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Integrated Transport Assessment
prepared for

SOL QUARRIES LIMITED

**81 – 83 Conservators Road, Yaldhurst,
Christchurch**

February 2019



Integrated Transport Assessment
prepared for

Sol Quarries Limited

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Introduction

1. SOL Quarries Ltd (SOL) has commissioned Novo Group to prepare an Integrated Transport Assessment (ITA) for the expansion of their quarry at 81 – 83 Conservators Road in Yaldhurst, Christchurch.
2. This report provides an assessment of the transport aspects of the proposed development. It also describes the transport environment in the vicinity of the site, describes the transport related components of the proposal and identifies compliance issues with the transport provisions in the District Plan. It has been prepared broadly in accordance with the Integrated Transportation Assessment Guidelines specified in New Zealand Transport Agency Research report 422, November 2010.
3. SOL has resource consent to extract material at 81 – 83 Conservators Road. This approval includes a range of transport related conditions that will be set out later in this report. Those conditions have been (and continue to be) met. The proposal is to extend the quarry site to enable further extraction of material. Key from a transport perspective is that the expansion will not lead to an increase in the daily traffic movements compared to the consented development, which is a maximum of 300 heavy vehicle movements per day. Similarly, the vehicle access arrangements and truck routing requirements will be consistent with the consented activity.
4. The existing and proposed expansion (Stages 1 to 3) sites are illustrated in **Figure 1**.



Figure 1: Site Location



Transport Environment

Road Network

Conservators Road

5. Conservators Road is classified as a rural *Local Road* in the District Plan road hierarchy. These types of road are intended to provide property access. This road is approximately 6.2m wide and has wide grass berms. The speed limit in the vicinity of the site is 80km/hr, although there are two 90-degree bends between the site and the intersection with Savills Road that mean the actual speeds are anticipated to be notably less than 80km/hr past the site access.
6. Traffic volumes on Conservators Road are not readily available, although the NZ Transport Agency CAS¹ database suggests that the traffic volume is in the order of 112 vehicles per day.

Savills Road

7. Savills Road is also classified as a rural *Local Road* in the District Plan road hierarchy. This road has a sealed width of 7.2m wide and a formed width of 8.2m, with the widening being undertaken by SOL as part of the consented development. The speed limit in the vicinity of the site is 80km/hr. Traffic volumes are not available on this section, although they have been estimated as approximately 350 vehicles per day based on the adjacent road volumes.

Guys Road

8. Guys Road is also classified as a *Local Road* in the District Plan road hierarchy. This road has a sealed width of 7.2m wide and a formed width of 8.2m, with the widening being undertaken by SOL as part of the consented development. The speed limit in the vicinity of the site is 80km/hr. Christchurch City Council traffic counts undertaken in 2016 suggest the existing volume on this section of road is approximately 357 vehicles per day.
9. In addition to the widening described above, the Guys Road / Savills Road intersection has been widened to accommodate the vehicle tracking of an *AustRoads Type 10* vehicle. This was a requirement of the consented development.

Ryans Road

10. Ryans Road is classified as a *Local Road* in the District Plan road hierarchy. This road has a sealed width of 7.2m wide and a formed width of 8.2m, with the widening being undertaken by SOL as part of the consented development. The speed limit on this road is 60km/hr between Guys Road and Coringa Road, then rising to 80km/hr to the intersection with Pound Road. Christchurch City Council traffic counts undertaken in 2016 suggest the existing volume on this section of road are approximately 375 vehicles per day.

¹ Crash Analysis System.



Crash History

11. The NZ Transport Agency Crash Analysis System (CAS) has been reviewed to identify crashes that have been reported on the surrounding road network (including the intersections with Pound Road) between 2013 and 2018. The output from the CAS database is included in **Figure 2** and **Appendix 1**.

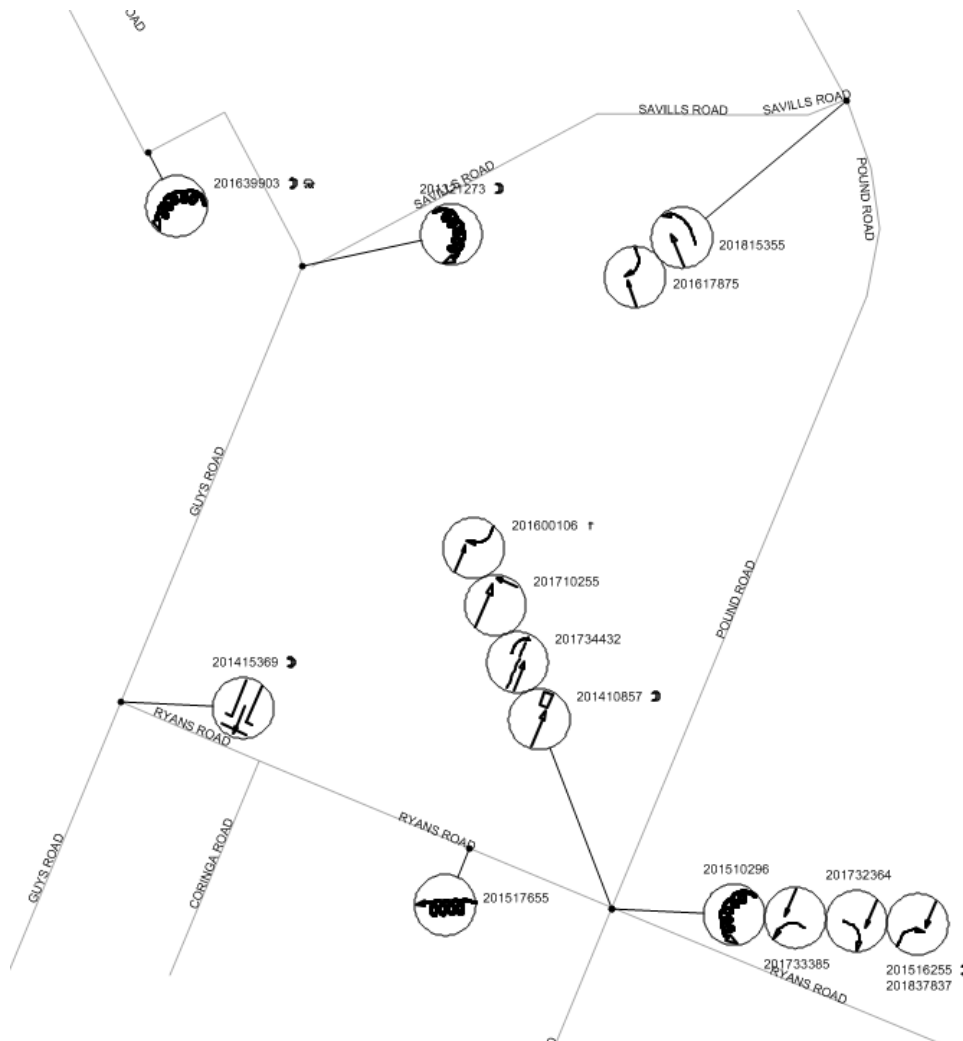


Figure 2: NZTA CAS Collision Diagram

12. The review of the crash data highlighted 15 report crashes within the selected criteria. These crashes are summarised as follows:



Table 1: NZTA Crash Data Summary

Crash Details	Commentary	Severity
Pound Rd / Ryans Rd Intersection	Failure to give-way, where a car turning right into Ryans Road (west) failed to give-way to a northbound motorcycle on Pound Road.	1 Fatal crash
	Failure to give-way, where a vehicle turning left out of Ryans Road (east) failed to give-way to a southbound vehicle on Pound Road.	1 Non-injury crash
	Failure to give-way, where a vehicle turning right into Ryans Road (east) failed to give-way to a southbound vehicle on Pound Road.	1 Serious injury crash plus 1 non-injury crash
	Failure to give-way, where a vehicle travelling through Ryans Road (east to west) failed to give-way to a northbound vehicle on Pound Road.	1 Minor injury crash
	Failure to give-way, where a vehicle turning right out of Ryans Road (west) failed to give-way to a southbound vehicle on Pound Road.	1 Non-injury crash
	Southbound motorcycle lost control on loose material at the intersection when turning left.	1 Minor injury crash
	Northbound car hit a vehicle parked at the intersection.	1 Minor injury crash
	Northbound van hit a car that was turning right into Ryans Road.	1 Non-injury crash
Pound Rd / Savills Rd Intersection	A car turning right into Savills Road failed to give-way to a northbound vehicle.	1 Serious injury crash
	A northbound motorcyclist was sideswiped by a northbound van as the motorcyclist misjudged the van driver's intentions.	1 Serious injury crash
Guys Rd / Savills Rd Intersection	Southbound vehicle lost control. Alcohol and showing-off were identified as contributing factors.	1 Minor injury crash
Guys Rd / Ryans Rd Intersection	Westbound vehicle on Ryans Road failed to notice the end of the road at the intersection.	1 Minor injury crash
Conservators Rd Mid-Block	Southbound vehicle lost control and the northern 90-degree bend.	1 Non-injury crash
Ryans Rd Mid-Block	A westbound car lost control whilst suddenly swerving to avoid an animal.	1 Serious injury crash

13. The above crash summary identifies that the 15 reported crashes includes one fatality, four serious injury crashes plus five minor injury crashes. The majority of crashes occurred at the Pound Road / Ryans Road intersection. The safety record of this intersection is a known issue to Council and improvements are budgeted in the 2018 Long Term Plan for 2024 to 2026. The safety record of this intersection as it relates to the consented and proposed activity will be discussed later in this report.
14. The remainder of crashes are not considered to represent a specific road safety concern with regards to traffic generated by the quarrying activity.



Existing Consent

15. Resource consent has been approved for the Stage 1 quarry at the application site. The approval has light vehicle access only from Conservators Road, with all heavy vehicle access coming from Guys Road.
16. This approval included a suite of conditions and the transport conditions are as follows (using the number for conditions from RMA/2018/505):

34. The activity shall be limited to a maximum of 300 heavy vehicle movements per day and 30 light vehicle movements per day.

35. All heavy vehicles exiting the site between the hours of 7:00am until 9:00am and 4:00pm until 6:00pm shall not turn right and shall turn left to exit from the site onto Guys Road. The vehicle access shall be designed with control gates that are operated between these periods to ensure that heavy vehicles turn left when exiting the site. The vehicle access shall be constructed in accordance with the attached design plan drafted by GHD Ltd.

Signage shall be erected at the weighbridge and at the Heavy Vehicle exit reinforcing the requirement to turn left on to Guys Road during these hours. This signage must either be in accordance with the City Plan rules for signage or a separate resource consent for the signage must be obtained.

The consent holder shall maintain records including a log book of all vehicles exiting the site and weighbridge records. This log book and weighbridge records shall be provided to Council's Compliance and Investigations Team on a bi-monthly basis for the first 6 months and on request thereafter.

36. Heavy vehicular access to the site shall be via the proposed new access road from Guys Road as shown in plan RMA92028479, page 3 of 7 within the approved consent documents.

37. Prior to the activity commencing on the site, localised widening of the Savills Road/ Guys Road intersection shall be undertaken to accommodate the turning geometry of an Austroads 'Type 10' vehicle. An engineering design of the proposed physical works shall be submitted and agreed with the Council.

38. Widening of Ryans Road between the Guys/Ryans intersection and the Ryans/Pound intersection, to a sealed width of 7.2m with a formation width of 8.2m (2 lanes of 3.6m width and a 0.5m compacted edge), shall be undertaken in accordance with the Council's infrastructure design standards, prior to commencement of any quarrying activity on the site.

39. Widening of Guys Road between the Guys/Ryans intersection and the site accessway, to a sealed width of 7.2m with a formation width of 8.2m (2 lanes of 3.6m width and a 0.5m compacted edge), shall be undertaken in accordance with the Council's infrastructure design standards, prior to commencement of any quarrying activity on the site.

40. Widening of Guys Road between the Guys/Savills intersection and the site accessway, to a sealed width of 7.2m with a formation width of 8.2m (2 lanes of 3.6m width and a 0.5m compacted edge), shall be undertaken in accordance with the Council's infrastructure design standards, prior to commencement of any quarrying activity on the site.



41. *Widening of Savills Road between the Guys/Savills intersection and the Savills/Pound intersection, to a sealed width of 7.2m with a formation width of 8.2m (2 lanes of 3.6m width and a 0.5m compacted edge), shall be undertaken in accordance with the Council's infrastructure design standards, prior to commencement of any quarrying activity on the site.*
 42. *Site enabling works may commence prior to the road widening works being undertaken, but these works shall be limited to the relocation of the waterway, formation of the bunds and remediation of the contaminated portion of the site. These works shall be undertaken over a maximum period of 8 weeks and shall not generate more than 24 vehicle movements per day.*
 43. *The gateway shall be set back from the edge of the sealed road to enable large vehicles to stop clear of the carriageway.*
 44. *The access is to be sealed into the site for a minimum distance of 100 metres and shall be a minimum width of 6m.*
 45. *There shall be no sales access to the site from Conservators Road. The access via Conservators Road shall be for light vehicles associated with staff only.*
 46. *Traffic monitoring shall be required to be undertaken on an annual basis. Monitoring shall be undertaken using 5 count locations in accordance with the supplied Traffic Count methodology, using Austroads or NZTA vehicle class. The 5 required locations are specified in Figure 1 attached and shall be monitored simultaneously. Monitoring shall take place for 7 consecutive days and data provided to Council's enforcement team within 4 weeks of completion.*
17. It is understood that all physical works required to Council's road network have been completed and the defects period on these works has now ended. The Guys Road access has been constructed as per condition 36, as is indicated in **Figure 3**. The site access road has been sealed for a length of 250m, which is 150m greater than that required by condition 44.

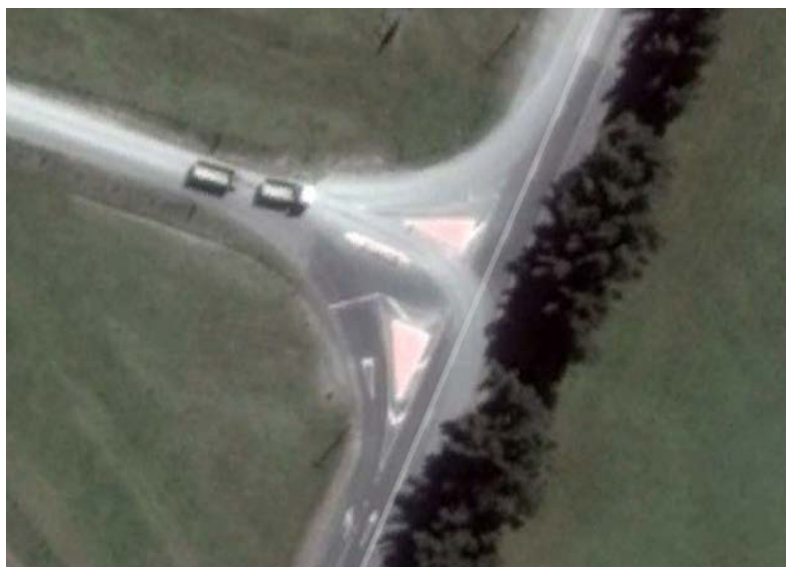


Figure 3: Guys Road Site Access



Proposed Activity

18. The proposal is to expand the quarry site to access additional aggregate. The details of the activity will be as per the consented activity, albeit within an expanded site area. The existing buildings on site have been estimated as being approximately 465m² GFA².
19. The traffic generation will remain as a maximum of 300 heavy vehicle movements per day and 30 light vehicle movements per day, as per condition 34 of the consented activity. Traffic count data from the existing activity (between January and October 2018) has been provided by the applicant. This indicates that the existing activity is operating within the limits of the consent. Furthermore, it indicates a weekday average of 206 heavy vehicle movements per day and 17 light vehicle movements per day. The maximums observed were 300 heavy vehicle movements per day (occurring three times) and 28 light vehicle movements per day (occurring three times).
20. The vehicle routing required by condition 35 (closing the right turn exit from Guys Road between 07:00 to 09:00 and 16:00 to 18:00) will remain. Equally, all heavy vehicle access will be via the Guys Road access.
21. The physical works required by conditions 37 to 41 have all been undertaken.

Parking and Loading

22. The site includes large metalled areas that accommodate car parking and loading. Whilst none of the parking or loading is marked, there remains ample space to accommodate these vehicles on-site.

Access

23. Light vehicles will use the Conservators Road access, which is a metalled accessway approximately 4.0m wide and 800m long. This access is approximately 207m north of the 90-degree bend in the road and good visibility is provided. This access is immediately adjacent to the access that serves the Ready Lawn site at 93 Conservators Road.
24. Heavy vehicles will continue to only use the Guys Road access. This access is approximately 264m north of the Ryans Road / Guys Road intersection and there are no other accesses in the vicinity. This access also has good visibility to oncoming traffic on Guys Road.

District Plan Compliance Assessment

25. The site is zoned *Rural Waimakariri* in the District Plan and the proposed activity is understood to be Discretionary in the zone. An assessment of compliance against the transport rules of the District Plan has been undertaken and is contained in **Appendix 2. Table 2** summarises the non-compliances identified.

² Gross Floor Area.



Table 2: District Plan Transport Non-Compliances

Rule	Nature of Non-Compliance
<p>7.4.3.1 Minimum number & dimensions of car parks required At least the minimum number of car parking spaces in Table 7.5.1.1 in Appendix 7.5.1 shall be provided on the same site as the activity. The minimum number of car parking spaces required may be reduced by the relevant amount if the activity qualifies for any of the permitted reductions in Appendix 7.5.14.</p>	<p>The site is required to provide 1 visitor plus 6 staff spaces. These are able to be accommodated, although staff car parking will not be marked.</p>
<p>7.4.3.1 Minimum number & dimensions of car parks required Car parking spaces shall be provided with the minimum dimensions in Table 7.5.1.3 in Appendix 7.5.1.</p>	<p>The proposed parking layout does not comply with the District Plan dimensions.</p>
<p>7.4.3.7 Access design Access shall be provided in accordance with Appendix 7.5.7.</p>	<p>The Conservators Road vehicle access is longer than 50m, has a formed width narrower than 5.5m and does not provide passing points. The width of the Guys Road access is greater than 9.0m at the road boundary. A dedicated pedestrian / cycle access is not provided.</p>
<p>7.4.3.7 Access design Queuing spaces shall be provided in accordance with Appendix 7.5.8.</p>	<p>A queue space of 6.0m is assumed to be required at the Conservators Road access, whereas no queue space is provided.</p>
<p>7.4.3.8 Vehicle crossings The minimum spacing to an adjacent vehicle crossing on the same side of the frontage road, shall be in accordance with Table 7.5.11.1 in Appendix 7.5.11.</p>	<p>There is an adjacent vehicle crossing on Conservators Road immediately adjacent to the site access.</p>
<p>7.4.3.10 High trip generators More than 50 vehicle trips per peak hour or 250 heavy vehicle trips per day (whichever is met first) 'Peak hour' are those hours between 15:00 and 19:00 hours on a weekday.</p>	<p>The proposed activity generates greater than 250 heavy vehicle movements per day and therefore requires a Basic ITA.</p>

Assessment of Effects

26. The Discretionary nature of the proposal means all transport matters are to be assessed. The key assessment matters are considered to be:
 - i. **Parking and loading:** The provision of sufficient usable car parking, cycle parking and loading;
 - ii. **Access arrangements:** The provision of safe and efficient site access; and
 - iii. **Wider network effects:** The transport effects of the proposed activity on the wider transport network.
27. The above, along with the specific matters outlined in **Table 2**, are discussed in turn below.



Parking and Loading

28. The site will provide ample metalled surfaces to accommodate car parking and loading on-site. The amount of metalled area is such that not marking car parking does not lead to inefficiencies that result in overspill to the surrounding road network. It is noted that the areas where activity occurs are some distance from the road network, so there is no incentive to park off-site.
29. The District Plan does not required cycle parking for quarry activities, so it is considered the cycle parking demand is negligible. That said, there is ample space in the existing shed / workshop to accommodate whatever cycle parking demand may occur.
30. Overall, the site is considered to be self-sufficient with regards to parking and loading with no adverse effects arising.

Access Arrangements

Conservators Road

31. The Conservators Road access accommodates the light vehicle movements to the site, which is a maximum of 30 vehicle movements per day. The passing volumes on Conservators Road are sufficiently low that this access operates safely and efficiently. There is also sufficient visibility out of the access to comply with the District Pan requirements.

Access Width and Queue Space

32. It is noted that this access is approximately 4.0m wide and there is no passing, either along the access or at the boundary. The traffic generation on this access is typically tidal, with arrivals as staff turn up to work and departures as they leave. Therefore, the potential for conflicts to occur is reasonably low. There is also ample space (grass berm) on both sides of the access for vehicles to pull over and avoid a conflict.

Pedesdtrian / Cycle Access

33. In addition, it has been assumed that the District Plan would require a dedicated pedestrian / cycle access because there may be more than nine parking spaces using this access. The site is located sufficiently far from main residential areas that walking and cycling trips are not anticipated. The access is straight and any pedestrians / cyclists would be observed by oncoming vehicles and conflicts avoided.

Seperation to Adjacent Accesses

34. The Conservators Road access is immediately adjacent to the access to the Ready Lawn site at 93 Conservators Road, where the District Plan requires a separation of 50m is required. The assessment matters associated with this non-compliance are:
 - i. Whether the landscaping adjacent to the road will be adversely affected by the location of the vehicle crossing.



- ii. Whether safety will be adversely affected by conflict between manoeuvring vehicles at the crossings.
35. The access is existing, so there will be no effects on the landscaping on the road corridor.
36. The safety of the road network is considered to be acceptable because of the low number of vehicles using the access, the low number of vehicles that access the Ready Lawn site and the low volumes on Conservators Road. Again, it is noted that this access arrangement is existing and the proposed traffic volumes are not altering. No adverse safety effects have been identified with regards to the existing access so it is considered to be able to continue to operate satisfactorily.

Guys Road Access

37. The Guys Road access accommodates the 300 heavy vehicle movements per day. This access has been constructed as per the consented development requirements and will not be altered by this proposal. The access has good visibility to Guys Road to operate safely. The passing volumes are sufficiently low that this access is considered to operate efficiently.

Access Width

38. The width of the Guys Road access has been identified as being greater than permitted by the District Plan. The width at the road boundary is approximately 40m, compared to a maximum permitted width of 9.0m. This width is provided to accommodate the access arrangement required by condition 36 of the existing consent, which allows for turning of heavy vehicles as well as the provision of raised islands to assist in meeting condition 35 (vehicle turning restrictions).
39. The key assessment matters with regard to this non-compliance are considered to be:
- i. Whether there are any adverse effects on the safety and amenity values of neighbouring properties and/or the function of the transport network; and
 - ii. Whether the safety of pedestrians, particularly the aged and people whose mobility is restricted, will be compromised by the length of time needed to cross a wider driveway.
40. The additional width is not anticipated to have adverse effects on the safety or function of the transport network. The additional width specifically accommodates the turning of vehicles to and from the site in a way that protects the safety and efficiency of the road network.
41. Although the access width will take longer to cross than an access that complies with the permitted maximum, this is considered to be acceptable. This part of the transport network is anticipated to have very few pedestrians, so the potential for these users to be affected is limited. Furthermore, it is considered highly unlikely that the elderly or the mobility impaired are crossing this access.
42. Overall, it is noted that this is an existing access that has been specifically designed to accommodate heavy vehicles. We are not aware of adverse safety issues regarding the existing use of this access. The proposal will retain the same traffic volumes as per the



existing activity, so the effects of the proposed quarry expansion are also considered to be acceptable.

Wider Network Effects

43. The assessment matters of the High Trip Generator rule have been adopted for the purpose of assessing the wider network effects of the proposed activity. These are set out and addressed in turn below.

Access and manoeuvring (safety and efficiency): *Whether the provision of access and on-site manoeuvring area associated with the activity, including vehicle loading and servicing deliveries, affects the safety, efficiency, accessibility (including for people whose mobility is restricted) of the site, and the transport network (including considering the road classification of the frontage road).*

44. The operation of the proposed accesses has been set out above and it is considered that they will continue to operate safely and efficiently. We are not aware of any safety or efficiency issues with the accesses to date and, given the proposed quarry expansion will not increase daily traffic volumes, it is considered that the accesses will continue to operate satisfactorily.

Design and Layout: *Whether the design and layout of the proposed activity maximises opportunities, to the extent practicable, for travel other than by private car, including providing safe and convenient access for travel by such modes.*

45. The site is reasonably remote from residential areas with sufficient density to make walking a viable transport option for the majority of staff. The site has sufficient space to accommodate cycle parking, should staff choose to cycle, but cycling is not anticipated to be a significant transport option given cyclists would need to use high speed rural roads to access the site.

46. It is also noted that the nature of the activity leads to large areas of metalled surface that can accommodate car parking. Given the nature and location of the activity, it is considered that the proposal includes sufficient measures to enable travel by modes other than single occupancy car.

Heavy vehicles: *For activities that will generate more than 250 heavy vehicle trips per day, whether there are any effects from these trips on the roading infrastructure.*

47. The consented development included a requirement for road widening in several locations. This widening has been undertaken. The proposed quarry expansion will not increase the daily traffic volumes generated by the activity, so it is considered that the heavy vehicles can be satisfactorily accommodated by the roading infrastructure.

48. It is noted that the Guys Road access includes requirements to close the right turn out of the site between 07:00 to 09:00 and 16:00 to 18:00. This has the effect of preventing heavy vehicles that are leaving the site from travelling to the Ryans Road / Pound Road intersection or Guys Road south of Ryans Road during these periods. This minimises the effects of the activity at the Ryans Road / Pound Road intersection.



49. SOL do not own trucks, so the material is quarried and then sold to companies that pick-up the material themselves. As such, SOL are not able to direct vehicles where they can travel on the surrounding road network. That said, the Quarry Management Plan does include a requirement for all drivers accessing the site to undergo an induction, which includes a requirement for SOL to deter drivers from using a route along Guys Road and School Road in order to minimise the effect on this community. This is as much as can be expected given the influence SOL can have on independent truck drivers.
50. Again, it is noted that the above is consistent with the consented activity and there will be no additional effects from the proposal on this basis. This is considered to be sufficient to minimise adverse effects of heavy vehicles.

Accessibility of the location: *Whether the proposed activity has demonstrated the accessibility of the site by a range of transport modes and whether the activity's location will minimise or reduce travel to and from the activity by private vehicles and encourage public and active transport use.*

51. The proposed activity is primarily accessible by car. Whilst it is possible for people to cycle or walk to the site, this is considered unlikely.
52. The key issue with regards to this assessment matter is that the quarries establish where there is material to be sourced. This is a fundamental driver of where quarries are located and differentiates quarries from typical land uses (such as housing, retail and offices). It is considered that the quarry location is acceptable from a transport perspective given this distinction.

Summary and Conclusion

Summary

53. SOL has resource consent to extract material at 81 – 83 Conservators Road. This approval includes a range of transport related conditions that have been set out in this report. Those conditions have been (and continue to be) met. The proposal is to extend the quarry site to enable further extraction of material. Key from a transport perspective is that the expansion will not lead to an increase in the daily traffic movements compared to the consented development, which is a maximum of 300 heavy vehicle movements per day.
54. The site will have sufficient area on-site to accommodate the parking and loading activity. No off-site effects are anticipated with regard to parking and loading.
55. Several non-compliances have been identified regarding the Conservators Road access. This access accommodates light vehicles only. The width of access and lack of footpath are both considered to be acceptable because of the straight alignment, low traffic volumes and ability to use the internal berms for passing. No issues have been identified regarding the proximity to the Ready Lawn business access.
56. The Guys Road access has been specifically designed to accommodate heavy vehicles, as well as restricting turning right out of the site at key times. This access has a width



greater than permitted by the District Plan, although no adverse effects are anticipated. This access is anticipated to continue to operate safely and efficiently.

57. The effects of the proposed activity on the wider network are considered to be mitigated by the implementation of road upgrades associated with the existing consent. Closure of the right turn out of the site to Guys Road during peak times mitigates the potential effects at the Pound Road / Ryans Road intersection.

Conclusion

58. For the reasons set out above, the proposed activity is considered to have less than minor transport effects.



Appendix 1

NZTA CAS Data



First Street	ID Second street I or landmark	Crash Number	Date	Day	Time	Description of Events	Crash Factors	Road	Natural	Weather	Junction	Ctrl	Tot Inj F S M A E I T R N
	Distance R		DD / MM / YYYY	DD	HHMM		(ENV = Environmental Factors)		Light				
CONSERVATORS ROAD	590H GUYS ROAD	201639903	21/05/2016	Sat	0001	CAR1 SBD on CONSERVATORS ROAD, lost control turning left, CAR1 hit ditch	CAR1 Entering / On curve, lost control when turning	Wet	Dark	Light Rain	Unknown	M/A	
GUYS ROAD	I CONSERVATORS ROAD	201321273	24/02/2013	Sun	0300	CAR1 SBD on CONSERVATORS ROAD lost control turning right, CAR1 hit Fence, Tree on right hand bend etc	CAR1 alcohol suspected, Entering / On curve, new driver / under instruction, showing off wheelspins etc	Dry	Dark	Fine	T Type Junction	Mill	1
GUYS ROAD	I RYANS ROAD	201415369	22/08/2014	Fri	2115	SHV1 WED on GUYS ROAD missed inerts or end of road	SHV1 alcohol test below limit, too fast on straight, attention diverted by cigarette etc	Dry	Dark	Fine	T Type Junction	Give Way Sign	1
POUND ROAD	I RYANS ROAD	201733385	21/02/2017	Tue	1311	TRUCK1 SBD on POUND ROAD hit CAR2 merging from the left	CAR2 Failed to give way At a stop at stop sign, did not notice another party, over seas/migrant driver failed to adjust to NZ road rules and road conditions	Dry	Bright	Fine	X Type Junction	Stop Sign	
POUND ROAD	I RYANS ROAD	201600106	29/04/2016	Fri	1253	CAR2 turning right hit by oncoming MOTOR CYCLE1 WED on POUND ROAD	MOTOR CYCLE1 alcohol test below limit CAR2 failed to give way when turning to non-turning traffic	Dry	Overcast	Fine	X Type Junction	Stop Sign	1
POUND ROAD	I RYANS ROAD	201837837	05/04/2018	Thu	1600	OTHER2 turning right hit by oncoming VAM1 SBD on POUND ROAD	OTHER2 failed to give way when turning to non-turning traffic, attention diverted, did not check / notice another party	Dry	Bright	Fine	X Type Junction	Stop Sign	
POUND ROAD	I RYANS ROAD	201710255	12/01/2017	Thu	1550	CAR1 EBD on POUND ROAD hit CAR2 crossing at right angle from right, CAR2 hit Fence	CAR1 Failed to give way At a priority traffic control, did not stop at stop sign, over seas/migrant driver failed to adjust to NZ road rules and road conditions	Dry	Bright	Fine	X Type Junction	Stop Sign	2
POUND ROAD	I RYANS ROAD	201732364	25/01/2017	Wed	1445	TRUCK1 SBD on POUND ROAD hit SHV2 merging from the right	TRUCK1 suddenly swerved to avoid vehicle SHV2 did not stop at stop sign	Dry	Bright	Fine	X Type Junction	Stop Sign	
POUND ROAD	I RYANS ROAD	201516255	19/08/2015	Wed	1748	CAR2 turning right hit by oncoming VAM1 SBD on POUND ROAD	CAR2 failed to give way when turning to non-turning traffic	Dry	Dark	Fine	X Type Junction	Stop Sign	1
POUND ROAD	I RYANS ROAD	201510296	01/01/2015	Thu	1036	MOTOR CYCLE1 SBD on POUND ROAD lost control turning left	MOTOR CYCLE1 lost control due to road conditions ENV: road slippery (loose material on seal)	Dry	Bright	Fine	X Type Junction	Stop Sign	1
POUND ROAD	I RYANS ROAD	201410857	25/01/2014	Sat	0350	CAR1 WED on POUND ROAD hit parked veh, CAR1 hit Parked Vehicle	CAR1 too far left/right, did not see or look for other party until too late	Dry	Dark	Fine	X Type Junction	Stop Sign	2
POUND ROAD	I RYANS ROAD	201734432	11/03/2017	Sat	1302	VAM1 WED on POUND ROAD overtaking hit CAR2 turning right	VAM1 overtaking at an intersection, misjudged intentions of other party CAR2 Other - Signalling	Dry	Overcast	Fine	X Type Junction	Stop Sign	
POUND ROAD	I SAVILLS ROAD	201617875	26/11/2016	Sat	1633	CAR2 turning right hit by oncoming VAM1 WED on POUND ROAD	CAR2 failed to give way when turning to non-turning traffic	Dry	Bright	Fine	T Type Junction	Mill	1
POUND ROAD	I SAVILLS ROAD	201815355	16/06/2018	Sat	1100	MOTOR CYCLE1 WED on POUND ROAD sideswiped by VAM2 turning left	MOTOR CYCLE1 misjudged intentions of another party VAM2 alcohol test below limit, Failed to signal in time	Dry	Overcast	Fine	T Type Junction	Give Way Sign	1
RYANS ROAD	350W POUND ROAD	201517655	11/09/2015	Fri	1620	CAR1 WED on RYANS ROAD lost control: went off road to left, CAR1 hit Fence, Tree	CAR1 lost control avoiding another party, suddenly swerved to avoid animal	Dry	Overcast	Fine	Unknown	M/A	1



Appendix 2

Transport Compliance Assessment



RULE	COMMENT	COMPLIES?	
7.4.3.1 Minimum number & dimensions of car parks required			
i). Any activity	At least the minimum number of car parking spaces in Table 7.5.1.1 in Appendix 7.5.1 shall be provided on the same site as the activity. The minimum number of car parking spaces required may be reduced by the relevant amount if the activity qualifies for any of the permitted reductions in Appendix 7.5.14.	The site is required to provide 1 visitor plus 6 staff spaces. These are able to be accommodated, although staff car parking will not be marked.	No
ii). Any car parks available to the general public.	Car parking spaces shall be provided with the minimum dimensions in Table 7.5.1.3 in Appendix 7.5.1.	The proposed parking layout does not comply with the District Plan dimensions.	No
iii). Any activity: A. where standard car parks are provided (except residential developments with less than 3 units), or B. containing buildings with a GFA of more than 2,500m ²	At least the minimum number of mobility parking spaces in accordance with Table 7.5.1.2 in Appendix 7.5.1 shall be provided on the same site as the activity.	One mobility park is required and able to be accommodated.	Yes
7.4.3.2 Minimum number of cycle parking facilities required			
a). Any activity	At least the minimum amount of cycle parking facilities in accordance with Appendix 7.5.2 shall be provided on the same site as the activity.	Not applicable.	N/A
7.4.3.3 Minimum number of loading spaces required			
a). Any activity where standard car parks are provided.	At least the minimum amount of loading spaces in accordance with Appendix 7.5.3 shall be provided on the same site as the activity.	Not applicable.	N/A
7.4.3.4 Manoeuvring for parking & loading areas			
a). Any activity with a vehicle access	On-site manoeuvring area shall be provided in accordance with Appendix 7.5.6.	Complies	Yes



RULE		COMMENT	COMPLIES?
<p>b). Any activity with a vehicle access to:</p> <ul style="list-style-type: none"> i. a major or minor arterial road; or ii. a collector road where three or more car parking spaces are provided on site; or iii. six or more car parking spaces; or iv. a heavy vehicle bay required by Rule 7.4.3.3; or v. a local street or local distributor street within the Central City core; or vi. a main distributor street within the Central City where the vehicle access serves three or more parking spaces; or vii. a local street outside the Central City core and the vehicle access serves six or more parking spaces. 	<p>On-site manoeuvring area shall be provided to ensure that a vehicle can manoeuvre in a forward gear on to and off a site.</p>	<p>The site has all vehicles entering and exiting forwards.</p>	<p>Yes</p>
7.4.3.5 Gradient of parking and loading areas			
<p>a). All non-residential activities with vehicle access.</p>	<p>Gradient of surfaces at 90 degrees to the angle of parking (i.e. parking stall width) - Gradient shall be $\leq 1:16$ (6.26%)</p>	<p>Complies</p>	<p>Yes</p>
<p>b). All non-residential activities with vehicle access</p>	<p>Gradient of surfaces parallel to the angle of parking (i.e. parking stall length). - Gradient shall be $\leq 1:20$ (5%)</p>	<p>Complies</p>	<p>Yes</p>
<p>c). All non-residential activities with vehicle access</p>	<p>Gradient of mobility car park spaces - Gradient shall be $\leq 1:50$ (2%)</p>	<p>Complies</p>	<p>Yes</p>
7.4.3.6 Design of parking and loading areas			
<p>a). All non-residential activities with parking and/or loading areas used during hours of darkness.</p>	<p>Lighting of parking and loading areas shall be maintained at a minimum level of two lux, with high uniformity, during the hours of operation.</p>	<p>The quarry will not operate prior to 06:30 or after 18:00 and is therefore not considered to operate in the hours of darkness.</p>	<p>N/A</p>
<p>b). Any urban activity, except:</p>	<p>The surface of all car parking, loading, and associated access areas shall be formed, sealed and drained and car parking spaces permanently marked.</p>	<p>Not applicable, as the proposed activity is not urban.</p>	<p>N/A</p>



RULE		COMMENT	COMPLIES?
i. residential activities containing less than three car parking spaces; or ii. sites where access is obtained from an unsealed road; or iii. temporary activities.			
7.4.3.7 Access design			
a). Any activity with vehicle access.	Access shall be provided in accordance with Appendix 7.5.7.	The Conservators Road vehicle access is longer than 50m, has a formed width narrower than 5.5m and does not provide passing points. The width of the Guys Road access is greater than 9.0m at the road boundary. A dedicated pedestrian / cycle access is not provided.	No
b). Any activity providing 4 or more car parking spaces or residential units.	Queuing spaces shall be provided in accordance with Appendix 7.5.8.	A queue space of 6.0m is assumed to be required at the Conservators Road access, whereas no queue space is provided.	No
c). Outside the Central City, any vehicle access: i. to an urban road serving more than 15 car parking spaces or more than 10 heavy vehicle movements per day; and/or ii. on a key pedestrian frontage	Either an audio and visual method of warning pedestrians of the presence of vehicles or a visibility splay in accordance with Appendix 7.5.9 shall be provided. If any part of the access lies within 20 metres of a Residential Zone any audio method should not operate between 20:00 and 08:00 hours.	Not applicable, as the access is not to an urban road.	N/A
7.4.3.8 Vehicle crossings			
a). Any activity with a vehicle access to any road or service lane.	A vehicle crossing shall be provided constructed from the property boundary to the edge of the carriageway / service lane.	Complies	Yes
b). Any vehicle crossing on an arterial road or collector road with a speed limit 70 kilometres per hour or greater.	Vehicle crossing shall be provided in accordance with Appendix 7.10.	Not applicable	N/A
c). Any vehicle crossing to a rural selling place.	Vehicle crossing shall be provided in accordance with Figure 14 in Appendix 7.5.10.	Not applicable	N/A



RULE		COMMENT	COMPLIES?
d). Any vehicle crossing on a road with a speed limit 70 kilometres per hour or greater	The minimum spacing to an adjacent vehicle crossing on the same side of the frontage road, shall be in accordance with Table 7.5.11.1 in Appendix 7.5.11.	There is an adjacent vehicle crossing on Conservators Road immediately adjacent to the site access.	No
e). Any activity with a vehicle crossing	The maximum number of vehicle crossings shall be in accordance with Table 7.5.11.2 (outside the Central City) and Table 7.5.11.3 (within the Central City) in Appendix 7.5.11.	There is only one crossing per road frontage, so the proposal complies.	Yes
f). Any activity with a vehicle crossing	The minimum distance between a vehicle crossing and an intersection shall be in accordance with the Table 7.5.11.4 (outside the Central City) and Table 7.5.11.5 (within the Central City) in Appendix 7.5.11.	Complies	Yes
g). Any vehicle crossing on a rural road	The minimum sight lines to vehicle crossings shall be provided in accordance with Figure 18 in Appendix 7.5.11.	Complies	Yes
7.4.3.9 Location of buildings and access in relation to road/rail level crossings			
a). Any new road or access that crosses a railway line	No new road or access shall cross a railway line.	Not applicable	N/A
b). All new road intersections located less than 30 metres from a rail level crossing limit line	The road intersection shall be designed to give priority to rail movements at the level crossing through road traffic signals.	Not applicable	N/A
c). All new vehicle crossings located less than 30 metres from a rail level crossing limit line.	No new vehicle crossing shall be located less than 30 metres from a rail level crossing limit line unless the boundaries of a site do not enable the vehicle crossing to be more than 30 metres from a rail level crossing limit line.	Not applicable	N/A
d). Any building located close to a level crossing not controlled by automated warning devices (such as alarms and/or barrier arms).	Buildings shall be located outside of the sight triangles in Appendix 7.5.13.	Not applicable	N/A



RULE	COMMENT	COMPLIES?
7.4.3.10 High trip generators		
k. Mixed Use	More than 50 vehicle trips per peak hour or 250 heavy vehicle trips per day (which ever is met first) 'Peak hour' are those hours between 15:00 and 19:00 hours on a weekday.	The proposed activity generates greater than 250 heavy vehicle movements per day and therefore requires a Basic ITA. That being said, the already consented quarry on the site will utilise the existing access and will not generate any additional traffic over and above what has already been approved. In this respect, the proposed development remains 'within the scope' with the previous resource consent. The site is however also located on a rural road so any existing trip generation can be included for the purposes of calculating the HTG thresholds.
		Noted

	CAR PARKS		CYCLE PARKS		LOADING	
	Residents / Visitors	Staff	Visitors	Staff	HGV	99% Car
Quarry (465m ² GFA)	1 / 800m ² GFA	11 / 800m ² GFA	Nil	Nil	Nil	Nil
	1	6	-	-	-	-