
TO: Bede Morrissey, Policy Planner, City Development

FROM: Logan Copland, Trevor Watson, DCC Transport

DATE: 31 March 2022

SUBJECT: **VARIATION 2: TRANSPORT RESPONSE TO REQUEST FOR COMMENTS ON GREENFIELD REZONING SITES – REJECTED SITES**

BACKGROUND

1. City Development have sought expert transport advice in relation to Variation 2 to the 2GP (Additional Housing Capacity). This memorandum contains the expert advice sought.
2. This memorandum will be used to inform the reporting planning officer's Section 42A Report. Specifically, it provides a brief assessment of each 'rejected' site with a view to identifying potential transport issues associated with them.
3. Transportation infrastructural issues have also been identified in relation to each site, including the need for improvements to the transport network to accommodate additional development. The reader is advised that in most cases (unless otherwise stated) that these improvements are not currently planned or funded.
4. Finally, submissions in relation to each site have been considered and responded to, as requested.

COMMENTS ON THE PREVIOUSLY REJECTED SITES

RS170: 103, 105, 107 Hall Road, Sawyers Bay – Rezoning from Rural Residential 1 to some form of Residential zoning



1. City Development's memo to DCC Transport indicates that the site would be able to accommodate approximately **23** dwellings at Township and Settlement Zoning (400m²). The current zoning is Rural Residential 1.
2. The site was originally rejected because it was considered that development of this site will exacerbate downstream wastewater overflows.
3. FS256 raises concerns with respect to increased traffic stress to a small bridge. It is presumed that the bridge to which this statement refers is that located on Hall Road, adjacent to 41 Hall Road. The submitter is also concerned with the "danger posed by a blind corner". It is presumed that the corner to which this statement refers is that located adjacent to 105 Hall Road.
4. I note that the carriageway over the bridge described in Paragraph 3 is in the order of 7.0m wide and a footpath is provided on one side. There is also excellent forward sight visibility. It is not considered that the development would create any noticeable concerns with the bridge from a traffic capacity perspective. However, from a structural perspective, there may be limitations to the types of vehicles that can cross the bridge. Since this is a residential development, this is only likely to be a potential issue during the construction phase, when heavy vehicles will need to access the site for civil and house construction. It is considered that this can be managed as necessary and would be unlikely prohibit rezoning of this property to enable a relatively small number of new house sites.
5. With respect to the 'blind corner', it is considered that this could be resolved relatively easily as part of a road upgrade. This could involve vegetation clearance and curve widening in the location shown below. This may also require vesting of part of the development site as road.



6. The most concerning aspect is the intersection between two private drives within legal road and the end of the Hall Road formation, shown below. Any increase in traffic usage at this intersection will require careful consideration by a suitably qualified and experienced traffic engineer to identify a solution that is safe. This is considered to be the main transport related issue relating to residential development of this site.



7. Note also that the legal width is constrained to only 12m further north-west. It is likely that road widening and upgrading would be required to facilitate residential development. Due to topography, this would have to occur on the southern side and would require vesting of part of the development site as road to achieve a minimum 15m reserve width.
8. The formed section of Hall Road is a Collector Road with a 15m wide reserve width. It has an 8m wide sealed carriageway. It is expected that this carriageway width could accommodate the additional vehicle traffic generated by 23 new house sites.
9. The road has a footpath on both sides from the Stevenson Avenue intersection up to 39 Hall Road, where the western footpath terminates, leaving a footpath on the eastern side of the road only beyond this point. Additional residential development may increase pressure for the Council to extend the western footpath up to the development site – a length of about 550m.
10. Hall Road provides good access to SH88 and a roundabout is provided at the Stevenson Avenue / Station Road intersection. It is unlikely that traffic generated by an additional 23 dwellings

would have a noticeable impact the safe and efficient operation of nearby intersections. However, it should be noted that the Station Road / Sir John Thorn Drive intersection is managed by Waka Kotahi as Road Controlling Authority, and confirmation that they are comfortable with the additional development traffic passing through this intersection should therefore be sought.

11. As above, access to the development site would need to be considered in more detail at the subdivision stage. This should be done as part of an Integrated Transport Assessment submitted as part of a subdivision consent.

RS193: 177 Tomahawk Road – Rezoning from Rural to General Residential 1

12. City Development's memo to DCC Transport indicates that the site would be able to accommodate approximately **135** dwellings at Township and Settlement Zoning (400m²). The current zoning is Rural.
13. The site was originally rejected because stormwater discharge from the site is complex, and would likely require discharge into the Tomahawk Lagoon. This raises concerns relating to water quality and acceptability to iwi, which would likely mean that discharge consent from ORC would be challenging to obtain.
14. The site has frontage to Tomahawk Road and Gloucester Street. Tomahawk Road is a Collector Road and Gloucester Street is a Local Road.
15. Gloucester Street is a no exit road serving a handful of properties. It has a legal width in the order of 12m from Spencer Street up to the first sharp curve. The carriageway is about 7.5m wide with footpaths on both sides. Past the curve, there are no footpaths. For a road serving between 1-20 dwelling units (du), NZS4404:2010 requires a 15m wide reserve width with a 5.5-5.7m wide carriageway and footpaths and berms on both sides. Consideration would need to be given to on-road parking. Gloucester Street does not meet this standard because there are no berms and the footpath on the northern side is too narrow.
16. The road intersects with Spencer Street and Tomahawk Road which forms an unusual intersection alignment. Additional traffic volumes at Gloucester Street could create efficiency issues for cars trying to exit Spencer Street. The intersection would need to be reviewed and potentially upgraded with increased traffic volumes.
17. Submission FS34 supports the rezoning of the site subject to Gloucester Street being widened to 'current specifications' to allow for future traffic requirements. The submitter notes that they may apply to develop the end of their farm (address not supplied) and if it is to be subdivided then Gloucester Street would not be wide enough to support the increased traffic volumes. The submitter also notes that Spencer Street is too narrow for its current traffic volume but does not appear to suggest that Spencer Street should be widened also.
18. As per the assessment above, it is agreed that Gloucester Street does not strictly comply with NZS4404:2010. However, it should be noted that the formed carriageway is wider than required. It is considered that further investigation / transport assessments should be provided by the proposer which specifically reviews the standards of the surrounding affected roads as a result of the proposed rezoning. Note that I consider that it would not be acceptable to develop this number of houses with a single point of access, and hence, the ability for Gloucester Street to accommodate additional development traffic is a key issue to be resolved from a transport perspective.
19. I note that there also does not appear to be any potential for widening of Gloucester Street due to the location of existing buildings on adjacent properties. The titles of adjacent properties should be reviewed to see if there are building line restrictions registered which could allow for road widening.
20. Tomahawk Road has a suitable cross section to absorb additional traffic volumes. However, there are known speed issues on this road. The likely point of site access is located near a curve which will have implications for sight distances. An ITA would need to be undertaken by the

developer to assess these matters. This may need to include traffic modelling to review impacts of development traffic on localised intersections. The ITA would also need to consider how active road users such as pedestrians and cyclists would be safely provided for.

RS161: 210 Signal Hill Road – Rezoning from Rural to Large Lot Residential or Rural Residential

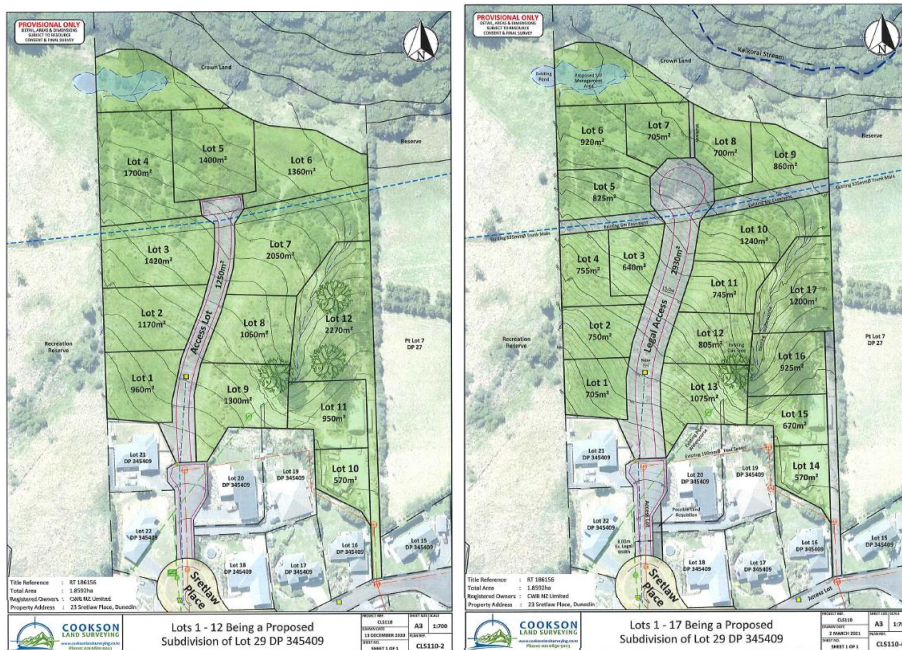
21. City Development's memo to DCC Transport indicates that the site would be able to accommodate approximately **23** lots at Large Lot Residential 1 zoning (2000m²) and 13 lots at Large Lot Residential 2 (3500m²) zoning. However, a structure plan has been provided by the submitters and if this was adopted, there would be total of **7** lots. To ensure a robust analysis, a total capacity of 23 lots has been used for this assessment.
22. The site was originally rejected because it was subject to SNL overlays and was considered inappropriate for residential development due to the significance of landscape values.
23. The site has frontage to Signal Hill Road. Signal Hill Road is a Collector Road. Mobile Roads suggests an estimated average daily traffic (ADT) of 500 vehicles per day (vpd). The legal width is in the order of 12m. The carriageway is in the order of 7.25m wide with painted edge-lines. There are no footpaths, with these terminating to the west of the site boundary.
24. It is considered that the rezoning would have only an insignificant effect on the wider transport network because the quantum of development being considered is relatively small.
25. That said, Large Lot Residential zoning may result in a density where residents would expect urbanised transport infrastructure to be provided which is currently not in place, such as footpaths. However, this would be best determined at the time of subdivision once the final density per hectare is known. This is because if the density is sufficiently low, it may be acceptable to provide a suitable shoulder on Signal Hill Road for pedestrians to use instead of a footpath. It can be seen from the below Google Streetview image that there is a steep embankment and utility poles which could make building a footpath difficult, if that was deemed necessary. Hence, to ensure the option is available, it is recommended that, prior to rezoning, the appellant be required to confirm that there are no insurmountable constraints that would prevent footpath construction linking the development site with the existing footpath kerb and channel outside 188 Signal Hill Road. This would then allow the decision over whether footpath construction is actually required to be appropriately deferred to subdivision stage, as Council could then have confidence that options are available to address pedestrian connectivity.



26. Aside from this, it is considered that the remaining transport issues are relatively minor and could be adequately managed at the time of subdivision consent.

RS110: 23 Sretlaw Place / 118 Brockville Road – Rezoning from Rural to General Residential 1

27. City Development's memo to DCC Transport indicates that the site would be able to accommodate approximately **32** lots at General Residential 1 zoning (2000m²). However, the submitter has prepared two structure plans: one containing **12** lots and the other containing **17** lots. The current zoning is Rural. These two plans are copied below.



28. The site was originally rejected because the original request to rezone the site was received from a potential (unsuccessful) purchaser, so was not progressed.
29. Submissions received relating to transportation matters are primarily concerned with increased traffic and maintenance of the existing private accessways.
30. Plan CLS110-2 (left) shows 3 lots accessed over 18 Sretlaw Place and 9 lots accessed over 25 Sretlaw Place, both of which appear to be shared access lots.
31. Plan CLS110-4 (right) shows 4 new lots access over 18 Sretlaw Place and 13 new lots accessed over 25 Sretlaw Place, and hence, is essentially an up-scaled version of CLS110-2.
32. There appears to be 4 existing users of the access over 18 Sretlaw Place and 10 existing users of the access over 25 Sretlaw Place. Hence, the development could increase these numbers to up to **17** over 25 Sretlaw Place and **14** over 18 Sretlaw Place.
33. These access lots are not of a standard that Council would accept to adopt as legal roads. For this to happen, they would need to be widened/upgraded to Code of Subdivision standards as part of a subdivision and vested back to the Council as legal roads. This would require agreement from other owners/users.
34. Increased use of these access lots of private access-ways to the numbers being contemplated would be contrary to recent policies notified relating to number of lots accessed from a private way (where it is suggested that an access-way serving more than 12 sites should be made a legal road).
35. Note that 118 Brockville Road, whilst not being considered for rezoning at this time, has frontage to Charters Street. The radius boundary corners would suggest that a road or accessway has been previously contemplated in this location. Use of this as a new intersection could present issues due to the proximity to Colquhoun Street. This would need to be assessed as part of an ITA in support of a subdivision consent. Further, the corridor is only 12m wide and

would not meet the required standard for a legal road. It is considered worthy to investigate this location as future access point to a smaller scale of development, so that it could be used as a private way.

36. While it is expected that the development would have minimal impact on the wider transport network, it is considered that the previous construction of narrow private accessways is now presenting some constraints to ensuring that sufficient access to 118 Brockville Road and 23 Sretlaw Place is available for any substantial level of development on this site.
37. Hence, unless the submitter is able to demonstrate that suitable road access can be achieved, it is considered that the development potential of the site is constrained by the standard of accesses that has been provided previously.

RS176: 234/290 Malvern Street, Leith Valley – Rezoning from Rural Residential 2 to either Large Lot Residential (LLR1 or LLR2) or Rural Residential 1

38. City Development's memo to DCC Transport indicates that the site would be able to accommodate a total of **58** dwellings at Large Lot Residential 1 Zoning, **33** dwellings at Large Lot Residential 2, and **8** dwellings and Rural Residential 1.
39. The site was originally rejected because access to the site is constrained by the Urban Biodiversity Mapped Area, and because there are downstream wastewater issues.
40. The site has frontage to Malvern Street, which is a Collector Road. The road forms part of the Council's Strategic Cycle Network, though this extends only as far Woodhaugh Street. There is no dedicated cycling infrastructure on the road. However, this does not preclude cyclists from using the road, or Council from providing this infrastructure in the future.
41. Malvern Street comprises a two-lane/two-way carriageway with painted edge lines and a dashed centre line. There is a footpath on the eastern side of the road. The Water of Leith runs more or less parallel with the carriageway on the western side of the road, near Patmos Avenue.
42. There a bus stops directly adjacent to the site.
43. A traffic count adopted from Road Assessment and Maintenance Management Tool (RAMM) on Malvern Street taken in October 2021 reveals an ADT of 1261vpd North of Patmos Avenue. The estimated ADT south of Patmos Avenue is in the order of 1500vpd. These are fairly modest volumes given the road's classification.
44. While additional development on Malvern Street will likely have cumulative effects on the efficiency of the Duke Street / George Street signalised intersection, it is considered unlikely that a development of this size would create any significant effects in this regard. In making this statement, I note that the site is well located to make use of alternative modes of transport such as walking, cycling and public transport. This supports the network resilience and travel choice focuses within the Council's Integrated Transport Strategy.
45. Overall, it is considered that residential development on the site can be supported from a traffic and transportation perspective. That said, it is not clear how access would be provided and what sort of standard could be achieved. For the number sites being contemplated (except for Rural Residential 1 Zoning), it is likely that new public roading would need to be provided, ensuring a suitable number of connection points to the existing transport network. Hence, an Integrated Transport Assessment would need to be provided to ensure all localised and wider transport impacts are adequately evaluated in detail. This will need to ensure suitable access provisions and connections to existing roading infrastructure.
46. Since undertaking the above assessment, Transport has been subsequently advised that the submitter is now proposing only two additional lots, which would be accessed via a ROW to Patmos Avenue. Such a proposal would have no noticeable effects on the wider transport network, and it is considered that any detailed matters could be addressed as part of a subdivision consent.
47. The original assessment contained in Paragraphs 38-47 are retained for completeness.

RS206, RS206a, RS77: Part 35 and 43 Watts Road, Part 109 North Road – Rezoning from Rural/Rural Residential 2 to General Residential 2/General Residential 1

48. City Development's memo to DCC Transport indicates that the site would be able to accommodate a total of **173** residential lots across the entirety of the rejected site areas listed above and shown below.



49. The area marked RS206 in the above map is approximately 2.26 ha in size and, at Large Lot Residential 1 density (minimum site size 2,000m²) could support approximately **8** dwellings.
50. The area marked RS206a in the above map is approximately 3.01 ha in size and, at General Residential 2 density (minimum site size 300m²) could support approximately **70** dwellings.
51. The area marked RS77 in the above map is approximately 4.07 ha in size and, at General Residential 2 density (minimum site size 300m²) could support approximately **95** dwellings.
52. The sites were rejected because of Significant Natural Landscape issues, expected exacerbation of downstream wastewater overflows, and topography making high density development problematic.
53. Watts Road is a relatively constrained legal road corridor. It is only about 12m wide at the North Road intersection and reduces to about 10m wide at 35 Watts Road. There are steep banks on the private land on the western side of the road, meaning that even if the legal width was increased, that physical improvements would likely require significant and expensive engineering works. At the southern end, the carriageway is about 8m wide and there are footpaths on both sides. This reduces to 7m and a footpath on only one side where the carriageway crosses Lindsay Creek. Further north, the carriageway reduces to less than 6.0m wide and the footpath is less than 2.0m wide, with utility poles situated within the footpath.
54. It is not clear what level of development Watts Road would be expected to service if the land was rezoned as requested by the submitter. For less than 100du, the Code of Subdivision requires a 16.0m wide road corridor. For more than 100du but less than 450du, a 20m road corridor is expected and cycle lanes are required. The current standard of Watts Road does not

satisfy either of these requirements and no assessment of this has been provided by the submitter.

55. Additional development on Watts Road would result in additional turning movements at the Watts Road / North Road intersection. In the absence of any assessment of this by the submitter, the significance or otherwise of this effect cannot be determined with any certainty.
56. It is noted that part of 309 Watts Road is already zoned General Residential 2. It is considered that there are already constraints with achieving access to this site because access is only available from North Road. This would require a crossing structure to bring a new road over Lindsay Creek. It is considered that only a limited number of new dwellings could be constructed with a single access to avoid concerns relating to emergency access and ensuring that the demand on the one access to North Road is suitably managed. This is an important consideration in this case because North Road carries a high traffic volume (estimated 6,400ADT as per Mobile Roads meaning turning onto or off North Road could be difficult during peak hours. This is particularly the case because the majority of traffic from the subdivision would most likely be making a right turn in the am peak toward the city.
57. We do note, however, that the site is well serviced by public transport and North Road contains existing cycle infrastructure in the form of painted cycle lanes. In that sense, we consider the site is well positioned from a travel choice and resilience perspective.
58. That notwithstanding, Transport has concerns about the rezoning as requested and considers that there is insufficient detail / assessment for us to provide our support to the submitter's request.

RS171: 3 Brick Hill Road and 18 Noyna Road, Sawyers Bay – Rural to Township and Settlement

59. City Development's memo to DCC Transport indicates that the site would be able to accommodate approximately 59 dwellings lots at Township and Settlement zoning. The current zoning is Rural.
60. The site was originally rejected because residential development would exacerbate downstream wastewater overflow.
61. The submitter does not provide any assessment of the potential effects of the rezoning on the transportation network. The site is largely rectangular shaped with frontage to Noyna Road to the south and Brick Hill Road to the north.
62. Elizabeth McColl (FS86) raises road safety concerns relating to access to the site from Noyna Road and also impacts on the state highway network.
63. Noyna Road is a Local Road that provides access to a handful of residential properties. It is a single lane road widening to two-lane at its intersection with Sir John Thorn Drive. Sir John Thorn Drive forms part of the state highway network (SH88), and hence, Waka Kotahi is the Road Controlling Authority for that road.
64. Development of this site would have a potential effect on the State Highway network due to the potential for increased turning movements at the Noyna Street / Sir John Thorn Drive intersection. Waka Kotahi would need to be consulted regarding this.
65. In addition, Noyna Road would not be able to accommodate the level of development being contemplated, and hence, would need to be upgraded to the standards set out in the Code of Subdivision if it was to be used for access. This would need to include carriageway widening and footpath extensions to connect with existing infrastructure on Sir John Thorn Drive.
66. Brick Hill Road typically comprises a 20m wide legal road corridor. The formed carriageway varies from approximately 7.5m wide down to less 5.0m at the bridge / culvert crossing at the beginning of Stevenson Avenue.
67. It is considered that the carriageway over the bridge is constrained to a point where it could present issues with additional traffic volumes generated by the proposed rezoning. The structural condition of the bridge would also need to be reviewed. There are no provisions for

pedestrians and there is no footpath on Stevenson Avenue (i.e., east of the bridge). However, note that the developer of the subdivision at 105 Stevenson Avenue is required to construct a new footpath on Stevenson Avenue that links that subdivision to the existing footpath outside Sawyers Bay School. This is currently under construction. It is considered that a footpath would need to be extended from the proposed rezoning site to the new footpath on Stevenson Avenue. This would likely be more than 100m of new footpath and would therefore be a reasonably substantial / costly construction task which would need to be funded by the developer.

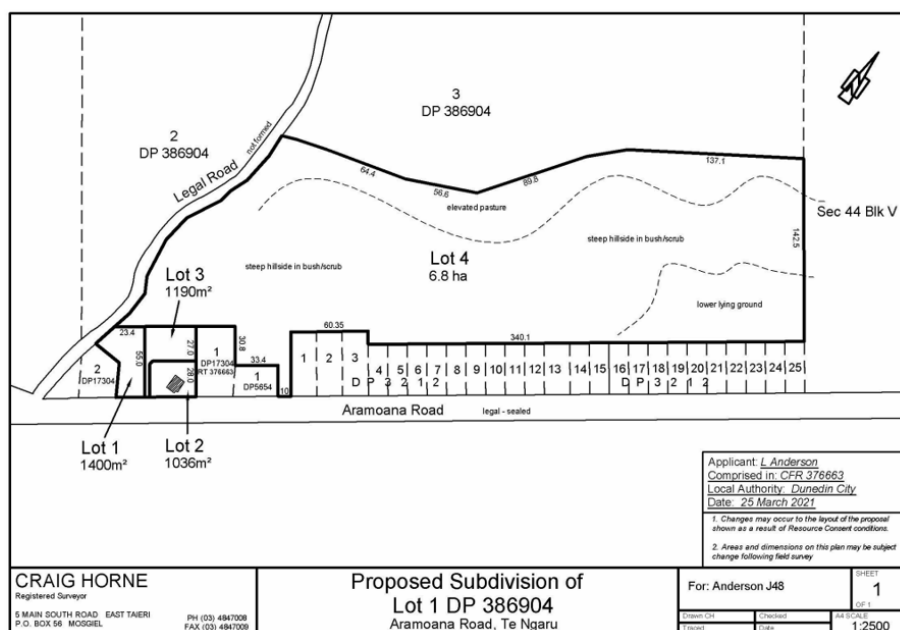
68. Any new intersection from Brick Hill Road would need to satisfy standards within Austroads and the Code of Subdivision.
69. Traffic distribution requires consideration because Brick Hill Road and Blanket Bay Road are both narrow, winding roads and additional traffic could therefore create safety issues.
70. Overall, while we are not diametrically opposed to the rezoning, there are transportation infrastructural issues that do not appear to have been considered by the submitter. Hence, the submitter should be required to provide an integrated transport assessment to the Council for review, which addresses the concerns raised above.

RS200: 489 East Taieri-Allanton Road – Rezoning from Rural to Township and Settlement/Large Lot Residential 1

71. City Development's memo to DCC Transport indicates that the site would be able to accommodate approximately 41-61 lots at Township and Settlement zoning (ranging from 500m²-700m²) and approximately 8 additional lots at Large Lot Residential 1 zoning (approximately 2000m²). The total yield would therefore be in the order of 69 dwellings. The current zoning is Rural.
72. The site was originally rejected because parts of the site are very steep, there is existing residential capacity in Allanton, and rezoning would not support the compact form/city policies.
73. The site has frontage to East Taieri-Allanton Road (State Highway 1) along its northern boundary. Waka Kotahi is the road controlling authority for this road. According to map data from Waka Kotahi, this section of the road is a Limited Access Road. The site also has frontage to Ralston Street to the west and Riverside Road to the east. A paper road runs through the site generally following an east-west alignment.
74. The site is located some 20km from the central city. Walking and cycling would not be a feasible form of transport and there is no infrastructure to support alternative modes of transport. There is also no public transport service available to the site.
75. Residential development on the site is anticipated to have a significant impact on the state highway network. This is because the Structure Plan provided implies access to State Highway 1 would be proposed and there is no evidence of consultation with Waka Kotahi in that regard. As above, this is particularly important noting that the road is a Limited Access Road
76. Ralston Street has no footpaths or kerbs. The development could potentially change the traffic dynamics on this road to a significant degree.
77. Overall, from a transport perspective, it is considered that the site is not a good candidate for the zoning sought due to its isolated location, proximity to State Highway 1, and lack of provision for alternative modes of transport.

RS205: 761 Aramoana Road – Rezoning from Rural to Township and Settlement

78. City Development's memo to DCC Transport indicates that the site would be able to accommodate 3 lots at Township and Settlement zoning (ranging from 500m²-700m²). The current zoning is Rural.
79. These are shown below.

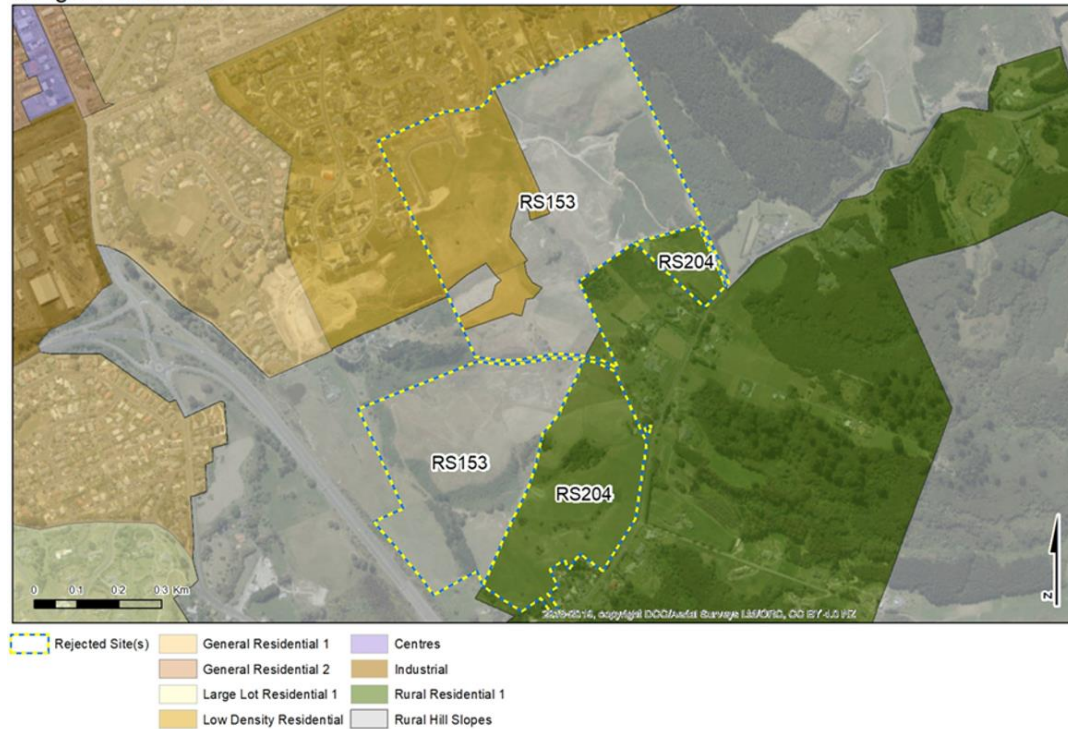


80. An additional 3 residential sites would have an insignificant impact on the transport network. Any existing issues with the transport network would not be exacerbated to any noticeable extent because the scale of development being considered is small.
81. That said, access to the new sites would need to be assessed by the developer at the time of subdivision and confirmed as complying with minimum sight distances requirements in the 2GP.

RS204: 21, 43, 55, 65, 75, 79, and 111 Chain Hills Road – Rezoning from Rural Residential 1 to a mix of zones (GR1, LLR1) as shown on submitter’s structure plan & RS153: 77 and 121 Chain Hills Road and 100 Irwin Logan Drive, Mosgiel – Rezoning from Rural to a range of Residential and Rural Residential zones. Note – requested additional sites are included: 2-20 Jocelyn Way, 38 and 40-43 Irwin Logan Drive, and 25-27 Pinfold Place

82. The current zoning is a mix of Rural Hill Slopes and Low Density Residential which provides for a minimum site size of 25ha and 750m², respectively. The submitter has provided a draft structure plan which would provide for a total of **136** lots across **both** RS204 and RS153.
83. RS204 comprises of the land fronting Chain Hill Road – 21, 43, 55, 65, 75, 79 and 111 Chain Hills Road. RS153 comprises of the land at 77 and 121 Chain Hills Road, and 100 Irwin Logan Drive. There are also additional sites requested at 2-20 Jocelyn Way, 38 and 40-43 Irwin Logan Drive, and 25-27 Pinfold Place. RS204 and RS153 are shown below.

Mosgiel / Chain Hills



84. The submitter's structure plan is shown below, which, as above includes land across both RS204 and RS153.

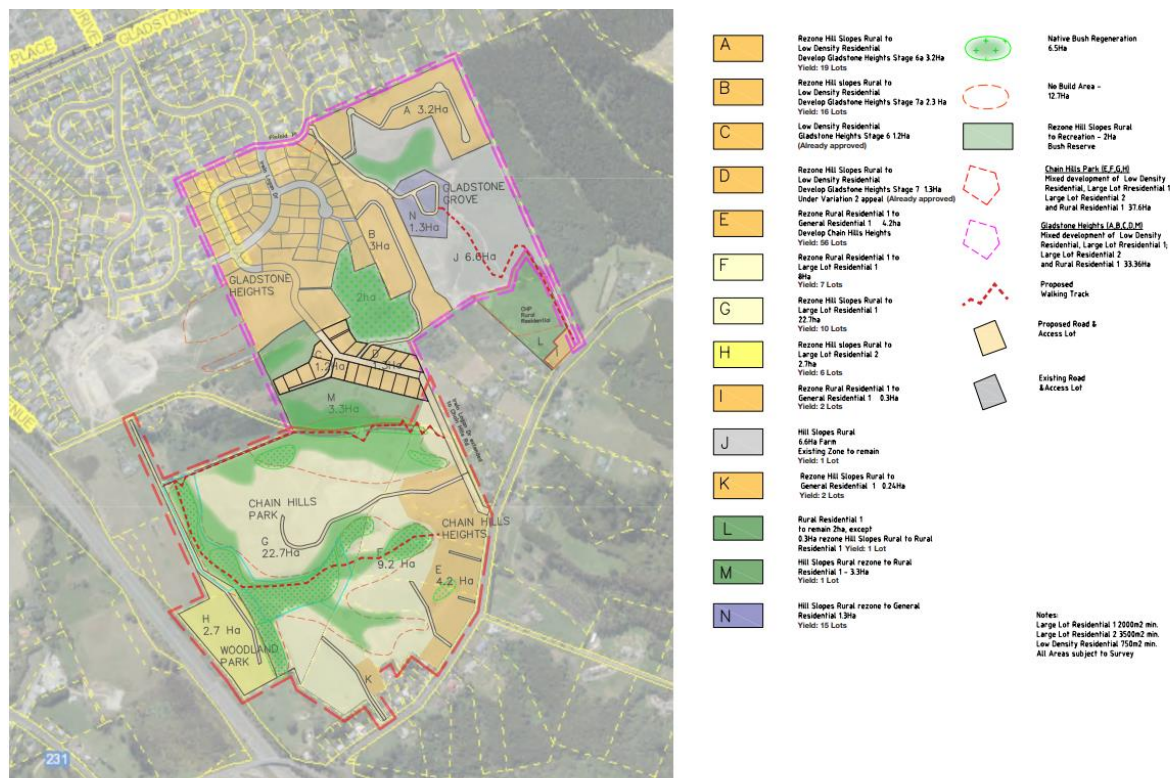


Figure 1 : Proposed Re-Zone Site Structure Plan

85. A notable number of submissions were received on this site which raise transportation concerns.

86. FS105 opposes the change and specifically notes that they oppose the proposed road connection from Gladstone Road North to Chain Hills Road due to safety concerns.
87. FS107, FS108, FS118, FS246, FS26, FS46, FS48 and FS165 oppose the change primarily due to concerns about the road connection. They consider that Chain Hills Road and Morris Road are currently unsuitable to accommodate the change. FS165 notes that there are no pedestrian or cycle facilities on Chain Hills Road and suggests that the developer should be required to construct a cycle and pedestrian path at least along the area where the proposed road will join Chain Hills Road and the junction with Morris Road, and provide for a dedicated cycle lane along Morris Road and possibly Main Road as far as the Old Brighton Road turnoff. They also consider it is questionable to promote cars leaving the motorway at Fairfield to reach Mosgiel because they would need to pass the Fairfield Primary School.
88. FS183 supports the submission in part but has raised concerns about a new road connecting to Woodland Avenue. They consider that development of their property at 40 Woodland Avenue would 'go some way to mitigating these issues as it would allow widening the road and access to further up the hill without going through the neighbour's property'. Note that Transport is unclear as to whether a road connection from the development site to Woodland Avenue is being promoted by the proposer.
89. FS89 opposes the submission, but in particular opposes the road connection between Gladstone Road North and Chain Hills Road. They comment that the Irwin Logan Drive / Gladstone Road North intersection will 'become an increasing bottleneck'. They consider that this intersection would require a roundabout. They also raise concerns about more traffic turning right from Irwin Logan Drive into Heathfield Drive and associated effects on the safety and efficiency of Gladstone Road North.
90. FS196 opposes the submission due to the various transport related concerns. They also note the lack of consideration for public transport.
91. FS48 oppose the submission due to concerns about access to the site via a right of way passing along the back of the further submitter's property (20 Pinfold Place).
92. I respond to these submissions below.
93. In terms of the existing transport network, Irwin Logan Drive has an 18.0m wide reserve width, typically comprising an 8.0m wide sealed road carriageway with footpaths and berms on both sides. There is a footpath on the western side of the road only for the first 120m from Gladstone Road South. Pram crossing points are provided at intersections as necessary.
94. A recent traffic count in July 2021 adopted from RAMM showed an ADT of 903vpd on Irwin Logan Drive between Gladstone Road North and Heathfield Drive. There is no recent count information for this road south of Heathfield Drive. Currently, the traffic volumes on Irwin Logan Drive, south of Heathfield Drive, will be less since some of the traffic will disperse off Irwin Logan Drive and into the Heathfield development. Note also that this count was taken soon after construction of the Heathfield Drive connection to Woodland Avenue, and it is therefore possible that some of the traffic was/is using this road as a through route to enter or exit Mosgiel. The extent of this is unclear.
95. As can be seen from the submitter's concerns, the submission proposes a roading link between Chain Hills Road and Gladstone Road North. This would occur via an extension of Irwin Logan Drive, which passes through the Gladstone Oaks development and has continued through the more recent Gladstone Heights development.
96. Chain Hills Road extends from Morris Road and terminates at a dead end after a length of about 3.4km. The proposed new intersection with Chain Hills Road is shown to be located about 800m north of the Morris Road intersection and hence, this section of Chain Hills Road would receive additional demand should the connection proceed. The proposed intersection location would require assessment against Austroads. This would need to be done by the developer's traffic engineer and submitted to Council for review.

97. Many submitters raise concerns with respect to the safety implications of the development on Chain Hills Road. They note that the road is a rural road with an 80kph speed limit with a tortuous alignment and lack of facilities for non-motorised road users. I concur with the concerns raised by the further submitters and consider that the proposer should be required to address these concerns.
98. It is noted that even if the concerns raised on Chain Hills Road with respect to inadequate facilities for non-motorised users are resolved, that the same issues exist on Morris Road. There are no current plans for Council to install footpaths or cycle facilities on Morris Road, and hence, the development is likely to increase pressure for Council to install this infrastructure. This would be a significant project in terms of scale and cost.
99. In addition, the submitter has not undertaken an analysis of the proposed road connection on the wider transport network. While Transport is typically supportive of proposals that enhance network connectivity, this needs to be assessed in the context of the surrounding environment.
100. In that regard, Transport recommends that an integrated transport assessment is prepared by a suitably qualified and experienced person. This will need to include an analysis of traffic generation, but also distribution of existing and new traffic which could be changed with the proposed roading connection. This will allow the Council to better understand the scale of the potential wider effects of the connection on the wider transport network. For example, the connection could be used as a rat-run for drivers wishing to bypass the SH87 intersection which is commonly understood to be under significant pressure during peak hours. This could funnel additional traffic through Fairfield, accessing/egressing the motorway via Old Brighton Road. As above, in the absence of any detailed transport assessment / traffic modelling, the scale of this potential problem is not understood to a point where the Council is able to make a conclusive determination on Transport rounds as to the acceptability (or otherwise) of the development at this stage.
101. Notwithstanding the concerns raised above, and in the event that the proposal was acceptable in principle to Council (including the provision of the link road), the Council would need to better understand what standard the connection road could be constructed to, particularly in terms of widths and gradients. This is because of the steep topography required to traverse over the hill.
102. Overall, then, it is considered that in the absence of any detailed traffic/transport analysis, that Transport is currently unable to provide its support to the proposed rezoning.

RS169: 41 Emerson Street – Rezoning from Rural to General Residential 1

103. City Development's memo to DCC Transport indicates that the site would be able to accommodate **102** dwellings at General Residential 1 zoning (500m²). The current zoning is Rural.
104. The existing transport infrastructure on Emerson Street is inadequate to accommodate urbanised development such as this. For more detail, please refer to the Greenfield Sites assessment relating to 33 Emerson Street.
105. An additional 102 dwellings is likely to have a significant impact on the transport network and further assessment would need to be undertaken by the submitter to further understand and evaluate these effects.
106. At a minimum, Emerson Street would need to be upgraded to an urban roading standard and nearby intersections would need to be assessed with the additional traffic volumes to determine what upgrades would be required.
107. Hence, in the absence of any supporting transportation information, Transport is unable to provide its support to this rezoning.

RS14: Freeman Cl and Lambert St, Abbotsford– Rezoning from Rural to General Residential 1

108. City Development's memo to DCC Transport indicates that the site would be able to accommodate the following:
- 25 McMeakin Road (S298.001) is 2.7 ha in size and has an estimated capacity of **47** lots at a 400m² minimum site size.
 - The area in question of 42 Lambert St (S281.001) is approximately 6.6 ha size and has an estimated capacity of **116** lots at a 400m² minimum site size.
 - 45 McMeakin Road and part 188 North Taieri Rd (S228.003) is approximately 30.83 ha in size total. At a 400m² minimum site size (GR1) the site could support up to approximately **540** lots. At a 750m² minimum site size (LDR) the site could support up to approximately **288** lots.
 - 55 McMeakin Road (S302.002) is approximately 15.1 ha in size and has an estimated capacity of **264** lots at a 400m² minimum site size.
109. This is a total maximum capacity of up to **967** new dwellings.
110. The site was originally rejected as significant natural hazard risks were identified.
111. FS102 opposes the change because the current roading in the surrounding area, particularly North Taieri Road, is not suitable for the increased traffic flow that could be enabled by the rezoning. They also consider that North Taieri Road is not wide enough to cope with the current traffic due to kerbside parking, particularly around school pick-up/drop-off times.
112. FS114 raises various concerns relating to the standard of North Taieri Road, both in terms of safety and structural integrity. This submitter has particular concerns with respect to safety around Abbotsford School and impacts of additional traffic on the railway crossing bridge, near Severn Street.
113. FS187 raises concerns about resilience due to lack of alternative access provisions, safety at the Severn Street/Abbotsford Road/North Taieri Road intersection, as well as general safety and congestion concerns at Abbotsford School.
114. In response to submissions, it is considered that with the quantum of development being considered, that there would be significant effects on the transport network. These effects have not been evaluated by the submitters. I consider that an additional 967 dwellings could generate in the order of 7,930vpd-9770vpd, and 870-1160vph during the peak hours. This is a significant amount of new traffic. Since the development site is located at the end of North Taieri Road, a large proportion of this traffic would be required to travel the full length of the road when entering and leaving the site.
115. According to Mobile Roads, the latest estimated ADT on North Taieri Road, between Freeman Close and McKinlay Road is currently 410vpd. From this, I would anticipate a peak hour traffic volume in the order of 41-62vph. The development could therefore increase the daily traffic volume on this section of North Taieri Road by over 9,000vpd and the peak hourly traffic volume by over 1,100vph. This would represent a substantial change in transport demands for North Taieri Road. The volumes on the southern parts of the road would be even higher because of the already existing higher volumes.
116. The effects of this additional traffic on downstream intersections, such as North Taieri Road / Abbotsford Road and also the motorway on-ramp and nearby roundabouts, has not been assessed by the submitters.
117. Since the site is constrained in terms of options for access, it is considered that this level of development would create unacceptable pressure on North Taieri Road and the wider transport network. It is considered that, as a minimum, a development of this size would require construction of additional connection points to other parts of the existing transport network. There are existing legal roads in McMeakin Road and Abbots Hill Road which provide these possible connections. However, these roads are not fully formed and where they are formed, the standard is not suitable for residential development. They also have narrow reserve widths.

118. From a structural integrity perspective, it is unlikely that North Taieri Road would be able to accommodate the additional traffic loading. This is especially the case noting the amount of heavy construction traffic that would be required to access the site during earthworks/subdivision construction phase, and house construction phase. The railway bridge also presents constraints in this regard, since the bridge is structurally incapable of supporting heavy overweight type vehicles, such as mobile cranes.
119. Based on the above high-level assessment, it is considered that Transport is unable to provide its support for the proposed rezoning, based on the quantum of development being proposed and the lack of sufficient transport assessment on behalf of the submitters.

RS154: 91 and 103 Formby Street – Rezoning from Rural to Township and Settlement

120. City Development's memo to DCC Transport indicates that the site would be able to accommodate 31 dwellings at Township and Settlement zoning (500m²). The current zoning is Rural.
121. The site has frontage to Formby Street to the east and Huntly Road to the south. Formby Street is a Local Road and Huntly Road is a Collector Road.
122. Outram School is located about 280m from the site on Formby Street. The Outram Rural Centre Zone is about 1km away.
123. Formby Street has a reserve width in the order of 12m. The carriageway is formed to a width of about 5.5m with a dashed centre line. There are no footpaths on this section of Formby Street. The nearest footpath commences north of Three Kings Court. The posted speed limit is 50kph. Street lighting along this section of Formby Street may not be suitable for residential development and may therefore require upgrading to meet current standards.
124. Huntly Road has a varying reserve width but is typically in the order of 12m wide. The carriageway is in the order of 6.0m wide with a dashed centre line. There are no footpaths on Huntly Road. There is street lighting on the south side of the road between Formby Street and Bell Street, but not along the section that passes the development. The posted speed limit is 70kph. The operating speed is unknown. There is a line of utility poles which present roadside hazards.
125. The vertical and horizontal alignments of both roads are favourable. There are no significant undulations or curves.
126. Huntly Road / Formby Street intersect at a typical priority T-junction with Huntly Road having priority. There is no formal give-way signage or road markings and there is no continuity line. There is a chevron sign indicating to drivers that the road does not continue straight but that they are instead required to turn left or right onto Huntly Road. Having considered the reported crash history using NZTA Crash Analysis System, the intersection has an excellent accident record with no crashes reported in the past 10 years. However, this would need to be reviewed in light of additional traffic volumes from development.
127. Additionally, the lack of pedestrian / cycle infrastructure is an issue. The developer would need to extend footpaths to connect the development with existing infrastructure. This is likely to be a substantial expense but is a pre-requisite for development in order to manage transport effects. In addition to providing for active road users, provision footpaths kerb and channel would assist with managing vehicle operating speeds.
128. The speed limit on Huntly Road would also need to be reviewed and likely reduced, with infrastructure provided to ensure drivers respect the reduced speed limit.
129. An Integrated Transport Assessment would need to be undertaken at the developer's expense to ensure all transport effects are adequately evaluated and suitable mitigation / design measures implemented to manage any adverse effects.
130. Hence, while it is considered likely that, subject to the above, an additional 31 dwellings would have only a minor impact on the wider transport network, Transport questions the overall suitability of development of this site from a sustainability perspective. In particular, the site is

located some 25km from the city centre and residents would be provided with minimal transport options. Facilitating further development in Outram is considered to be at odds with key focus areas within the Dunedin Integrated Transport Strategy, such as a focus on travel choices and resilience.

RS175: 85 Formby Street – Rezoning from Rural to Township and Settlement

131. City Development's memo to DCC Transport indicates that the site would be able to accommodate **43** dwellings at Township and Settlement zoning (500m²). The current zoning is Rural.
132. Hence, the combined capacity of RS175 and RS 154 would be in the order of **74** dwellings.
133. It is considered that all of the transport comments made with respect to RS154 are also applicable to this site. However, a combined development of dwellings would be a substantial development for Outram, and the associated transport effects would clearly be more significant.
134. The comments made under Paragraph 130 are emphasised again, being relevant for RS175 and RS 154 individually, but amplified in a scenario where both developments proceeded.
135. Transport considers that, despite the outcomes of any effects assessment of a future integrated transport assessment, that there are fundamental transportation policy issues associated with adding further development capacity in isolated locations such as Outram. On that basis, and noting that the Council considers there to already be adequate capacity for housing in Outram, Transport is not convinced that rezoning both RS175 and RS154 is a desirable outcome for the city's transport network. Hence, we are not supportive of these submissions.