Snowy 2.0 Main Works Traffic and Transport Assessment notes:

*'Along Sharp Street there is angled parking. This parking geometry means that vehicles exiting their park need to creep out to improve their sight distance. Whilst cars are reversing out of their spot, there is an opportunity for rear-end crashes to occur with the through traffic.'*

It then states the likelihood of a crash is 'improbable', the likely severity is 'minor' and the resulting level of risk is 'low'. This is refuted. The likelihood of a crash is 'probable - once or more per year (but less than once a week)', the likely severity is 'minor' and the level of risk is 'high'.

The road safety audit also notes:

*'The strip shopping centre environment increases the likelihood of pedestrian jay-walking. A crash*



*involving a pedestrian and fully-laden Heavy Vehicle has the potential to result in serious/fatal outcomes.'*

It then states the likelihood of a crash is 'improbable', the likely severity is 'serious' and the resulting level of risk is 'medium'. This is refuted. The likelihood of a crash is 'probable - once or more per year (but less than once a week)', the likely severity is 'serious' and the level of risk is 'intolerable'.

## **THE SAFETY OF ROAD USERS AND PEDESTRIANS IN SHARP STREET WILL RISE TO HIGH AND INTOLERABLE LEVELS.**

### **2.6 Sharp Street Pavement**

As described in previous sections, Sharp Street in Cooma currently has negligible heavy vehicle traffic. Light vehicles have minimal impact on pavement structure.

The project will bring almost 400 daily heavy vehicle movements to Sharp Street, and 800 daily heavy vehicle movements at peak. This level of traffic loading will put the pavement structure at risk of damage. Figure 8 shows existing pavement distress – pavement failures are in fact almost a certainty.



*Fig 8 - Sharp Street showing existing pavement distress.*

Pavement damage and repair work will add to congestion in Sharp Street and further reduce the environment and amenity of Sharp Street.

### **2.7 Traffic Noise**

Cooma is a country town that does not lie on a major highway. Cooma is a quiet place. It lies in a bowl at the junction of Cooma and Cooma Back Creeks.

Cooma has a very low background noise level in daytime such that an uncommon event like a heavy semi-trailer moving along the main street can be heard a kilometre away or a heavy semi-trailer driving up the Mt Gladstone hill on the Snowy Mountains Highway can be heard over 3 kilometres away.

Cooma is almost completely silent at night-time. The occasional and isolated heavy vehicles can clearly be heard on the sale yards hill on the Monaro Highway, the Mt Gladstone hill on the Snowy Mountains Highway and along Sharp Street over much of town. Another example, cattle lowing in the sale yards can be clearly heard over much of the town.

These examples typify Cooma's current noise profile.

### **INTRODUCTION OF SNOWY 2.0 WILL MEAN A MAJOR, DETRIMENTAL CHANGE IN NOISE PROFILE FOR THE PEOPLE OF COOMA.**

Sharp Street and the Mt Gladstone hill on the Snowy Mountains Highway will carry over 400 daily heavy vehicle movements on average across the project and almost 800 daily heavy vehicle movements at the peak of the project.

The traffic assessment notes approximately 20% of project traffic would be at night.

Taking 80% of the traffic and based on 10 hours of daytime, at average times, there would be over 30 heavy vehicles along Sharp Street and the Mt Gladstone hill on the Snowy Mountains Highway every hour. At peak times, 60 heavy vehicles. Heavy vehicles every two minutes or every minute. To all intensive purposes, there will be continual heavy traffic noise where there is currently minimal daytime heavy traffic noise.

At night-time, 20% of the traffic is estimated meaning heavy vehicles every eight minutes on average and every four minutes at peak times.

Heavy vehicles either have to pull loads up the Mt Gladstone hill or brake coming down to slow to the 60 kph limit. In Sharp St, heavy vehicles have to change gears, brake and accelerate. They will always be noisy.

Day times in Cooma are relatively active and there is wind and other environmental noise. Night times are usually completely quiet. Background traffic noise in daytime is one thing, background traffic noise at night-time will be disastrously high compared to current levels.

Traffic noise for people, cafes and local businesses in Sharp Street, compared to current levels, will similarly be disastrously high.

### **NOISE WILL COME FROM HEAVY VEHICLE TRAFFIC THAT IS UP TO A HUNDRED FOLD INCREASE ON CURRENT LEVELS.**

## 3 Snowy Mountains Highway

### 3.1 Introduction

Comments in the following sections relate to that part of the Snowy Mountains Highway running from the intersection with Kosciuszko Road at the Four Mile to Adaminaby and the Kosciuszko National Park boundary.

The Snowy Mountains Highway from the Four Mile to Adaminaby and the park boundary is a 'country road'. By that is meant that it is not a highway to the same standard (road geometry, road width, overtaking lanes and pavement strength) as the Monaro Highway between Cooma and Canberra. It is characterised by long hills, sharp curves, narrower road surface and weaker pavement. It has lower sight distances. Overtaking is difficult on much of the section.

Driving between the Four Mile and Adaminaby and the park boundary, it is unusual to see more than one or two oncoming heavy vehicles and uncommon to have to overtake a heavy vehicle. It can take considerable time to get an overtaking opportunity.

### 3.2 Project Traffic

The impacts of project traffic are shown in Figures 9 and 10 which are excerpts from Annexure D Construction traffic volumes of the Snowy 2.0 Main Works Traffic and Transport Assessment.

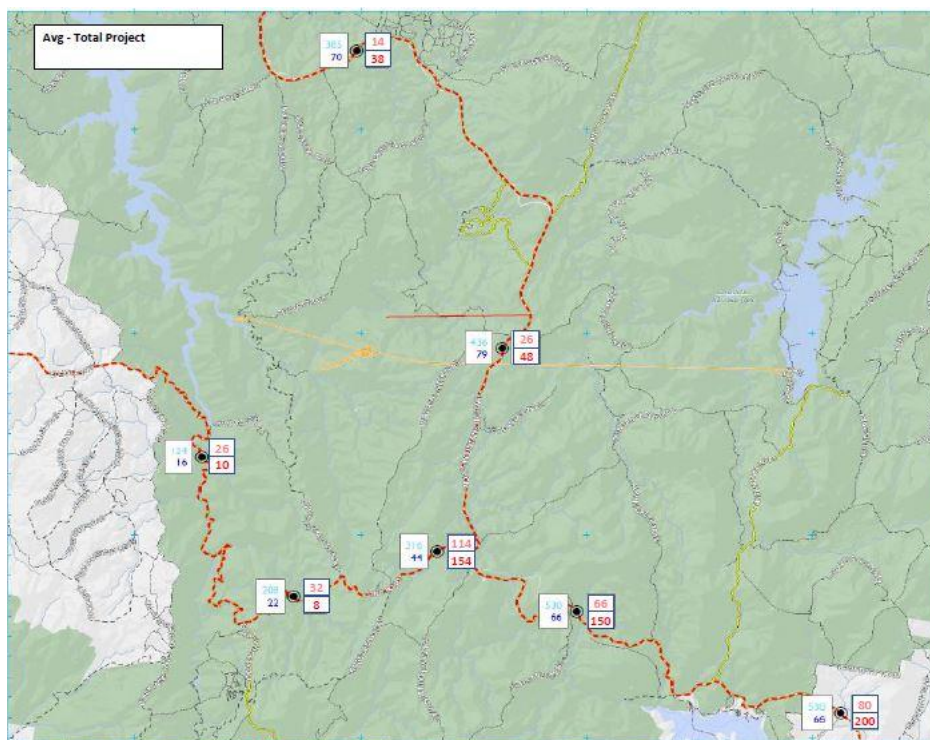
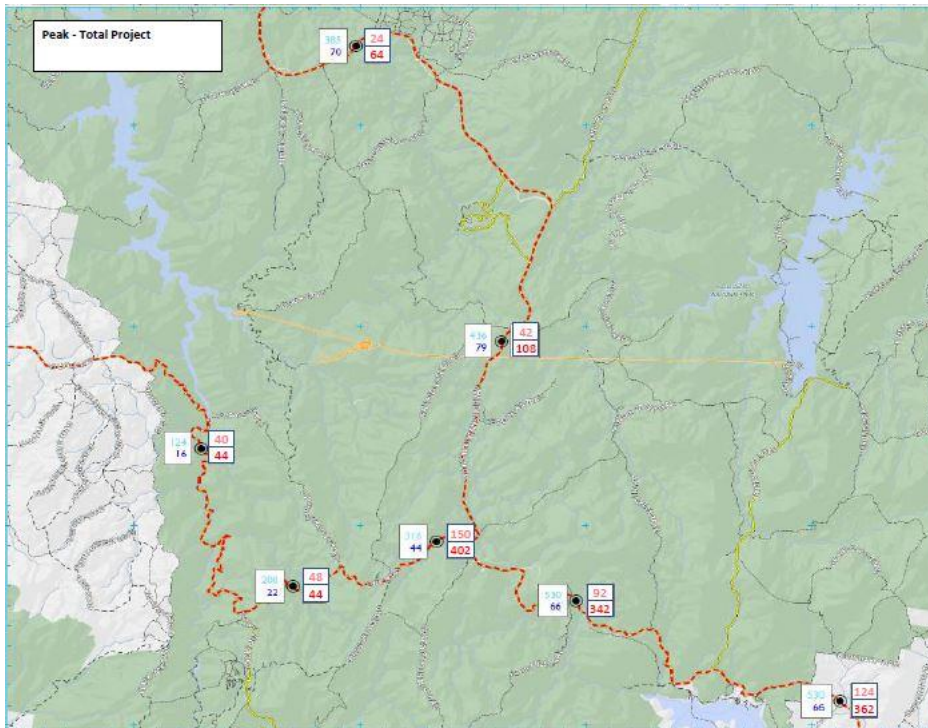


Fig 9 - Average Total Project Traffic from Annexure D Construction traffic volumes of the Snowy 2.0 Main Works Traffic and Transport Assessment





*Fig 10 - Peak Total Project Traffic from Annexure D Construction traffic volumes of the Snowy 2.0 Main Works Traffic and Transport Assessment*

These show the average daily project traffic along the Snowy Mountains Highway before reaching the Kosciuszko National Park boundary will include 200 heavy vehicles and the peak daily traffic will include 362 heavy vehicles. These are one-way movements – almost all heavy vehicles will have a return journey. In total, therefore, the Snowy Mountains Highway will have to cope with 400 daily heavy vehicle movements on average across the project and 720 daily heavy vehicle movements at the peak of the project.

The traffic assessment notes approximately 20% of project traffic would be at night. Taking 80% of the traffic and based on 10 hours of daytime, at average times, there would be over 30 heavy vehicles along the Snowy Mountains Highway every hour. At peak times, 60 heavy vehicles.

**THIS MEANS EVERY TWO MINUTES ON AVERAGE, AND EVERY MINUTE AT PEAK TIMES, THERE WILL BE A HEAVY VEHICLE ALONG THE SNOWY MOUNTAINS HIGHWAY. CURRENTLY, THERE ARE ALMOST NO HEAVY VEHICLES.**

This is a huge difference to the traffic characteristic of the 58 km long section of the Snowy Mountains Highway between the Four Mile (Kosciuszko Road intersection) and the Kosciuszko National Park boundary.

Heavy vehicles will not travel in a metronomic manner – they will not be evenly spaced every minute or two. Heavy vehicles will bunch up and form platoons as they travel. There will frequently be two vehicles in a row, often three vehicles in a row and maybe more. This will happen in both directions at the same time.

Putting it succinctly, it will become extremely difficult to impossible to overtake along the 58 km length. The construction of overtaking lanes would provide only temporary relief because the majority of the highway is of low geometric standard and difficult to overtake under current circumstances. With high volumes of heavy traffic in both directions, safe overtaking will become

near to impossible. Driver frustration will become a significant problem. Drivers will take serious risks to overtake.

As an example, one location requiring an overtaking lane would be Wambrook Hill. Heavy traffic will slow dramatically on the main hill and remain slow as it crests to Middlingbank Road. The full length is 10km from Wambrook Creek to Middlingbank Road. The overtaking problem is not only on the uphill, the same will apply on the downhill.

**TRAVEL TIMES ON THE SNOWY MOUNTAINS HIGHWAY BETWEEN COOMA AND ADAMINABY WILL INCREASE SIGNIFICANTLY COMPARED TO THE PRESENT.**

As another example, the Adaminaby school bus currently 'enjoys a quiet drive' with child pick-ups along the Snowy Mountains Highway to Cooma. The project will mean a stressful drive, not only with heavy traffic moving in the buses direction, but especially with a continuous stream of oncoming heavy traffic.

The road safety audit in the Snowy 2.0 Main Works Traffic and Transport Assessment notes:

*'Along the haul route, substandard horizontal and vertical geometry exists. .... The winding nature of this route means there is horizontal and vertical geometry that restricts sight lines. .... There is an approximately 75km length along SMH where there are no dedicated overtaking lanes. This significant length increases the likelihood of vehicles overtaking by using the oncoming traffic lane. Overtaking in this manner increases the likelihood of head-on collisions.'*

It then states the likelihood of a crash is 'improbable', the likely severity is 'serious' and the resulting level of risk is 'medium'. This is refuted. The likelihood of a crash is 'probable - once or more per year (but less than once a week)', the likely severity is 'serious' and the level of risk is 'intolerable'.

**ROAD SAFETY RISK ON THE SNOWY MOUNTAINS HIGHWAY BETWEEN COOMA AND ADAMINABY WILL DETERIORATE SIGNIFICANTLY, RISING TO INTOLERABLE LEVELS.**

### **3.3 Pavement**

The Snowy Mountains Highway from the Four Mile to Adaminaby and the park boundary is a 'country road'. Much of its length has been widened from a very narrow pavement to the current, but still, relatively narrow pavement. The pavement has been built for no more than the current level of traffic and specifically for the current level of low volume heavy traffic.

With the project requiring the Snowy Mountains Highway to carry 400 daily heavy vehicle movements on average and 720 daily heavy vehicle movements at the peak of the project, the existing pavement will simply not survive. It will fail, and very quickly, if the construction coincides with any wet weather periods.

Major repair work undertaken during the project will simply exacerbate the traffic conditions and significantly increase travel times. It will frustrate drivers of cars and light vehicles even further and frustration leads to risky driving.

## 4 Traffic Alternatives

Alternate routes for project heavy vehicles to avoid Sharp Street in Cooma are few. Within Cooma, heavy vehicles already use Commissioner Street to avoid Sharp Street. Commissioner Street runs parallel to Sharp Street, one block to the east.



Fig 11 - Heavy truck using Commissioner Street to avoid Sharp Street

Figure 11 shows a heavy truck using Commissioner St, exiting the intersection with Vale Street. Commissioner Street poses much the same issues for heavy truck usage as does Sharp Street and has particular road safety issues. It again features angle car parking along its length. It fronts Cooma Public School with drop off and pick up of children. The intersection with Vale Street is a locus for community activity in Cooma. On one corner is Cooma Public School. On another corner is the community library. Less the 50 metres from the corner is the main entrance into the Cooma Ex-Servicemens Club. Adjacent to and opposite the Ex-Servicemens Club on Vale Street is St Patricks infant and primary schools. The intersection with Vale Street is a tight layout with landscaping at each corner and pedestrian crossings on all four legs.

Commissioner Street, like Sharp Street, is not suited to the project frequency of heavy vehicle travel.

The EIS for the proposed Snowy 2.0 Segment Factory makes note that *'an alternative route for heavy vehicles between the proposed segment factory and the Snowy 2.0 construction sites within KNP which bypasses Cooma has been investigated by Snowy Hydro in consultation with SMRC and the State Government. This route includes Yallakool, Mittagang, Shannons Flat and Bobeyan roads. Use of this alternative route by heavy vehicles generated by the proposed segment factory would likely require upgrade works including:*

- *minimal road widening where required;*
- *the sealing of Shannons Flat and Bobeyan roads; and*
- *upgrades to the intersections of Bobeyan Road and Snowy Mountains Highway, Yallakool Road/Polo Flat Road and Monaro Highway.'*

It is agreed that this is a viable alternative and it is recommended. The construction period for Snowy 2.0 is said to be 3.5 years and is much more likely to be a longer than shorter timeframe. Avoiding



the severe impacts of heavy vehicle traffic on Cooma for 3.5 years, perhaps 4 years, perhaps longer and removing the intolerable risk of road accidents involving project heavy vehicles in Sharp Street makes this essential.

As noted in earlier sections of this submission, there are significant costs of road upgrades and repairs to make the Sharp Street/Snowy Mountains Highway route safe and trafficable for road users. This can be allocated to upgrade the Yallakool, Mittagang, Shannons Flat and Bobeyan roads route.

In regard to either route, it must be noted that as soon as the project is completed and Snowy 2.0 moves into normal operation, traffic on both routes will revert to the existing regime – low volume country highway and low volume rural road with minimal heavy vehicle traffic. The costs of enabling the heavy vehicle project traffic to access the project site are essentially project costs. The only exception to this may be Bobeyan Road where improvement is already slated – but this is an improvement that mainly benefits ACT residents to access the Snowy Mountains.