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**Integrated Transport Assessment**  
**Prepared for**

# **THE CLEARING STAGE 3-6**

**Amberley**  
**Hurunui District**

May 2022



**Integrated Transport Assessment**  
**Prepared for**

**The Clearing Stage 3-6**

Amberley  
Hurunui District

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## Introduction

1. Novo Group has been commissioned to prepare an Integrated Transport Assessment (ITA) in relation to proposed Stages 3-6 of 'The Clearing' residential subdivision in Amberley.
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. Key aspects of the current proposal include:
  - i. Development of 201 residential lots in Stages 3-6, with potential for a further 50 lots on a balance lot (Lot 5000) subject to design. It is assumed that each lot will be developed in future with a single residential dwelling. While development of the balance lot will be subject to a separate consent in future, this assessment will consider traffic generation and effects associated with the development of a combined total of 251 lots / dwellings including the indicative 50 lots on Lot 5000. Further, this assessment will also consider traffic generation and effects associated with the 123-lot Stage 1-2 development that has already been granted resource consent.
  - ii. The current proposal incorporates a proposed internal roading network that will connect to Carters Road (SH1) via a planned new road and intersection, and to Amberley Beach Road via the consented Stage 1-2 road network.
  - iii. The majority of the proposed lots are provided with direct road frontage, although some lots are served by shared ROWs.
4. **Figure 1** indicates the general site location, while **Figure 2** illustrates the proposed Stage 3-6 layout. A copy of the proposed site layout and road cross-sections is contained in **Appendix 1**.



Figure 1: Site Location (Source: Canterbury Maps)



Figure 2: Stage 3-6 Layout (Source: Extract from Davis Ogilvie Plan)

## Transport Environment

### Road Network

#### Carters Road (State Highway 1)

5. The proposed Stage 3-6 development will access Carters Road (SH1) via a planned new road and intersection to be delivered as a condition of consent (RC200045) for a new retirement village development to be established north of the application site at 175 Carters Road. A copy of the new road and intersection scheme plan is provided in **Appendix 2**.
6. **Table 1** sets out the transport details of Carters Road (State Highway 1) in the vicinity of the application site at present.



Table 1: Carters Road (SH 1) Road Characteristics

Key Feature or Characteristic	Comment
Road Classification	Strategic Arterial (State Highway 1) This road is a Limited Access Road.
Cross-Section Description	Traffic lanes in both directions of 3.6m width.  1.8m sealed shoulder plus kerb and channel are provided on the western side of the road. 1.2m wide sealed shoulder plus grass verge are provided on the eastern side of the road.  There is a service lane to the west of the main carriageway that provides property access. This is separated by a wide planted strip.
Traffic Volumes	10,721 vehicles per day (including 12.3% heavy).  AM Peak hour of 623 vehicles per hour  PM Peak hour of 934 vehicles per hour.
Speed	There is a change in speed limit located near the northern Carters Road Service Lane. The speed limit north of this point is 50km/hr. The speed limit south of this point is 80km/hr.
Pedestrian & Cycling Infrastructure	None along the main carriageway, although there is a footpath provided as part of the service lane on the opposite/western side.
Additional Notes	A new access road and intersection has been proposed as part of an Amberley Retirement Village (yet to be constructed). This is located mid-way between the two Service Lane accesses.



Figure 3: Typical View of SH1

### Amberley Beach Road

- The proposed Stage 3-5 development will also access Amberley Beach Road through the internal road network approved for eth Stage 1-2 development.



8. **Table 2** sets out the current transport details of Amberley Beach Road in the vicinity of the application site.

Table 2: Amberley Beach Road Characteristics

Key Feature or Characteristic	Comment
Road Classification	Collector Road
Cross-Section Description	8.3m wide carriageway, comprising 5.3m wide eastbound lane and 3.0m wide westbound lane. On-street car parking is permitted.  (This widens to a 12m wide carriageway to the west of Teviotview Place and comprises a 5.3m wide eastbound lane and 6.7m wide westbound lane).
Traffic Volumes	1,200 vehicles per day <sup>1</sup> .  AM Peak hour of 171 vehicles per hour.  PM Peak hour of 224 vehicles per hour <sup>2</sup> .
Speed	50km/hr.
Pedestrian & Cycling Infrastructure	A footpath is provided on the northern (opposite) side of the road. There is no footpath on the southern side of the road between the proposed access and Teviotview Place.  There are no on-road cycle lanes



Figure 4: Typical View of Amberley Beach Road

<sup>1</sup> Estimate from Mobile Roads.

<sup>2</sup> Counted by Novo Group survey in June 2020





## Rosewood Drive

9. **Table 3** sets out the transport details of Rosewood Drive in the vicinity of the application site.

Table 3: Rosewood Drive Characteristics

Key Feature or Characteristic	Comment
Road Classification	Local Road
Cross-Section Description	10.0m wide carriageway with on-street car parking permitted on the eastern side. No-Stopping (broken yellow lines) is provided on the western side.
Traffic Volumes	250 vehicles per day <sup>3</sup> .
Speed	50km/hr.
Pedestrian & Cycling Infrastructure	A footpath is provided on the western side of the road only.
Additional Notes	This road is not yet completed. As the wider area develops, further connections will be made with the wider Amberley township.



Figure 5: Typical View of Rosewood Drive

## Crash History

10. The Waka Kotahi NZ Transport Agency Crash Analysis System (CAS) has been reviewed to identify crashes that have been reported along Carters Road (SH1) and Amberley Beach Road in the vicinity of

<sup>3</sup> Estimate from Mobile Roads.



the site (including within 30m of the Carters Road – Amberley Beach Road intersection) for the full 5-year period 2017-2021 plus available 2022 as of 9 May 2022. The search area and location of reported crashes is shown in **Figure 6**.

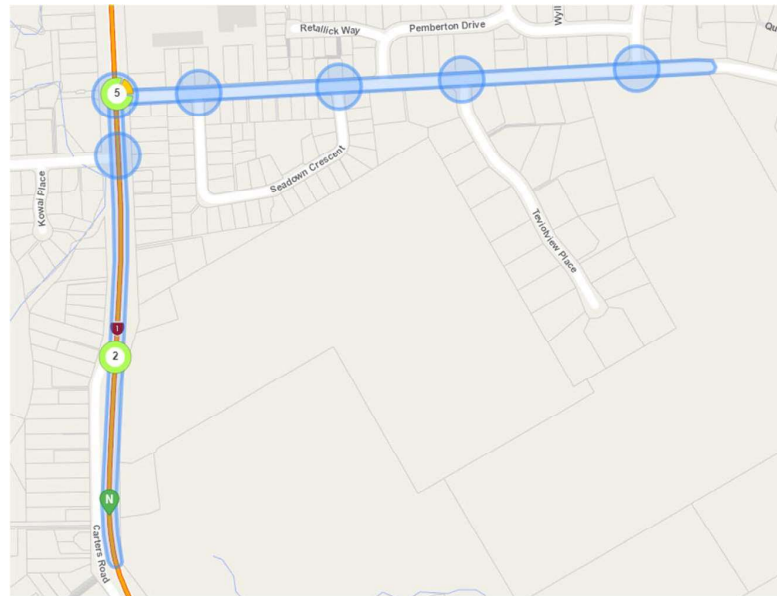


Figure 6: CAS Search Area and Reported Crash Locations

11. As indicated in **Figure 6**, the CAS search revealed a total of 8 reported crashes, all of which occurred on Carters Road (SH1). Five of the reported crashes (1 minor injury and 4 non-injury) occurred at the Carters Road (SH1) – Amberley Beach Road intersection. Three of these five crashes (including the minor injury crash) involved vehicles turning right into Amberley Beach Road failing to yield to southbound through traffic on Carters Road (SH1). The other two crashes included a rear end collision on Amberley Beach Road, and a passing/merging incident involving two southbound vehicles on Carters Road (SH1).
12. The other three reported crashes included two rear end collisions with vehicles stopped on Carters Road (SH1) waiting to turn right into the northern end of the service road for the properties at 142-198 Carters Road. The remaining crash was a parking related incident outside the Amberley Foodstore.
13. The reported crash information does not indicate an inherent safety issue on the road network surrounding the site that will be exacerbated by the current proposal.

## The Proposal

14. The proposed Stage 3-6 development comprises the following activities:
  - i. A total of 201 lots, with the assumption being (for the purpose of this assessment) that each lot is to be developed with a single residential house/unit. Traffic associated with an indicative future development of 50 lots / dwellings on the balance lot (Lot 5000) will also be considered in this report.



- ii. Access to Carters Road (SH1) via a planned new road and intersection to be constructed as a condition of consent (RC200045) associated with the adjacent Amberley Retirement Village development. The intersection scheme design approved by RC200045 is attached as **Appendix 2**.
  - iii. Access to Amberley Beach Road via the internal road network of the consented Stage 1-2 development. The primary road through the Stage 1-2 development connects with Amberley Beach Road immediately opposite Rosewood Drive and will form the 4<sup>th</sup> leg of the upgraded priority-controlled cross-junction intersection to be delivered in conjunction with the consented Stage 1-2 development.
  - iv. The primary road through the proposed Stage 3-6 development will mirror that provided through the majority of the Stage 1-2 development, comprising an 11m carriageway within an 18m road corridor. A 1.5m wide footpath is provided on both sides of the primary road.
  - v. The secondary road network typically provides for 15m wide road corridors to accommodate 9m wide carriageways with a 1.5m wide footpath on one side of the road only. The road corridor serving Lot 197 and Lots 200-205 has a proposed width of 13m, accommodating a 7.5m wide carriageway and a 1.65m wide footpath on one side of the road only.
15. A site plan and roading cross sections are attached as **Appendix 1**.



## District Plan Compliance Assessment

16. The site is zoned *Residential 1A* in the Hurunui District Plan and the proposed activity is understood to be anticipated in the zone although the overall activity status of the proposal is understood to be non-complying.
17. An assessment of compliance against the transport standards of the District Plan has been undertaken and is contained in **Appendix 3. Table 1** summarises the non-compliances identified.

Table 1: District Plan Transport Non-Compliance

Standard	Nature of Non-Compliance
8.4.3(d)	The proposed road corridors are less than 20m.
8.4.3(e)	The secondary roads do not have a footpath on both sides.

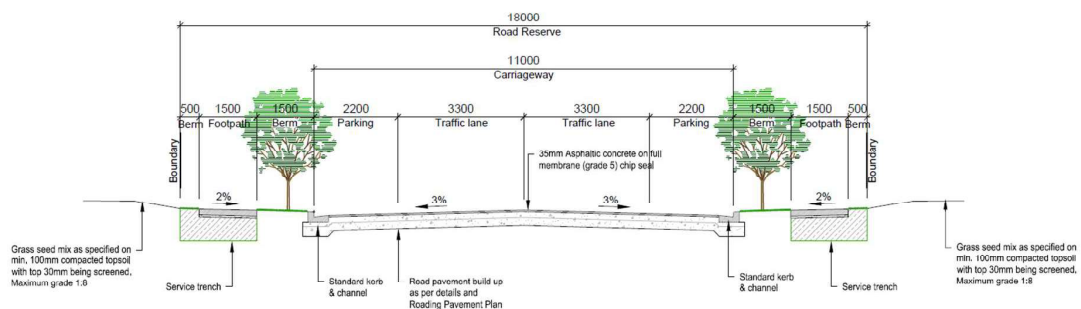
## Assessment of Effects

18. The District Plan transport non-compliances relate to road corridor widths and the provision of a footpath on one side of the secondary roads only.

### District Plan Non-Compliance – Road Widths

#### Primary Road Width

19. The site will be served by a primary road that generally runs east-west through the site, connecting with the primary road within the consented Stage 1-2 development at the eastern boundary and a planned new road and intersection off Carters Road (SH1) towards the north-western corner of the site. The primary road provides for an 11m wide carriageway plus 1.5m wide footpaths and 1.5m wide grass berms on both sides within an 18m wide road corridor as shown below in Error! Reference source not found. (also provided in **Appendix 1**).



**Typical Cross-Section - 18m Road, 11m Carriageway**

Scale 1 in 100

Road 1

NOTE: Engineer is to be notified to inspect the subgrade prior to the placement of any metalcourses.

Figure 7: Cross Section of 18m Wide Primary Road





20. In addition to the District Plan requirement, the *Hurunui District Council Development Engineering Standard 2017* also requires a 20m road reserve width. This can be reduced to 15m for local road culs-de-sac less than 150m in length. The proposed Primary Road is approximately 750m in length therefore the Council standard prefers a 20m road reserve width.
21. New Zealand Standard NZS4404:2010 *Land Development and Subdivision Infrastructure* (Figure E12 & E13) provides road design parameters for suburban 'live and play' areas. These respectively provide for up to 200 and 800 houses. Given that 201 lots are currently proposed within the Stage 3-6 development along with a potential 50 lots indicated for future development of the balance lot (Lot 5000) and 123 lots within the Stage 1-2 development (i.e. a total of 374 lots / dwellings), it is considered that the appropriate design standards would lie somewhere between Figure E12 and Figure E13. A comparison of the key Figure E12, Figure E13 design features and the proposed primary road cross section is provided in **Table 5** below.

Table 5: Comparison of NZS4404:2010 Figure E13 and Proposed Primary Road Design Features

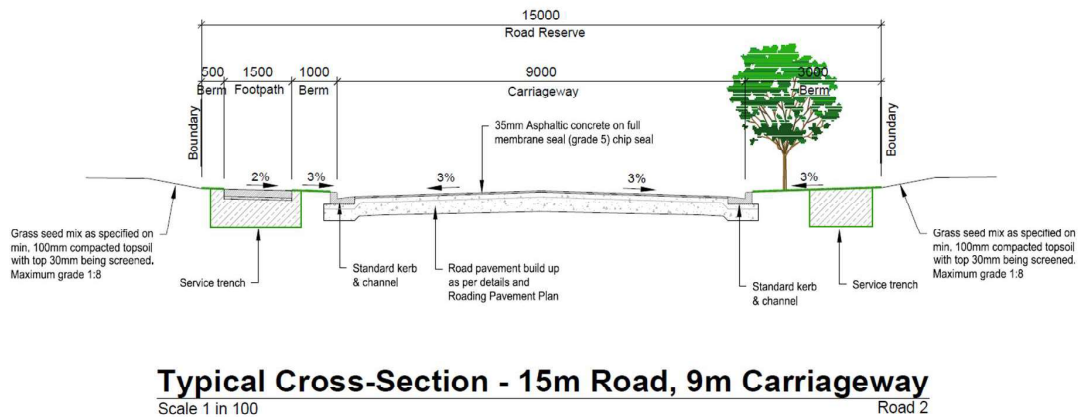
Design Feature	NZS4404:2010 Figure 12	NZS4404:2010 Figure 13	Proposed Primary Road
Locality Served	1 – 200 dwelling units	Up to 800 dwelling units	374 lots / dwellings in Stages 1-6 (and future development on the balance lot (Lot 5000))
Target Operating Speed	40 km/h	50km/h	40-50km/h or less
Minimum Road Width	15m	20m	18m
Pedestrians	1.5m one side or 1.5m each side if more than 20 du or more than 100m in length	2.0m each side	1.5m each side
Parking	Shared parking in the movement lane up to 100 du, separate parking over 100 du	Separate and recessed	2.2m each side
Movement Lane	5.5 – 5.7m	2 x 4.2m	2 x 3.3m
Classification	Local (~2,000 vpd)	Collector (~8,000 vpd)	Local (~1,500 vpd)

22. While the proposed primary road cross section design deviates from the Figure E13 characteristics slightly, it is considered that it still achieves the overall intent while notably serving less than half of the 800 dwelling units anticipated in the Figure E13 design scenario. The primary road design also provides a higher standard design than that anticipated in the Figure E12 design scenario, particularly in regard to road width (18m provided), pedestrian facilities (footpath proposed each side), movement lane width (6.6m proposed) and parking (2.2m width provided each side for parking).
23. Perhaps more importantly, the proposed primary road design mirrors that provided within the approved Stage 1-2 development, and therefore provides continuity through the entire development. The design is also consistent with (if not a slightly higher standard to) similar existing roads in the vicinity such as Rosewood Drive (11m carriageway, with a footpath on one side only). Furthermore, the proposed 11m carriageway width is consistent with that required for urban local roads longer than 200m under section 3.8.1.1.2 of the Council's Engineering Standards.



### Secondary Road Widths

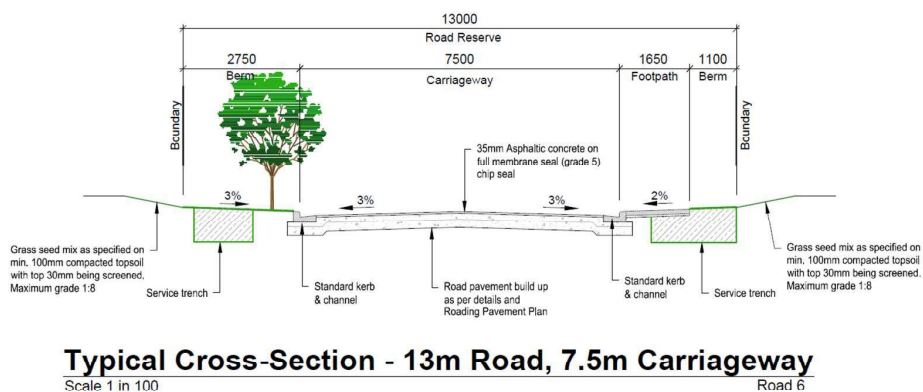
24. The majority of the proposed secondary roads within the Stage 3-6 development have a road corridor width of 15m, providing for a 9m wide carriageway with a 1.5m wide footpath on one side of the road as shown in **Figure 8** (also provided in **Appendix 1**).



NOTE: Engineer is to be notified to inspect the subgrade prior to the placement of any metalcourses.

Figure 8: Cross Section of 15m Wide Secondary Road

25. Each of these roads serves less than 200 lots / dwellings, therefore the NZS4404:2010 Figure E12 design standard is most appropriate. Further, it should be noted that each of these roads serves less than 100 lots/dwellings, which would otherwise trigger the Figure E12 design standard requirement to provide parking separate to the 5.5-5.7m wide movement lane. The proposed 9m carriageway width is also consistent with that required under section 3.8.1.1.2 of the Council's Engineering Standards for urban local roads less than 200m in length.
26. The proposed secondary road serving Lot 197 and Lots 200-205 has a 7.5m carriageway within a 13m road corridor, and a footpath on one side only as well, as shown in **Figure 9** (also provided in **Appendix 1**).



NOTE: Engineer is to be notified to inspect the subgrade prior to the placement of any metalcourses.

Figure 9: Cross Section of 13m Wide Secondary Road



27. Noting that this road only serves 8 lots/dwellings, and is therefore not expected to provide for parking separate to the movement lane, it is generally consistent with the NZS4404:2010 Figure E12 design standard in all respects except for the slightly reduced road corridor width. Although not a cul de sac, the proposed 7.5m carriageway also provides a higher standard than that required under section 3.8.1.1.2 of the Council's Engineering Standards for urban local cul de sacs less than 150m in length.
28. Based on the above, it is considered that any effects associated with having road corridors less than 20m in width as required by the District Plan (and Engineering Standards) are **acceptable** and **less than minor**.

### District Plan Non-Compliance - Footpaths

29. Clause 3.B.1.2 of the *Hurunui District Council Development Engineering Standard 2017* states that footpaths shall be 1.5m wide and that a minimum of one footpath shall be provided on all urban roads, preferably on the western side of the road. The proposal includes 1.5m wide footpaths on one side of each of the secondary roads, however the proposed roading pattern is such that the footpath will not always be on the western side of the road in order to provide continuous footpath connections around the secondary roads. Therefore, while the provision of a footpath on one side of the road only does not comply with District Plan standards, it does however align with the Engineering Standard. Cross sections of the secondary roads are provided in **Appendix 1** and illustrated earlier in **Figure 8** and **Figure 9**.
30. New Zealand Standard NZS4404:2010 *Land Development and Subdivision Infrastructure* implies that a 'Suburban Live & Play' area serving up to 200 residential units would ultimately have a target speed of 40km/h – which is considered to be a safe vehicle-pedestrian environment.
31. Pedestrian crossing opportunities would ultimately be available via the dropped-kerbs that will serve each lot and so people with disabilities and/or parents with push-chairs or mobility scooters could still cross the road.
32. Other pedestrian connections will also be provided through the proposed reserves to compliment the footpath network along the primary and secondary roads.
33. For the reasons discussed above, the effects of having a footpath on one side only of the proposed secondary roads is considered to be **acceptable** and **less than minor**.

### Other Matters for Consideration

34. Subdivision applications typically include a number of transport matters of control; and/or matters of discretion. In terms of traffic related issues, these matters relate to issues such as the geometric layout of the site and the effects of site generated traffic on the capacity of the surrounding road network.
35. For the purposes of this report, any future development on any of the proposed lots will be able to comply with all the relevant transport related requirements of the District Plan. This includes adequate parking, access and manoeuvring for each residential house on each new lot. Failure to comply with any of these standards would result in the requirement for additional resource consent approval.
36. Instead, the traffic related issues with this proposal relate to the ability of the existing road network in the vicinity of the site to safely cater for site generated traffic, while retaining a suitable level of service for existing residents in the immediate area. The relevant traffic related issues also include the consideration of the potential effects of the proposal at the State Highway intersection.



37. On this basis the following assessment of effects will consider:
- i. The proposed roading layout, including road widths and location / form of internal intersections.
  - ii. The ability for the proposal to provide adequate car parking and safe vehicular access and circulation.
  - iii. The daily and peak hour volume of traffic estimated to be generated by the proposal and its distribution onto the surrounding road network; and
  - iv. The ability of the surrounding road network to cater for increased traffic flow.

### **Road Widths and Layout**

#### *Road Widths*

38. Matters relating to road widths have already been discussed in 18-27 in relation to the identified District Plan non-compliance of not providing a 20m wide road corridor.
39. In terms of the primary road, the carriageway design provides for two-way flow with a 3.3m wide traffic lane in each direction and 2.2m wide parking margins each side as well as a footpath on both sides of road in accordance with District Plan requirements.
40. In regard to the secondary road cross sections, it is noted that the 9m carriageway width within the 15m wide road corridors will also provide for kerbside parking along both sides of these roads while still providing for slow-speed two-way traffic flow. Some parking and stopping controls may have to be considered in future however for the 7.5m wide carriageways, if it eventuates that kerbside parking demand creates an issue for through traffic. That said, it is noted that the 13m wide secondary road only serves a very small number of lots (Lot 197 and Lots 200-205 = 7 lots), and is unlikely to be seen as a desirable through route for general traffic not directly associated with those lots.

#### *Internal Road Network Layout*

41. The proposed internal road network provides for a relatively simple and well-connected layout, with the primary road following a logical alignment through the site to connect with the Stage 1-2 primary road at the eastern site boundary and the planned new road and intersection off Carters Road (SH1) at the northwest corner of the site. The secondary road network also provides a generally simple layout with logical connections to the primary road.
42. The proposed internal road network includes 10 intersections, the majority (8) of which are simple 90 degree T-junctions. Given the straight forward alignment of these T-junctions, apparent priority to the major through road, and likely local road classifications, it is considered that priority Stop / Give Way controls will not be necessary on these intersections.
43. There are two 4-way cross-junctions proposed on the primary road towards the western end of the site. It is considered that priority Give Way or Stop controls will be necessary on the secondary road approaches to these intersections to confirm priority for through movements on the primary road.
44. It is assumed that kerb radii at all intersections within the development will comply with the 5-7mR requirement under section 3.8.2.3 of the Council's Engineering Standards.
45. Council's Engineering Standards appear to be silent in regard to intersection spacing requirements. In the absence of such standards, it is considered that the Christchurch City Council Infrastructure Design



Standard provides useful guidance. Section 8.11.3 (Table 2) of the CCC IDS indicates an appropriate minimum separation distance of 40m for local/local road intersections. The minimum intersection spacing proposed in the internal road layout is approximately 54m in the vicinity of Lot 199 and Lot 218.

46. While the Engineering Standards include sight distance criteria for private accesses / vehicle crossings, there are no standards relating to intersection sight lines. Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections recommends minimum safe intersection sight distances (SISD) of 67m and 90m in 40km/h and 50km/h speed environments respectively (based on a driver reaction time of 1.5 seconds). While the posted speed limit within the development is expected to be the default urban speed limit of 50km/h, it is considered that the road design and layout is more conducive to typical vehicle operating speeds closer to 40km/h. On that basis, it is considered appropriate to provide for sight distances of at least 67m at intersections within the development. Depending on the detailed design of intersections within the development (including features such as kerb build-outs and position of limit lines on the side roads), sight distances of at least 67m can be generally achieved. This may however require consideration of possible stopping restrictions around the inside of some curves at the following locations:
  - i. Along the southwest side of the primary road outside Lot 284.
  - ii. Along the northeast side of the primary road outside Lot 209.
  - iii. Along the northwest side of the primary road outside Lots 217-218.
  - iv. Along the northeast side of the secondary road outside Lots 290-292.
47. It is assumed that road lighting, marking and signage will comply with the requirements under sections 3.8.2.5 & 3.8.2.6 of the Council's Engineering Standards.
48. For the reasons discussed above the proposed internal road layout, including road and carriageway widths, is considered to be fit-for-purpose. Further, any effects associated with departure from Council's Engineering Standards with respect to these matters are **acceptable** and **less than minor**.

#### **Car Parking, Vehicular Access and Circulation**

49. It is reiterated that any residential development on the proposed lots could comply with all the relevant transport related requirements of the District Plan. This includes adequate parking, access and manoeuvring for each residential house on each new allotment. Failure to comply with any of these standards would result in the requirement for additional resource consent approval to be considered separately to the subdivision application that is the subject of this report.
50. The proposed 11m carriageway width on the primary road, and the proposed 9m carriageway width on the majority of the secondary roads, allows for parking on both sides of the roads while still technically providing for low-speed two-way vehicle flow. In practise however, it is acknowledged that many drivers tend to yield to oncoming vehicles if they meet at a location where two vehicles are parked immediately opposite each other on either side of the road on a 9-10m wide carriageway. These conflicts are typically easily and quickly resolved, with negligible effect on the overall safe and efficient operation of the road network.
51. It is noted that there is a discrepancy between the District Plan standards and those in Section 3.8.9.1 of Council's Engineering Standards with respect to RoW widths. The proposal fully complies with District Plan Standard 8.4.3.3 which requires a minimum legal access width of 4.5m for 1-4 lots, but does not satisfy the higher requirement of 5.5m for 2-4 lots in the Engineering Standards. In terms of formed access widths, the District Plan requirement is 3.0m whereas 4.0m is required under the Engineering Standards. The additional 1m formed width requirement in the Engineering Standards offers little benefit in terms of safe and efficient operation of the access over the District Plan standard, particularly as both



only provide for one-way vehicle flow. In this regard, it is considered that the District Plan standard is entirely appropriate, and the RoW access widths are therefore considered fit for purpose.

### Traffic Generation

52. There are a total of 201 residential lots proposed in Stages 3-6, with indication of a potential future 50 lots /dwellings on the balance lot (Lot 5000) to bring the total to 251 lots. Combined with the 123 lots in Stages 1-2, this accounts for a total of 374 lots.

#### *Daily Traffic Generation Estimate*

53. There is a substantial library of traffic generation research on the traffic generation of residential development. This data typically reveals a range of 4-12 trips per day per dwelling unit. An analysis of traffic effects arising from suburban residential land development is typically based on a generation rate of around 8.2 trips per dwelling unit per day<sup>4</sup>.
54. However, the traffic generation research also indicates that the trip generation per dwelling unit is influenced by proximity to non-residential activities (shopping, schools, work places and general entertainment and other amenities), and the separation distance from the primary commercial district for the wider area (research indicates that increased separation distance from a major CBD results in more trip linking and a lower overall generation rate per dwelling unit). The location of the site within a small provincial community suggests that a generation rate of less than 8 trips per unit per day is likely, and this is confirmed by comparing the traffic volumes along the local roads with the number of houses. That being said, the (higher) trip generation rate of 8 trips per dwelling unit per day will be used for this assessment, however it must be emphasised that this is likely to be a conservative approach.
55. **It follows that 374 residential allotments could generate around 3,000 vehicle trips per day** (374 allotments x 8 trips each per day = 2,992). It is important to note that this level of traffic generation would not occur immediately but would occur over time as the application site was developed. Nonetheless, this is what could be expected over the longer term if 374 allotments were created, and a residential house established on each lot. Note that if each unit were to only generate, say 5 trips per day, the overall traffic generation would reduce to 1,870 vehicle trips per day.

#### *Peak Hour Traffic Generation*

56. It has already been estimated that the proposal will (conservatively) generate around 3,000 vehicle trips per day. However, it is the peak hour traffic generation of the site and the effects of this additional traffic on the operation of the surrounding road network that is the primary traffic consideration with this proposal.
57. Traffic generation research indicates that the peak hour traffic generation of suburban residential development is around 10% of the daily traffic generation. In this situation this calculates to around 300 trips in total to and from the site<sup>5</sup>. The NZTA *Trips and Parking Related to Land Use* report suggests that *Outer Suburban dwellings* could have a peak hour generation rate of 0.9 trips per unit. Applying this rate calculates **to around 337 peak hour trips in total to and from the site**<sup>6</sup>. For the purposes of this assessment the higher rate of 337 peak hour trips will be used. This again ensures that a robust assessment is carried out.

<sup>4</sup> Based on Outer Suburban dwellings in the NZTA Research Report 453 – *Trips and Parking Related to Land Use*.

<sup>5</sup> (375 units x 8 trips per unit per day = 3,000) x 10% in the peak hour = 300

<sup>6</sup> (374 units x 0.9 peak hour trips = 337 trips in the peak hour





58. This peak hour generation is likely to be tidal in nature where most of the peak hour traffic would be exiting the subdivision during the morning peak hour and then returning during the evening peak hour. This split is assumed to be around 75% exiting the development and 25% entering the development in the morning peak period, and around 70% entering the development and 30% exiting the development in the evening peak period.

#### Traffic Distribution and Network Effects

59. Initially, all site generated vehicles would have to exit the site via the new cross-junction intersection on Amberley Beach Road at Rosewood Drive that is to be constructed as part of the consented Stage 1-2 development. As the subdivision is completed, the site will eventually have access through to Carters Road (SH1) via the planned new road and intersection to be constructed as part of the consented Amberley Retirement Village development at 175 Carters Road.
60. Distribution scenarios for the AM and PM peak periods have been developed for site generated traffic based on Statistics NZ Census data<sup>7</sup> and also taking into account existing and future local road connections (e.g. Rosewood Drive through to Hilton Drive and Pound Street) as well as local attractions / destinations such as the Brackenfields shopping centre on the corner of Carters Road and Amberley Beach Road, other local businesses along Carters Road and Amberley School on Douglas Road. It should be noted that the developed distribution scenarios result in PM Peak turning volumes of development traffic at the Carters Road (SH1) and Amberley Beach Road intersection that are consistent with percentage splits of existing traffic surveyed by Novo Group in June 2020 as summarised in **Table 6** below. The distribution scenarios are summarised (with key assumptions noted) and illustrated in **Appendix 4**.

Table 6: Surveyed PM Peak Carters Road (SH1) and Amberley Beach Road Turning Volumes (Novo Group, June 2020)

Outbound / Inbound	Movement	Surveyed Volume and Percentage Split
Outbound	Left turn from Amberley Beach Road to Carters Road (SH1)	42 vph (63% of outbound)
	Right turn from Amberley Beach Road to Carters Road (SH1)	24 vph (37% of outbound)
Inbound	Left turn from Carters Road (Sh1) to Amberley Beach Road	62 vph (39% of inbound)
	Right turn from Carters Road (Sh1) to Amberley Beach Road	96 vph (61% of inbound)

61. While there will be up to 374 residential dwellings on the wider site (123 consented in Stage 1-2, 201 currently proposed in Stages 3-6 and nominally 50 in future development of the balance lot), the adopted distribution scenarios result in estimated traffic volumes (including individual turning movement volumes) at the existing Carters Road (SH1) / Amberley Beach Road intersection that are similar to those already considered and modelled in conjunction with the 123-lot Stage 1-2 consent for the PM Peak period. The main reason for this is due to distribution of site generated traffic across the planned Carters Road (SH1) connection, as well as other local road connections (e.g. Rosewood Drive through to Hilton Drive, Pound Street and Carters Road) that were acknowledged but not factored into the transport assessment for the Stage 1-2 proposal. Another reason is that the current distribution

<sup>7</sup> See <https://commuter.waka.app/> (Amberley)



scenarios allow for 5-15% of development traffic travelling locally to/from the Brackenfields shopping centre (accessed off Amberley Beach Road) and not travelling through the Carters Road (SH1) / Amberley Beach Road intersection.

62. Similarly, the distribution scenarios adopted for the current Stage 3-6 proposal (and incorporating consented Stage 1-2 and future balance lot traffic) are expected to result in AM Peak and PM Peak traffic volumes (including individual turning movement volumes) at the planned new Carters Road (SH1) intersection that are similar to those already considered and modelled in conjunction with the Amberley Retirement Village consent (which allowed for a nominal 250-lot residential development on the land now subject to this Stage 3-6 proposal).
63. **Appendix 5** provides a comparison of development traffic volumes at those two key intersections, between that previously considered and modelled in the Stage 1-2 / Amberley Retirement Village consents and that now adopted for this assessment. The difference in volumes on each individual movement ranged from -37 to +38 vehicles per hour. Most significantly, the critical right turn movement out of Amberley Beach Road onto Carters Road (SH1) is only estimated to be 6 vehicles per hour more than that previously considered under the Stage 1-2 consent, and the critical right turn movement out of the planned new road onto Carters Road (SH1) at the new intersection is estimated to be between 16-37 vehicles per hour less than that previously considered under the Amberley Retirement Village consent.
64. Based on the above, it is considered that further modelling of these Carters Road (SH1) intersections is not required. Waka Kotahi NZ Transport Agency was provided information on the proposed Stage 3-6 (then referred to as proposed Stages 3-5 plus future Stage 6) development along with copies of the traffic generation and distribution scenarios in **Appendix 4** and the comparison summary provided in **Appendix 5**. There were further follow-up email and phone conversations with the Agency during March and April 2022, and a virtual meeting to discuss main points on 30 March 2022. The Agency has subsequently provided a letter of agreement in principle to the proposed Stage 3-6 development, and this is provided in **Appendix 6**.
65. The low ambient volumes on Amberley Beach Road and Rosewood Drive are such that it is considered unnecessary to undertake detailed modelling of the upgraded Amberley Beach Road – Rosewood Drive intersection (where the Stage 1-2 road will form the 4<sup>th</sup> leg of the cross-junction). Indications are that this intersection would still operate at a good level of service (LoS A – LoS B), with minimal delays turning into or out of Rosewood Drive and/or the new Stage 1-2 access road, during peak periods even if all development traffic used this intersection. It is therefore not considered critical that the planned new road and intersection onto Carters Road (SH1) is operational prior to development occurring within proposed Stages 3-6.
66. For the reasons discussed above the effects on the traffic environment are considered to be **acceptable** and **less than minor**.

## Conclusion

67. This assessment relates to the proposed 201 lots within Stage 3-6 of The Clearing residential subdivision development, but also considers wider road network effects associated with combined traffic generation from potential future development of 50 additional lots / dwellings on the balance lot (Lot 5000) and the consented 123-lot Stage 1-2 development.
68. Although road widths within the proposed development are less than the minimum requirements in Council's District Plan and Engineering Standards, the primary and secondary roads generally achieve





compliant carriageway widths and the road designs are consistent with other roads in the vicinity (including those within the consented Stage 1-2 development).

69. The proposed secondary roads within the development only provide a footpath on one side of the road, whereas (in many instances) the District Plan and Engineering Standards require footpaths on both sides. Again, the proposed roading design / layout and provision of footpaths is generally consistent with other roads in the vicinity (including those within the consented Stage 1-2 development). The provision of other off-road pedestrian connections (e.g. through reserves) will help mitigate any effects associated with the provision of one footpath only along some roads.
70. The internal roads within the development are logically laid out and provide good connectivity for all modes. Adequate sight distances at intersections can be achieved, but consideration may need to be given to installation of stopping restrictions in certain locations.
71. The proposed internal road network will connect to Amberley Beach Road (and the wider Amberley local road network) via the primary road through the Stage 1-2 development, and to Carters Road (SH1) via a planned new road and intersection to be developed as part of the consented Amberley Retirement Village development on the adjacent site at 175 Carters Road.
72. Based on the adopted traffic generation and distribution assumptions, future traffic volumes through the new Carters Road (SH1) intersection, as well as through the existing intersection of Carters Road (SH1) with Amberley Beach Road, are expected to be similar (if not less than) those already considered by Council and Waka Kotahi NZ Transport Agency in conjunction with the consented Stage 1-2 and Amberley Retirement Village developments. Discussions have been had with the Agency in regard to the current development and the adopted traffic generation estimates and distribution scenarios. The Agency has subsequently provided a letter of agreement in principle for the Stage 3-6 development (albeit referred to in communications with the Agency as proposed Stages 3-5 and future Stage 6).
73. Owing to the low ambient traffic volumes on Amberley Beach Road and Rosewood Drive, detailed traffic modelling of this intersection is considered unnecessary. Further, indications are that the upgraded cross-junction intersection (to be constructed as part of the Stage 1-2 development) would continue to operate at level of service LoS A – LoS B even if development occurred within proposed Stage 3-6 before the new Carters Road (SH1) intersection was built and all development traffic had to use the Amberley Beach Road – Rosewood Drive intersection.
74. The site will be self-sufficient with regards to car parking, noting that each lot could provide car parking. Furthermore, car parking is provided along both sides of the primary road and there are opportunities to provide indented parking bays along the secondary loop road (if required). Any future development on any of the proposed lots will be able to comply with all the relevant transport related requirements of the District Plan. This includes adequate parking, access and manoeuvring for each residential house on each new lot. Failure to comply with any of these standards would result in the requirement for additional resource consent approval.
75. For the reasons discussed above, the proposal can be supported from a transport engineering perspective and the effects are considered to be **acceptable** and **less than minor**.



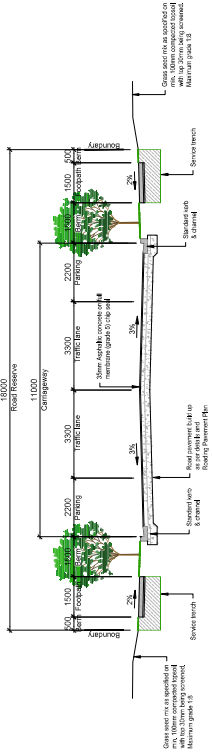
## **Appendix 1**

### **Application Plans**



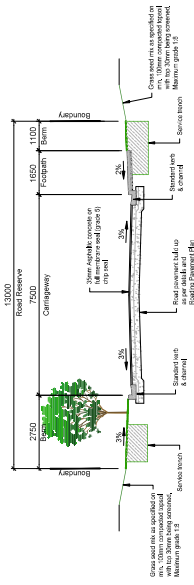
Rev.	Date	Reason	Approved
P1	10/09/22	Issue for Resource Consent	

**PRELIMINARY ISSUE**



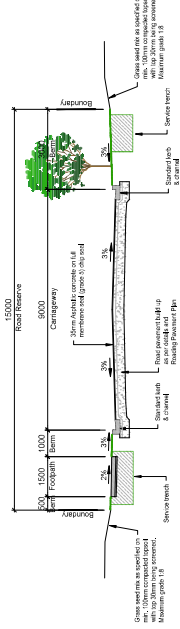
**Typical Cross-Section - 18m Road, 11m Carriageway**  
Road 7  
Scale 1 in 100

NOTE: Engineer is to be notified to inspect the subgrade prior to the placement of any materials.



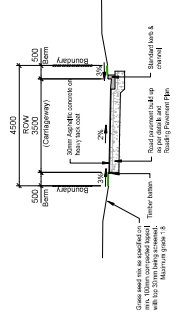
**Typical Cross-Section - 13m Road, 7.5m Carriageway**  
Road 8  
Scale 1 in 100

NOTE: Engineer is to be notified to inspect the subgrade prior to the placement of any materials.



**Typical Cross-Section - 15m Road, 9m Carriageway**  
Road 2  
Scale 1 in 100

NOTE: Engineer is to be notified to inspect the subgrade prior to the placement of any materials.



**Typical Cross-Section - 4.5m ROW, 3.5m Carriageway**  
Scale 1 in 100

NOTE: Engineer is to be notified to inspect the subgrade prior to the placement of any materials.



## **Appendix 2**


### **State Highway 1 Access Arrangements (Approved Under RC200045)**





Sheet  
**SK002D**  
 Scale @A3 1/1,000  
 Date 10/03/2021  
 By N Fuller  
 Project # 031-022

**Amberley Retirement Village,  
 175 Carters Road, Amberley**  
**Proposed State Highway 1 Intersection Arrangement: Overview**  
 Concept For Resource Consent  
 031-022 - SK001D



**novogroup**  
 Planning, Traffic, Development

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 Christchurch 8014  
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## **Appendix 3**

### **District Plan Transport Compliance Assessment**



Transport Standards		COMMENT	COMPLIES?
<b>8.4.3 Standards for permitted activities</b>			
<b>1. Vehicle access to any district arterial or strategic arterial road for activities generating up to 100 equivalent car movements per day:</b>			
The creation of any new property vehicle crossing or the use of an existing vehicle crossing for a new activity, including the relocation of such access points on any district or strategic arterial road must meet the following standards:		Not applicable. Direct access to Carters Road (SH1) is not proposed. Rather, access to the application site is from the planned new road (assumed local road classification) connecting to Carters Road via the planned new intersection. Similarly, direct access from Amberley Beach Road is not proposed. Rather, access from Amberley Beach Road (collector road) will be via the Stage 1-2 internal roading network (local road).	Yes
(a) No alternative legal access is available to another road;		Not applicable. As above.	Yes
(b) The activity complies with the standards for distances, clearance from intersections and minimum access spacing in Table 8.1;		Not applicable. As above.	Yes
(c) The design and construction of vehicle crossing intersections with roads and/or localised road widening must be in accordance with either Figure 8.4 or 8.6 depending on traffic generation; and		Not applicable. As above.	Yes
(d) One vehicle crossing must serve no more than 6 lots.		Not applicable. As above.	Yes
<b>2. Vehicular access to any collector or local roads, for activities (excluding construction activities) generating up to 100 equivalent car movements per day</b>		The overall site when fully developed will generate more than 100ecm/day	<b>Noted</b>
<b>(a) Outside Settlements:</b> The creation of any new property vehicle crossing, or the use of existing vehicle crossings for a new activity (including the relocation of such vehicle crossings), must meet the following standards:		N/A	N/A
(i) All vehicle crossings which adjoin a sealed carriageway shall be formed and sealed for their full length from the road to the property boundary or to 6 m from the edge of the road seal, whichever is the greatest distance, in accordance with the standards in either Figure 8.3 or 8.5 depending on traffic generation;		N/A	N/A
(ii) All vehicle crossings which adjoin a metalised carriageway must be formed to an all-weather standard for their full length from the road to the property boundary or to 6 m from the edge of the carriageway, whichever is the greatest distance, in accordance with the standards in either Figure 8.3 or 8.5, depending on traffic generation;		N/A	N/A





Transport Standards	COMMENT	COMPLIES?
(iii) Within the first 6 m from the road carriageway, the grade of access must not be steeper than 1:8, and any access shall be graded so as to abut the road boundary at the relative level of the roadway or footpath;	N/A	N/A
(iv) One vehicle crossing must serve no more than 6 lots;	N/A	N/A
(v) The design and construction of vehicle crossings on to roads must be in accordance with the sight distances in Table 8.2;	N/A	N/A
(vi) New vehicle crossings must be at least 30 m from a level railway crossing, and the corner of an intersection with two or more carriageways except where the access is onto a side road which joins either a strategic or district arterial road, then the distance must comply with "Distance M" in Table 8.1 and Figure 8.2.	N/A	N/A
(vii) Where more than an average of 12 heavy vehicle movements a week occur to any site, a heavy vehicle access must be provided to the following standards: (a) For heavy vehicle movements associated with milk tankers in the rural zone, a heavy vehicle access must be designed and constructed in accordance with Figure 8.8; and (b) For all other heavy vehicle movements a heavy vehicle access must be designed and constructed in accordance with Figure 8.7; and	N/A	N/A
(viii) All entranceways constructed for the purposes of vehicular access onto private property from the road reserve must be constructed to the standard in Figure 8.10.	N/A	N/A
<b>(b) Within Settlements:</b>		
The creation of any new property vehicle crossings or the use of existing vehicle crossings for a new activity, including the relocation of such vehicle crossings, within settlements must meet the following standards:		
(i) Maximum number of vehicle crossings (a) A site with a total road frontage of 30 m or less: 1 vehicle crossing (b) A site with a total road frontage of more than 30 m: up to 2 vehicle crossings	Could comply when houses are constructed – otherwise separate Resource consent required	Yes
(ii) Minimum width of vehicle crossings (a) Up to 4 dwellings: 3.1 m (b) 4 or more dwellings: 5.5 m (c) Any other activity: 6 m (or separate ingress and egress carriageways of 3 m width each) (d) 8 or more heavy vehicle movements per day: 9 m	Could comply when houses are constructed – otherwise separate Resource consent required. (Right-of-way accesses are typically 4.5m wide and serve no more than 4 lots).	Yes
(iii) The grade of access must not be steeper than 1:8 within the first 6m from the road boundary. Any access must be graded so as to abut the road boundary at the relative level of the roadway or footpath;	Assumed to comply. Site is relatively flat.	Yes



Transport Standards	COMMENT	COMPLIES?
(iv) One vehicle crossing serves no more than 6 lots;	Complies	Yes
(v) New vehicle crossings must be a minimum of 15 m from a level railway crossing, and the corner of an intersection of two or more carriageways except where the access is onto a side road which joins either a strategic or district arterial road then the distance must comply with "Distance M" set out in Table 8.1 and Figure 8.2;	Complies	Yes
(vi) All entranceways constructed for the purposes of vehicular access onto private property from the road reserve must be constructed in accordance with Figures 8.11 and 8.12; and	Complies	Yes
(vii) The design and construction of vehicle crossings on to roads must be in accordance with the sight distances in Table 8.2.	Complies	Yes
<b>3. Minimum access way and roading requirements</b>		
(a) Private right-of-way and private road		
(i) All carriageways for private rights of way and private roads must be designed and constructed in accordance with Figure 8.9;	Assumed to comply	Yes
(ii) Private rights-of-way and private roads must meet the minimum widths in Table 8.3:	Right-of-way accesses are typically 4.5m wide and serve no more than 4 lots	Yes
(iii) In Settlement Zones a private right of way or private road with access to a sealed public road must be formed and sealed to the widths specified in Table 8.3;	Complies on the basis the District Plan sets out minimum dimensions.	
(iv) In the Rural Zone the first 20 m from the road boundary of a private right-of-way or private road with access to a sealed public road must be formed and sealed to the widths specified in Table 8.3;	N/A	N/A
(v) In the Rural Zone any portion of a private right-of-way or private road with a grade steeper than 1:5 must be formed and sealed to the widths specified in Table 8.3;	N/A	N/A
(vi) A private right-of-way or private road with access to a metalled public road must be formed to an all-weather standard to the widths specified in Table 8.3; and	N/A	N/A
(vii) One private right-of-way or private road must serve no more than six lots.	Complies	Yes



Transport Standards	COMMENT	COMPLIES?
(b) In Settlement Zones a private right-of-way or private road shall be designed to cater for the 90 percentile tracking curves specified in Figures 8.15, 8.16 and 8.17;	Complies	Yes
(c) A private right-of-way or private road must be provided with stormwater control to manage the anticipated rainfall runoff from 10% AEP rainfall event unless otherwise specified in the District Plan;	Assumed to comply	Yes
(d) In Settlement Zones the minimum legal width of any road reserve must be 20 m for any road classified as a local road and 10 m greater than the required carriageway width for any road with any other classification (see Appendix 8.1 for road classifications); and	The proposed road corridors are only 18m wide for the primary road, and 13-15m wide for the secondary roads.	No
(e) In Settlement Zones any new public road shall have a footpath formed on both sides.	The primary road through the site has a 1.5m wide footpath on both sides. The secondary roads have a 1.5m-1.65m footpath on one side of the road only.	No
<b>4. Vehicle crossing standards:</b>		
(a) Any new allotment and balance allotment must have access to a legal road which is formed and maintained;	Complies	Yes
(b) All allotments must comply with vehicle access standards in Rule 8.4.3; and	As per the above assessment	
(c) Prior to the residential occupation of any new allotment formed within the Woodbank (River Edge) Zone at Hammer Springs, the internal road network must be continued to Rippingale Road which shall be formed and sealed so as to connect with the currently sealed section of that road.	N/A	N/A
5. On-site car parking standards		Noted
The following standards for on-site car parking apply where:		
- An activity is established on a site; or		
- There is a change of activity; or		
- A building is constructed or the floor area of a building substantially, altered or added to.		
The standards do not apply to unstaffed utilities, unstaffed community scale energy activities or unstaffed commercial scale energy activities.		
<b>(a) General Requirements</b>		
(i) Minimum on-site parking standards will apply to all specified activities in accordance with the table below.	Could comply when houses are constructed – otherwise separate Resource consent required.	Yes
Requires:		



Transport Standards	COMMENT	COMPLIES?
Residential = 1 per dwelling		
(ii) Accessible parking spaces must be provided at the rate of: (a) Up to and including 20 car parking spaces provided – not less than 1 accessible space; (b) 20 - 50 car parking spaces provided – not less than 2 accessible spaces; and (c) For every additional 50 spaces provided, or part thereof – not less than 1 accessible space	Not required for residential uses, but could still comply	Yes
(b) On-site car parking design standards		
(i) The minimum dimensions must be in accordance with Figure 8.13;	Could comply when houses are constructed – otherwise separate Resource consent required.	Yes
(ii) On-site manoeuvring for car parking must be provided to ensure that no vehicle is required to reverse either on to or off a site where: (a) Any site has access to a strategic arterial or district arterial road, or (b) Any site has access to a collector road and requires three or more spaces, or (c) Any site contains a non-residential activity;	Complies. The primary and secondary roads will most likely be classified as be local roads in future. Reverse manoeuvres are therefore permitted.	Yes
(iii) Parking areas must be provided with vehicle crossings and aisles as necessary for egress and ingress of vehicles to and from the road, and for the manoeuvring of vehicles in accordance with the relevant design standards shown in Figures 8.13, 8.15 and 8.17;	Complies	Yes
(iv) Gradients for servicing and manoeuvring must be less than 1:12.5;	Assumed to comply	Yes
(v) In Settlements, for all non-residential activities, the area used for parking, including associated access and manoeuvring must be sealed and parking spaces permanently marked out, and must provide stormwater disposal facilities;	Assumed to comply	Yes
(vi) In all other areas, the parking area and associated manoeuvring and access areas must be either sealed or metalled, and must provide stormwater disposal facilities;	Not applicable	N/A
(vii) Required parking areas, including access, manoeuvring and loading, must be kept clear and available at all times, free of impediments, for vehicles used in conjunction with the particular activity to which the parking relates; and	Complies	Yes
(viii) For parking or manoeuvring areas abutting a sealed carriageway or a public footpath within a road, a kerb or similar barrier of not less than 150 mm high and at least 600 mm width must separate the areas from the edge of the carriageway or footpath.	Assumed to comply	Yes



Transport Standards	COMPLIES?
(c) On-site loading requirements All activities requiring loading/unloading must provide at least one on-site loading area, designed and constructed in accordance with the standards shown in Figure 8.14.	Complies Yes



## **Appendix 4**

### **AM Peak and PM Peak Traffic Distribution Scenarios**

**User Input Yellow Cells**

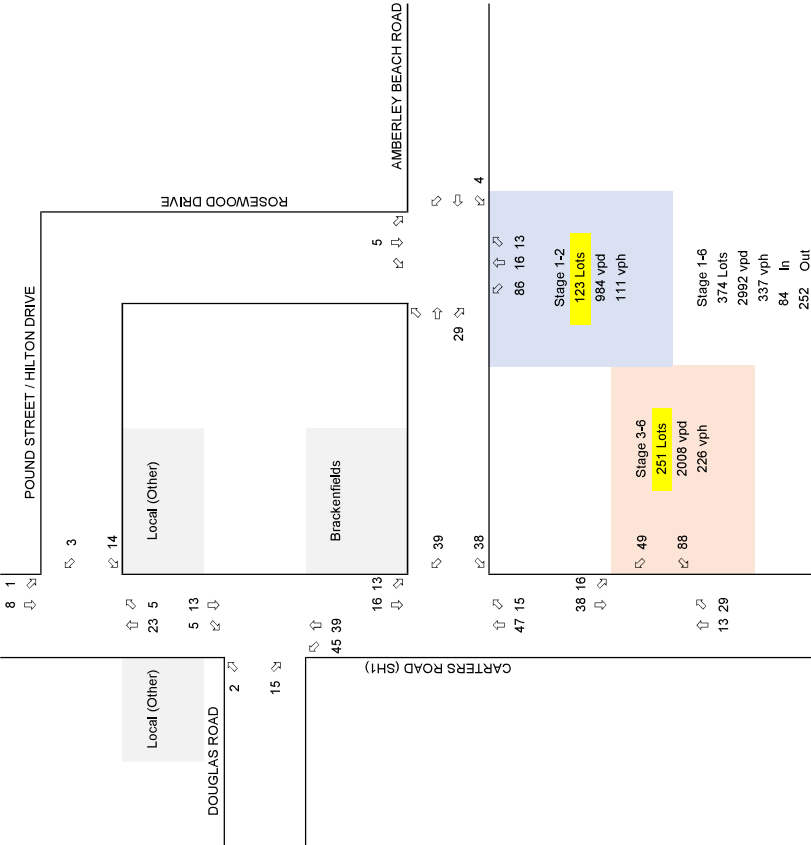
Generation Rates (RR453 - Res Outer Suburban)

8.0 Trips per day  
0.9 Trips per peak hour

**Assumptions**

25% AM Peak (in)  
75% AM Peak (out)  
100%

50% South (eg. Local - south, Woodend, Kalapoi, Christchurch)  
10% North (eg. Local - north, Waipara, Kaikoura, Culverden)  
20% West (eg. Amberley School, Rangiora, Oxford)  
5% East (Amberley Beach)  
5% Local (Brackenfields Shopping Centre)  
10% Local (Other)  
100%



	In	Out
30%	3.8%	11.3%
70%	8.8%	26.3%
100%	0.3%	0.8%
40%	1.0%	3.0%
50%	1.3%	3.8%
10%	0.5%	1.5%
40%	2.0%	6.0%
50%	2.5%	7.5%
100%	1.3%	3.8%
100%	0.0%	0.0%
70%	0.9%	2.6%
30%	0.4%	1.1%
35%	0.9%	2.6%
100%	30%	0.8%
	25%	75%

**Notes**

1. Local (Brackenfields) traffic to/from stg 3-6 / Carters access assumed to be split 70/30 across Carters and ABR Brackenfield accesses respectively
2. Local (Brackenfields) traffic to/from stg 1-2 / ABR access assumed to use ABR Brackenfield access exclusively (ie no traffic through Carters / ABR intersection)
3. Local (Other) origin/destination assumed to be centered on Carters Road between Douglas and Pound.
4. Amberley School assumed to be more significant origin/destination in AM peak than PM peak
5. Brackenfields shopping centre assumed to be less significant origin/destination in AM peak than PM peak

**User Input Yellow Cells**

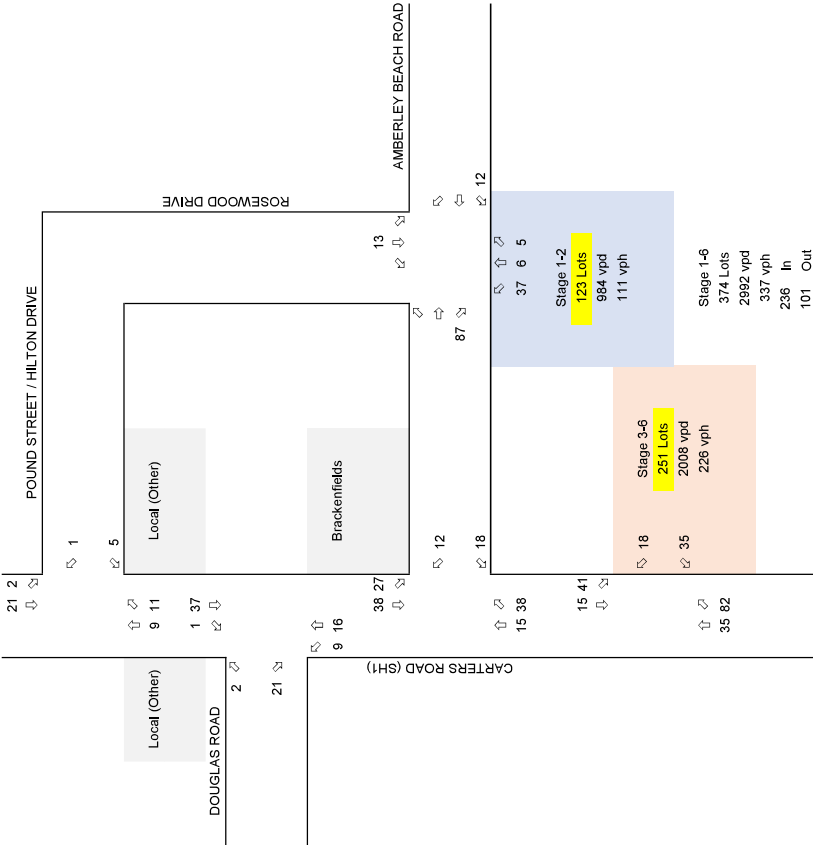
**Generation Rates (RR453 - Res Outer Suburban)**

8.0 Trips per day  
0.9 Trips per peak hour

**Assumptions**

70% PM Peak (in)  
30% PM Peak (out)  
100%

50% South (eg. Local - south, Woodend, Kaiapoi, Christchurch)  
10% North (eg. Local - north, Waipara, Kaikoura, Culverden)  
10% West (eg. Amberley School, Rangiora, Oxford)  
5% East (Amberley Beach)  
15% Local (Brackenfields Shopping Centre)  
10% Local (Other)  
100%



	In	Out
30%	10.5%	4.5%
70%	24.5%	10.5%
100%	0.7%	0.3%
40%	2.8%	1.2%
100%	3.5%	1.5%
10%	0.7%	0.3%
40%	2.8%	1.2%
100%	3.5%	1.5%
100%	3.5%	1.5%
100%	0.0%	0.0%
70%	7.4%	3.2%
100%	30%	3.2%
35%	2.5%	1.1%
35%	2.5%	1.1%
100%	30%	2.1%
	70%	30%

**Notes**

1. Local (Brackenfields) traffic to/from stg 3-6 / Carters access assumed to be split 70/30 across Carters and ABR Brackenfield accesses respectively
2. Local (Brackenfields) traffic to/from stg 1-2 / ABR access assumed to use ABR Brackenfield access exclusively (ie no traffic through Carters / ABR intersection)
3. Local (Other) origin/destination assumed to be centered on Carters Road between Douglas and Pound.
4. Amberley School assumed to be more significant origin/destination in AM peak than PM peak
5. Brackenfields shopping centre assumed to be less significant origin/destination in AM peak than PM peak





## **Appendix 5**

### **Comparison Summary of Previously Modelled Traffic Volumes and Current Estimated Traffic Volumes**

CARTERS ROAD (SH1) / NEW ROAD INTERSECTION

Consented Development - Retirement Village plus nominal 250 lot residential development

AM Peak	Carters (SH1) South Through	Carters (SH1) South Right	New Road Left	New Road Right	Carters (SH1) North Left	Carters (SH1) North Through	Total
Future Base	473	6	3	3	4	313	786
Retirement Village							16
Residential (250 lots)		37	83	86	19		225
*sole access to Carters (SH1)	473	43	86	89	23	313	1027
Combined							
<b>PM Peak</b>							
	Carters (SH1) South Through	Carters (SH1) South Right	New Road Left	New Road Right	Carters (SH1) North Left	Carters (SH1) North Through	Total
Base	459	5	5	5	4	720	1179
Retirement Village							19
Residential (250 lots)		97	33	34	61		225
*sole access to Carters (SH1)	459	102	38	39	65	720	1423
Combined							

Proposed Development - Retirement Village plus The Clearing (Stage 1-6)

AM Peak	Carters (SH1) South Through	Carters (SH1) South Right	New Road Left	New Road Right	Carters (SH1) North Left	Carters (SH1) North Through	Total
Base	473	6	3	3	4	313	16
Retirement Village							233
Residential (374 lots)		13	88	49	16	38	1035
*access to Carters (SH1) and ABR	486	35	91	52	20	351	8
Combined	13	-8	5	-37	-3	38	
Change							
<b>PM Peak</b>							
	Carters (SH1) South Through	Carters (SH1) South Right	New Road Left	New Road Right	Carters (SH1) North Left	Carters (SH1) North Through	Total
Base	459	5	5	5	4	720	1179
Retirement Village							19
Residential (374 lots)		82	35	18	41	15	226
*access to Carters (SH1) and ABR	494	87	40	23	45	735	1424
Combined	35	-15	2	-16	-20	15	1
Change							

CARTERS ROAD (SH1) / AMBERLEY BEACH ROAD INTERSECTION

Consented Development - The Clearing (Stage 1-2)

AM Peak	Carters (SH1) South Through	Carters (SH1) South Right	Left	Right	ABR Left	ABR Right	Carters (SH1) North Left	Carters (SH1) North Through	Total
Base									
Stage 1-2 (123 lots)									
*sole access to ABR	459	96	42	24	62	642			1325
Combined									
<b>PM Peak</b>									
	Carters (SH1) South Through	Carters (SH1) South Right	Left	Right	ABR Left	ABR Right	Carters (SH1) North Left	Carters (SH1) North Through	Total
Base	459	96	42	24	62	642			1325
Stage 1-2 (123 lots)									
*sole access to ABR	459	151	14	6	35				110
Combined									

Proposed Development - The Clearing (Stage 1-6)

AM Peak	Carters (SH1) South Through	Carters (SH1) South Right	Left	Right	ABR Left	ABR Right	Carters (SH1) North Left	Carters (SH1) North Through	Total
Base									
Stage 1-6 (374 lots)									
*access to Carters (SH1) and ABR	47	15	38	39	13	16			168
Combined									
Change									
<b>PM Peak</b>									
	Carters (SH1) South Through	Carters (SH1) South Right	Left	Right	ABR Left	ABR Right	Carters (SH1) North Left	Carters (SH1) North Through	Total
Base	459	96	42	24	62	642			1325
Stage 1-6 (374 lots)									
*access to Carters (SH1) and ABR	15	38	18	12	27	38			148
Combined	474	134	60	36	89	680			1473
Change	15	-17	4	6	-8	38			38



## **Appendix 6**

### **Waka Kotahi NZ Transport Agency Letter of Agreement in Principle**

Waka Kotahi NZ Transport Agency Reference:

2 May 2022

Wayne Gallot  
NOVO Group  
PO Box 365  
Christchurch 8140

Sent via email: [wayne@novogroup.co.nz](mailto:wayne@novogroup.co.nz)

Dear Wayne

**Proposed Stages 3-6 'The Clearing' Subdivision, Amberley – State Highway 1 Access**

You have sought comment from Waka Kotahi NZ Transport Agency (the Agency) in relation to proposed Stages 3-5 and future Stage 6 of 'The Clearing' subdivision development in Amberley, particularly in regard to access onto Carters Road (SH1) via a planned new intersection and also in regard to effects of subdivision traffic on the existing intersection of Amberley Beach Road with Carters Road (SH1).

From the information provided, Waka Kotahi understands that proposed Stages 3-5 and future Stage 6 will provide a total of up to 251 residential lots / dwellings, with access to Carters Road (SH1) proposed via the planned new intersection to be delivered as part of a consented retirement village development to the north. It is also acknowledged that Stages 3-6 will also have access to Amberley Beach Road through previously consented Stages 1-2 of 'The Clearing' development which provided 123 residential lots / dwellings.

We note the following information that has been provided to Waka Kotahi;

- Estimated traffic generation volumes and assumed traffic distribution scenarios
- Resultant estimated future intersection volumes
- Comparison of estimated future intersection volumes against those modelled and/or accepted in the previously consented retirement village and Stage 1-2 development for 'The Clearing'
- Masterplan images showing all consented, proposed and future stages of 'The Clearing' development in the context of the surrounding road network and retirement village complex.

James Long (Waka Kotahi Traffic Safety Engineer) has reviewed the above information. He does note that vehicles may leave the subdivision on Amberley Beach Rd and go straight across into the other residential development. However, the predicted volumes doing this are very low and as such there would be no material change should those vehicles use the main Amberley Beach Rd / SH1 intersection.

Waka Kotahi is satisfied that the estimated future volumes are similar (if not lower on some individual movements) to those previously modelled in relation to other consents and accepted by Waka Kotahi.

Based on the above, Waka Kotahi agrees in principle to the proposed Stage 3-5 development (including traffic associated with the future Stage 6 proposal). It considers that the planned new intersection design associated with the consented retirement village development will accommodate the estimated traffic generation associated with that development. As such, Waka Kotahi does not require further traffic modelling at this stage.

Waka Kotahi NZ Transport Agency Reference:

For avoidance of doubt, this agreement in principle is on the basis that there is to be no direct access for development traffic to Carters Road (SH1).

If you have any queries regarding the above or wish to discuss matters further, please feel free to contact Deborah Hewett via email at [deborah.hewett@nzta.govt.nz](mailto:deborah.hewett@nzta.govt.nz) or you can contact the environmental planning team at the following email address – [environmentalplanning@nzta.govt.nz](mailto:environmentalplanning@nzta.govt.nz).

Yours sincerely

A handwritten signature in blue ink that reads "D Hewett". The signature is written in a cursive style with a large initial 'D'.

Deborah Hewett  
Senior Environmental Planner  
Environmental Planning, System Design, on behalf of Waka Kotahi NZ Transport Agency.