



Proposed Residential Expansion Area Northlake

Transportation Assessment



**CARRIAGEWAY
CONSULTING**

traffic engineering | transport planning



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CCL file reference	14204 northlake ta draft4
Status	Draft 4
Issued	8 October 2026



1. Introduction

- 1.1. Northlake Investments Limited proposes to lodge a request to allow for a Residential Expansion Area (**REA**) which will enable an increase in the number of lots able to be developed in the west of the Northlake subdivision. If approved, the REA will allow for residential use within part of Activity Area E1 and subsuming the Activity Area C1 'island' in the current District Plan Structure Plan (as discussed further below).
- 1.2. This Transportation Assessment sets out a detailed analysis of the transportation issues associated with the proposed REA including changes in travel patterns that are likely to arise. Where potential adverse effects are identified, ways in which these can be addressed are set out.
- 1.3. This report is cognisant of the guidance specified in the New Zealand Transport Agency's '*Integrated Transport Assessment Guidelines*' and although travel by private motor vehicle is addressed within this report, in accordance with best practice the importance of other transport modes is also recognised. Consequently, travel by walking, cycling and public transport is also considered.
- 1.4. By way of background, the area was initially the subject of a private plan change (Plan Change 45) known as 'Northlake', with the rezoned area expected to accommodate up to 1,600 residences. The Northlake subdivision is an area within the Northlake zone.
- 1.5. A subsequent plan change was lodged to allow for residential development towards the west of the Northlake subdivision (but still within the Northlake zone). This is known as Plan Change 54 and was named as 'Northlake'.
- 1.6. To minimise confusion arising from the similar names, this report refers to the Northlake zone (being the wider area rezoned through PC45), the Northlake subdivision (being the part within the Northlake zone that has been developed by Northlake Investments Limited) and PC54 area (being the area within the Northlake zone rezoned through that plan change). The area that is the subject of the proposed REA is simply referred to as '**the site**'.

2. Site Overview

2.1. Location

- 2.1.1. The REA (**the site**) is located towards the northwest of the Northlake subdivision, which itself is located around 3.2km northeast of Wānaka town centre. For context, the general location of the site in respect of the local area is shown in Figure 1 and the location is shown in more detail in Figure 2.

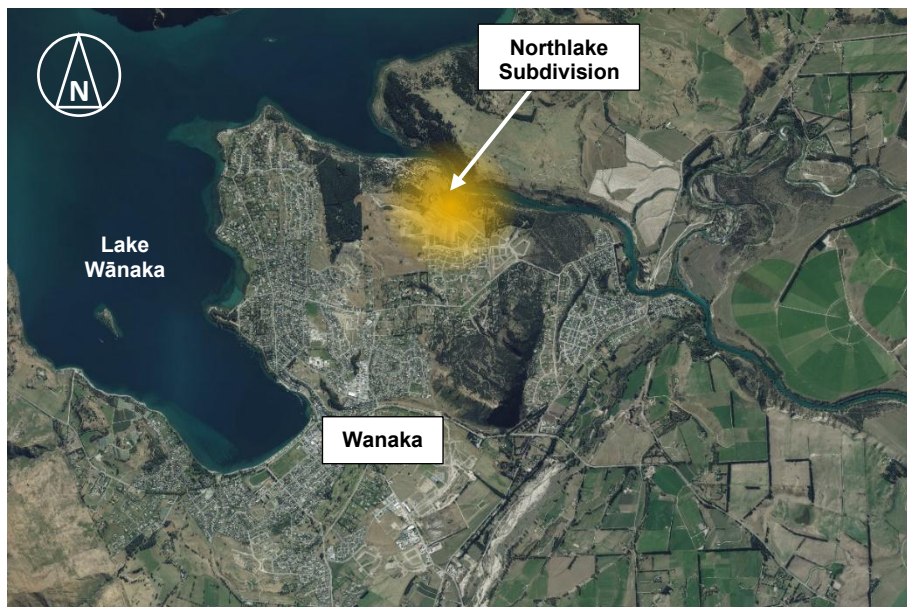


Figure 1: General Location of Proposed REA

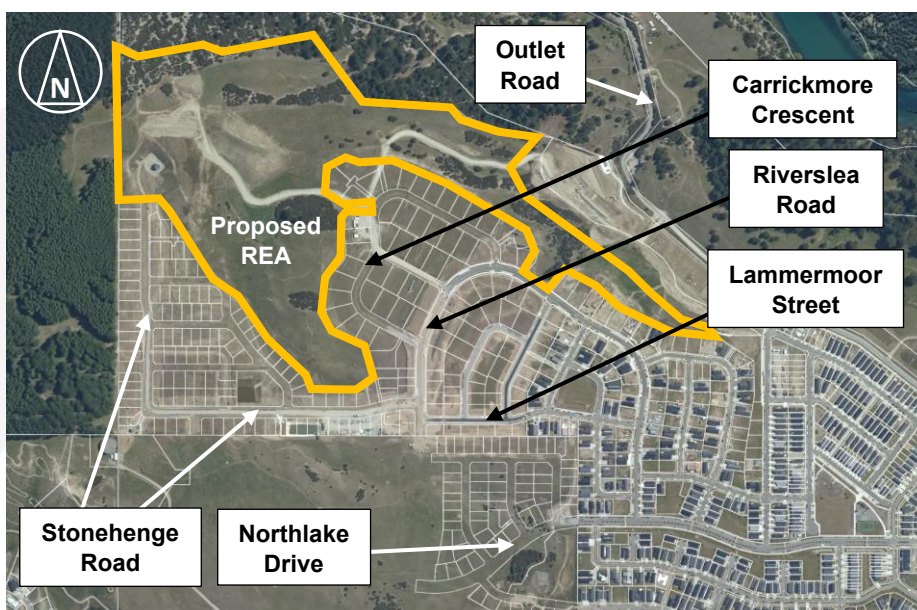


Figure 2: Aerial Photograph of Proposed REA and Environs

- 2.1.2. The site has frontage onto the northern end of Stonehenge Road, onto the eastern section of Stonehenge Road, Carrickmore Crescent towards the northeast, and Riverslea Road to the east.



- 2.1.3. Further afield, there are three potential routes that provide a connection between the Northlake subdivision and Aubrey Road, being the route providing access to the wider roading network. These are Northburn Road, Mt Linton Avenue and Outlet Road.

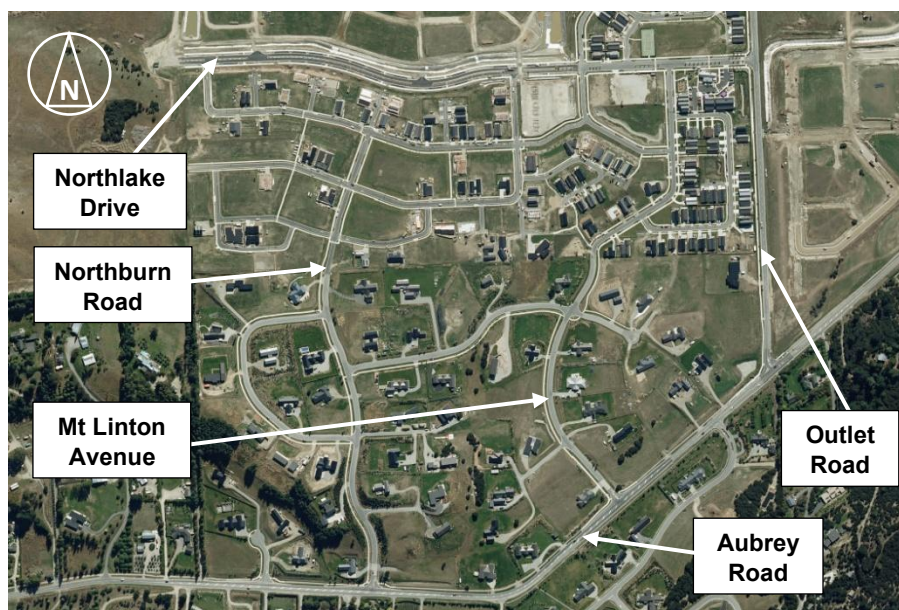


Figure 3: Routes Between Northlake and Wider Roading Network

2.2. *Roading Classification*

- 2.2.1. The District Plan classifies all roads in the immediate area of the site as Local Roads, indicating a role in providing primarily for property access. Northlake Drive to the southeast of the REA is similarly classified as a Local Road, despite the role it provides within the subdivision. However Outlet Road towards the east and south of the REA is classified as a Collector Road, indicating a role in accommodating both property access and through traffic.

3. Current Transportation Networks

3.1. *Roading Network*

- 3.1.1. In the immediate vicinity of the site, the roading network has recently been constructed as part of the continued development of the Northlake subdivision. The east-west Stonehenge Road has a 20m legal width and a formed width of 8.4m, with parking bays of 2.5m width. This configuration meets the Council's Land Use Development and Subdivision Code of Practice (**Code of Practice**) requirements for a road serving up to 800 residences. The road alignment is straight but with a gentle gradient from east to west.



Photograph 1: Typical Cross Section of East-West Part of Stonehenge Road (Looking West)

- 3.1.2. Stonehenge Road includes a 90-degree curve at the southwestern part of the Northlake subdivision, before then running with a north-south alignment and terminating approximately 350m from the curve. Part-way along this section of road, the legal width of Stonehenge Road reduces to 15m, with a 5.7m carriageway width and on-street car parking anticipated.



Photograph 2: Curve in Stonehenge Road (Looking West)



Photograph 3: Northern Section of Stonehenge Road (Looking North)

- 3.1.3. This section of Stonehenge Road also provides roading access to the area known as ‘Sticky Forest’. The road connects to Stonehenge Road approximately 75m north of the 90-degree curve referred to above, and while a ‘stub’ is constructed, the formation is presently just 35m long and ends at the property boundary.



Photograph 4: Section of Road Serving Sticky Forest

- 3.1.4. At the eastern end of Stonehenge Road, it meets Riverslea Road at a priority intersection, with Lammermoor Street joining Riverslea Road just to the south of this. Riverslea Road has the same configuration as Stonehenge Road, with a 20m legal width and 8.4m formed width.



Photograph 5: Stonehenge Road / Riverslea Road Intersection (Looking East)



Photograph 6: Typical Cross Section of Riverslea Road

- 3.1.5. Lammermoor Street continues towards the east. This has a 15m legal width with a 5.7m formed width and on-street parking within the movement lanes. This configuration meets the Code of Practice requirements for a road serving up to 100 residences. This is due to the absence of a parking lane over parts of its length, as if a parking lane was to be provided, then Lammermoor Street would meet the Code of Practice requirements for a road serving up to 200 residences.



Photograph 7: Typical Cross Section of Lammermoor Street (Looking West)

- 3.1.6. In turn Lammermoor Street connects to the eastern section of Riverslea Road, which then connects in turn to Northlake Drive.
- 3.1.7. At the northeastern corner of the proposed REA, access is proposed to be gained onto Carrickmore Crescent. This has a 15m legal width and is formed with a 5.7m wide carriageway (with localised widening on the curves). There are no indented parking bays meaning that parking in the movement lanes is anticipated, although in key locations, parking restrictions are marked.



Photograph 8: Typical Cross Section of Carrickmore Crescent (Looking East)

- 3.1.8. Carrickmore Crescent has a curving alignment and connects to Riverslea Road in two locations, at priority intersections approximately 200m apart.
- 3.1.9. Each of these roads operates with a 40km/h limit, consistent with the remainder of the Northlake subdivision.

3.1.10. Further afield, the increasing density of the roading network in the area to the southeast of the proposed REA means that there are variety of routes that traffic can use to travel to Wānaka and beyond.

3.1.11. Northlake Drive provides a key east-west route within the Northlake subdivision. It is a median divided road with one traffic lane in each direction, and a flat and gently curving alignment.



Photograph 9: Northlake Drive (Looking West)

3.1.12. At its eastern extremity, Northlake Drive meets Outlet Road at a priority ('give-way') crossroad intersection, with Joe Brown Drive forming an approach from the east (this serves the Hikuwai residential subdivision). The intersection does not have any auxiliary lanes for turning traffic, indicative of the generally low traffic flows that it carries. Sight distances in each direction are excellent.



Photograph 10: Outlet Drive Looking North, Northlake Drive on Left

3.1.13. Outlet Road has a sealed carriageway width of 6.4m, with shoulders of 1.0m (0.5m sealed and 0.5m metalled), and to the south of Northlake Drive, a straight horizontal alignment. It is subject to a 40km/h speed limit. Further south, Outlet Road descends and meets Aubrey Road at a priority ('stop') intersection. The intersection has an auxiliary right-turn and left-turn lane, with good sight distances in each direction.



Photograph 11: Aubrey Road / Outlet Road Intersection

3.1.14. Aubrey Road has a 60km/h speed limit and has the same cross-section as Outlet Road, with traffic lanes comprising a total of 6.4m, plus 0.5m sealed and 0.5m metalled shoulders in places.



Photograph 12: Typical Cross-Section of Aubrey Road

3.1.15. In turn, Aubrey Road provides a connection to Anderson Road and to State Highway 84.

3.1.16. Approximately 330m west of the Northlake Drive / Outlet Road intersection, Mount Nicholas Avenue joins Northlake Drive from the south. In turn, this connects to Northburn Road, and

Northburn Road then connects to Aubrey Road approximately 680m west of the Aubrey Road / Outlet Road intersection.

- 3.1.17. Northburn Road within the Northlake subdivision provides a 5.7m wide carriageway with indented parking bays. However, at the southern end of the subdivision, the road meets the existing formation of Northburn Drive which has a 6.4m wide carriageway (between edgelines), with gravelled shoulders and swales on either side, and one 2m wide footpath.



Photograph 13: Typical Cross-Section of Northern Section of Northburn Road



Photograph 14: Northburn Road, Looking South (Near the Southern Boundary to Northlake)

- 3.1.18. Further south, Northburn Road descends to meet Aubrey Road. The road retains the same cross-section, with a 6.4m wide carriageway.



Photograph 15: Northburn Road, Looking South (Just North of Aubrey Road)

3.1.19. The Aubrey Road / Northburn Road intersection is a priority ('give-way') intersection. The intersection has an auxiliary left-turn lane, but no right-turn lane although there is a flush median that can be used by vehicles turning right. Sight distances in each direction are excellent.



Photograph 16: Aubrey Road / Northburn Road Intersection, Looking West

3.1.20. The Pembroke Heights subdivision lies to the south of the proposed REA and the roading network that has been developed in this area provides further route choices. Notably, Riverslea Road has been extended southwards and in due course will connect to Northlake Drive approximately 300m south of Lammermoor Street. However there are already three roads constructed that provide routes that connect Riverslea Road to Northlake Drive, being Callaghans Creek Rise, Leven Stream Lane and Craigie Burn Lane.

3.1.21. Callaghans Creek Rise initially runs for around 240m east from Riverslea Road before turning through a 90-degree curve to run south for 100m before meeting Northlake Drive. Craigie Burn

Lane and Leven Street Lane run parallel to the north-south section of Callaghans Creek Rise, 80m and 160m to the west, respectively. These roads are all formed with a 15m legal width and a 5.7m carriageway, with parking anticipated within the movement lanes.

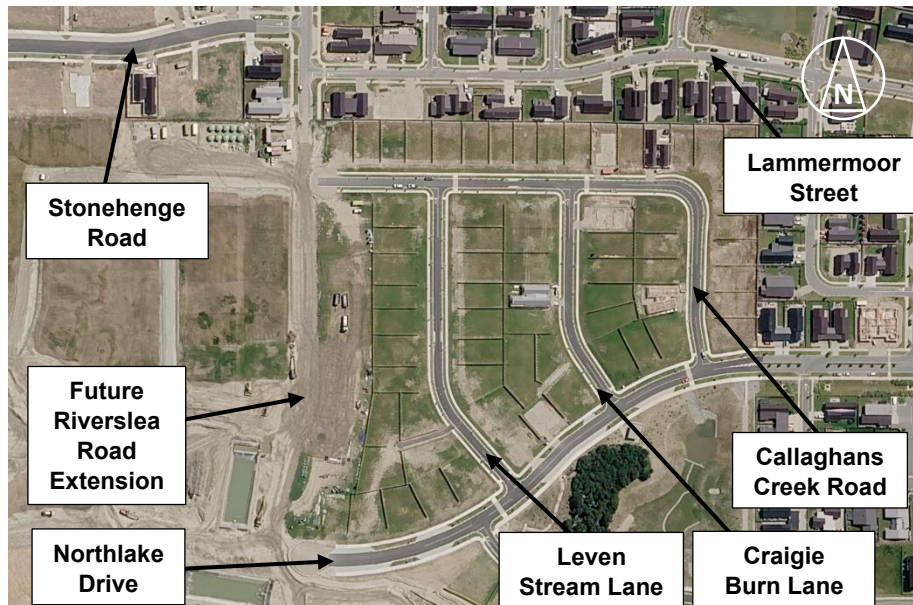


Figure 4: Recently Consenting Roading Network

3.2. **Non-Car Infrastructure**

- 3.2.1. The proposed and constructed roads in the area show that the provision for walking and cycling infrastructure is aligned with the requirements of the Code of Practice, with roads typically having footpaths on each side (as can be seen in the photographs above).
- 3.2.2. Cycling is generally anticipated to take place on-street due to the low flows and speeds. However, the Northlake Structure Plan shows that there are 'required walkway/cycleway' links running in the immediate area, and in that regard, there are shared paths on Northlake Drive and Riverbank Road as specified in the Structure Plan. There is also a shared route that runs along the northern side of Aubrey Road.

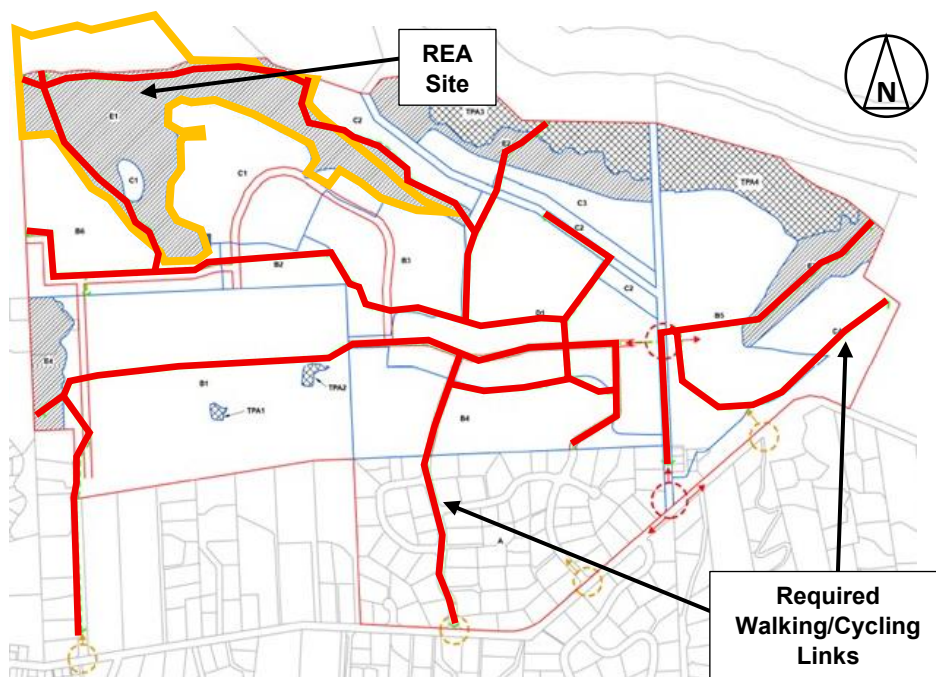


Figure 5: Required Walkway/Cycleway Links on Northlake Structure Plan (Extract from District Plan, Required Links and REA Highlighted)

- 3.2.3. As there is no public transport service in Wānaka, none of the roads in the area have specific provision for buses. As there are no firm proposals for bus services, it is not possible to be prescriptive as to where services might run in future, but Northlake Drive has been constructed in a manner which means it is suitable for bus services should any be operated in future.

3.3. Future Changes

- 3.3.1. There are no known changes to the roading environment in the immediate area that are set out in any overarching strategies or guides. However, there are a number of resource consents and future land use changes that will affect infrastructure in the area.
- 3.3.2. The Northlake zone was underpinned by a private plan change request (PC45) that expected up to 1,600 residences to be constructed. The Northlake zone is larger than the development known as the 'Northlake subdivision' and from information previously provided, comprises the following:

Stage	Residential Yield	Comment
Northlake subdivision Stg 1-12 & 14-15	523	100% constructed
Northlake subdivision Stg 14	46	100% constructed
Northlake subdivision Stg 16	55	90% constructed
Northlake subdivision Stg 17	48	75% constructed
Northlake subdivision Stg 18	125	25% constructed
Northlake subdivision retirement village	40	100 retirement apartments, equivalent to 40 standard residences. 35% constructed



Northlake subdivision Lot 1005	27	100% constructed
Northlake subdivision Lot 1006	25	100% constructed
Northlake subdivision AA-A	64	1 acre subdivision. 100% constructed.
<i>Subtotal</i>	955	
Pembroke Heights	352	Construction ongoing, estimated 15% constructed
Hikuwai	200	Construction ongoing, estimated 50% constructed.
Urquhart Land	23	Undeveloped. Calculated as 4.5ha @ 4.5 residences/ha) + 15%
<i>Subtotal</i>	577	
Total	1,528	

Table 1: Northlake Zone, Expected Overall Yields

- 3.3.3. On this basis, up to 1,530 residences could be constructed as of right under current zonings/consents. This is less than the 1,600 residences allowed for within PC45.
- 3.3.4. As part of the PC54 plan change, an allowance was also required to be made for development of Sticky Forest. This is an area of land located to the west of the Northlake zone, and for which access was required to be provided through the Northlake zone roading network as part of various legal and planning mechanisms. This access is via a short stub, constructed on the western side of Stonehenge Road (as seen on the left-hand side of Photograph 3 and on Photograph 4).
- 3.3.5. Evidence presented to the PC54 hearing¹ set out that it was not expected that the traffic generated by Sticky Forest would have adverse efficiency or safety effects on the Northlake zone roading network, although no specific calculation of the traffic generation or the routing of traffic was presented. However, evidence has also been presented to the Environment Court which drew the same conclusion². In that instance, an assessment was made that the generated traffic would use Stonehenge Road, before travelling northwards and then southwards using the 'loop' of Riverslea Road, Northlake Drive and then Mt Nicholas Road to reach Northburn Road. It was noted that alternatively, traffic could use the southwards extension of Riverslea Road to reach Northlake Drive and then to Mt Nicholas Road and Northburn Road.

¹ Tony Penny Statement of Evidence

² <https://www.qldc.govt.nz/media/nehj4lzw/transport-memorandum-may-2025.pdf>



Figure 6: Anticipated Routing of Sticky Forest Traffic (Shown in Red) (Extract from Figure 6 of Penny Evidence to the Environment Court)

- 3.3.6. Notwithstanding that there are two route possibilities, they both share the same approach of anticipating the use of Mt Nicholas Road and Northburn Road. In this regard, Northburn Road was described as being suitable for the increase in traffic that would arise from the additional traffic generated by Sticky Forest.
- 3.3.7. Additionally, assessment of Sticky Forest identified that traffic calming might be required to be implemented on Lammermoor Street such that it was not used by traffic travelling to and from Sticky Forest³.
- 3.3.8. As set out in Table 1 above, consents have been sought and granted for the full development of Pembroke Heights. This comprises the large block of green/brown coloured land at the lower left of Figure 6 above and it lies within the Northlake zone. As part of the consenting process for Pembroke Heights, the Council identified that Mt Nicholas Road was only suitable for carrying the traffic associated with up to 100 residences, and Northburn Road should also not be subject to any further increase in traffic, and therefore measures should be put in place to ensure that this route (that is, Mt Nicholas Road / Northburn Road) must not be used by any Pembroke Heights traffic.
- 3.3.9. Given that this route is the shortest and most logical for Pembroke Heights residents, this then led to conditions being placed on Pembroke Heights that access to Mt Nicholas Road would be physically prevented, with the outcome that bollards are to be placed mid-way along its length to prevent its use by through traffic. This in turn requires vehicles to use Northlake Drive, but there is still a network of local roads that drivers could use to 'double back' to Northburn Road. To minimise this, traffic calming measures are required on various roads to dissuade drivers from using those routes, and with a view to encouraging drivers to use the eastern part of Northlake Drive, Outlet Road, and Aubrey Road.
- 3.3.10. PC54 (Northlake) sought to establish Activity Area B6 for additional residential development located to the northwest of the Northlake subdivision, which would mean that traffic also used Northburn Road. In that case, the reporting of the Council's consultant traffic engineer set out that in their view, Northburn Road had no ability to accommodate any additional traffic to that which was already allowed for within the Northlake zone at that time. This was on the basis of their analysis that showed 195 lots within the Northlake zone were already using the road.

³ TP Consulting memorandum dated 22 September 2022, paragraph 5.10

3.3.11. For completeness, land use and subdivision consents at the Hikuwai subdivision within the eastern part of the Northlake zone have also considered traffic routing. In particular, the transportation analyses for Hikuwai identified that Hikuwai traffic exiting Joe Brown Drive in the morning peak hour will obstruct traffic generated from the Northlake and Pembroke Heights subdivisions that turn right from Northlake Drive. The analysis also identified that under that scenario, a roundabout was justified at the intersection. However it was stated that such a scenario was very unlikely to occur, because Northlake zone traffic would simply use Northburn Road instead. In that particular case, the use of Northburn Road by Northlake / Pembroke Heights traffic was accepted by the Council.

3.3.12. However as the use of Northburn Road was then not accepted by the Council for Pembroke Heights traffic, this then resulted in the applicant for Pembroke Heights being required to construct the roundabout at the Northlake Drive / Outlet Road / Joe Brown Drive intersection.

3.3.13. In summary:

- Sticky Forest has been progressed using an expected routing of Mt Nicholas Avenue and Northburn Road.
 - However through the consenting of the Pembroke Heights subdivision, the Council identified that Mt Nicholas Avenue was unsuitable for any increase in traffic and therefore required the route to be physically obstructed;
 - Through the consenting of the Pembroke Heights subdivision, the Council also identified that Northburn Road was unsuitable for any increase in traffic, such that traffic calming measures are now proposed on certain local roads to dissuade drivers from using them. These measures will also affect the routes available to Sticky Forest traffic;
- Consents at Hikuwai have been granted on the basis that the Council agreed that Northlake zone traffic will use Northburn Road. Thus although subdivision applications for Hikuwai identified the need for a roundabout at the Northlake Drive / Outlet Road / Joe Brown Drive intersection due to Northlake traffic using Outlet Road, this was not required to be put in place.
 - However the requirement that there should not be any increase in the use of Northburn Road by Northlake zone traffic means that the roundabout at the Northlake Drive / Outlet Road / Joe Brown Drive intersection is to be implemented as part of the Pembroke Heights subdivision.

3.3.14. It is evident that a series of apparently contradictory assertions have been made when various developments have been considered. Consequently, as part of the assessment of the proposed REA, the following receiving environment has been assumed:

- A roundabout is in place at the Northlake Drive / Outlet Road / Joe Brown Drive intersection;
- Bollards are in place on Mt Nicholas Road to prevent through traffic on that road;
- Traffic calming on local roads to prevent drivers doubling-back to use Northburn Road; and
- A traffic calming scheme is in place on Lammermoor Street to prevent it from being used by increased volumes of traffic.

3.3.15. For completeness, there does not appear to have been any consideration in any previous assessments of Sticky Forest of the need for a roundabout at the Northlake Drive / Outlet Road / Joe Brown Drive intersection. This is because Sticky Forest traffic is not expected to pass through this intersection, and rather, the rezoning of the land has been progressed on the basis that traffic will use Northburn Road instead. For the same reason, no assessment has



been found of the Aubrey Road / Outlet Road intersection that makes allowance for Sticky Forest traffic passing through it.

- 3.3.16. Given that the evidence presented to the Environment Court and which appears to have accepted by all parties (including the Court) was that Sticky Forest traffic will use Northburn Road, the assessment of the REA has been carried out on that basis. However as PC54 set out that no Northlake traffic was expected to use Northburn Road, the analysis has also been carried out on the basis that all Northlake traffic will use the Northlake Drive / Outlet Road route.



4. Current and Future Transportation Patterns

4.1. Existing Traffic Flows

- 4.1.1. The MobileRoad website records traffic count data throughout the country. This shows that in 2025, Northburn Road was assessed as carrying 1,530 vehicles per day.
- 4.1.2. Outlet Road towards the north of the subdivision carries approximately 340 vehicles per day (two-way). Further south however, the traffic volume is in the order of 1,520 vehicles per day. It is likely that the daily movements will comprise in part, recreational traffic associated with accessing the river mouth towards the west, and in part associated with construction traffic, plus residential traffic arising from both the Hikuwai and Northlake subdivisions.
- 4.1.3. As the peak hour traffic flows on a road are typically around 10% of the daily volumes, this suggests that at peak times, the Northburn Road carries 150-175 vehicles per hour (two-way) and the southern section of Outlet Road currently carries a similar volume.
- 4.1.4. The MobileRoad website also shows that Aubrey Road west of Northburn Road carries 5,500 vehicles per day, indicating a peak hour flow of around 550 to 600 vehicle movements (two-way). To the east of Outlet Road however a volume of 2,900 vehicles per day is recorded, indicating a peak hour flow of around 290 to 300 vehicle movements (two-way). The difference of 250-300 vehicles is likely to due to Northlake traffic using Northburn Road and Mt Linton Avenue to access Aubrey Road.

4.2. Future Traffic Flows (Without the Proposed REA)

- 4.2.1. As set out above, there are a number of changes in the immediate area which affect the roading network. The development is still ongoing, and so it is not possible to undertake a traffic survey because flows will be affected by construction traffic and lots which are consented but not yet occupied. Accordingly, when evaluating the proposed REA, the traffic flows have been calculated based on the full extent of development shown on Table 1.
- 4.2.2. With regard to the routing of traffic, all traffic associated with development to the south of Northlake Drive has been anticipated to use Northburn Road or Mt Linton Avenue to reach Aubrey Road (as these remain the shortest and fastest route for these residents). As set out above, Sticky Forest traffic is assumed to use Northburn Road, as per the evidence to the Environment Court. All development traffic to the north and west of Northlake Drive has been assumed to use Northlake Drive and Outlet Road to reach Aubrey Road, with none using Northburn Road as per the comments made through PC54.
- 4.2.3. On inspection of the relative positions of lots, this equates to traffic from 640 lots from the Northlake subdivision using the Northlake Drive / Outlet Road route. Of these, the shortest route for 150 lots will be to use Outlet Road (including for the retirement units) with 490 using Northlake Drive before then turning onto Outlet Road. Pembroke Heights traffic will use Northlake Drive also, with the Urquhart area traffic using Outlet Road.
- 4.2.4. Traffic generated by residential developments is known to vary for a variety of reasons, with one such reason being the proximity (or otherwise) to employment and community facilities. Where a dwelling is some distance from these types of facilities, the traffic generation rates tend to be lower than for residences that are closer due to 'trip chaining', that is, the tendency of a resident to carry out multiple visits to different destinations during the same trip away from the dwelling.

- 4.2.5. PC45 utilised a traffic generation rate of 0.9 vehicle movements per residence in each of the peak hours. Since that time, a small amount of commercial development has been constructed as consented within Northlake, which is likely to result in a slightly higher proportion of trips being made internally. It is also relevant to note the increased emphasis upon non-car modes of travel since PC45 was considered, plus increases in working from home, and the presence of the shared walking and cycling route that runs along the northern side of Aubrey Road. To take these into account, PC54 was advanced on the basis of a slightly lower trip rate, of 0.85 vehicle movements per residential unit in the peak hours. This rate has been adopted for this assessment also.
- 4.2.6. In the morning peak hour, PC45 allowed for 75% of the generated vehicles to be exiting the site, with 65% of the generated vehicle movements entering the plan change area in the evening peak hour. The same proportions have been adopted in this instance also. With regard to the distribution of these vehicles, PC45 noted that 20% of the traffic was expected to travel to/from the east with 80% travelling to/from the west.
- 4.2.7. The consents for the Hikuwai development have also been assessed. The most recent (RM220008) included a Transportation Assessment that allowed for the following:

	Trips Generated	AM Peak Hour	PM Peak Hour
Exiting Hikuwai towards Wanaka direction	Using Outlet Road Access	78	37
	Using Aubrey Road Access	30	14
	Total	108	51
Exiting Hikuwai towards the East	Using Outlet Road Access	20	9
	Using Aubrey Road Access	7	4
	Total	27	13
Entering Hikuwai from Wanaka Direction	Using Outlet Road Access	26	67
	Using Aubrey Road Access	10	26
	Total	36	93
Entering Hikuwai from the East	Using Outlet Road Access	7	17
	Using Aubrey Road Access	3	6
	Total	10	23

Table 2: Hikuwai Development Traffic Generation (Extract from Three Peaks Consulting Limited Transportation Assessment)

- 4.2.8. Applying the parameters set out above, and taking into account the existing traffic flows on Outlet Road prior to the Northlake zone being approved (as presented in the PC45 Transportation Assessment), shows the following:

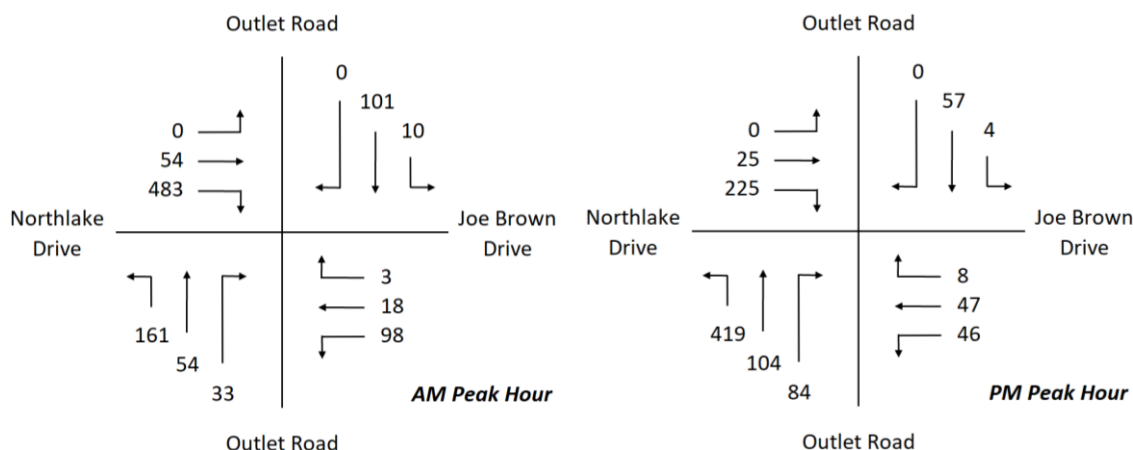


Figure 7: Morning and Evening Peak Hour Traffic Volumes, Without Proposed REA

4.2.9. The performance of the Outlet Road / Northlake Drive / Joe Brown Drive priority intersection has been modelled using the Sidra Intersection computer software package and the results are summarised below.

Approach	Morning Peak Hour			Evening Peak Hour		
	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Outlet Road (east)	5.0	0.2	A	4.9	0.7	A
Joe Brown Drive	6.1	0.4	A	8.7	0.5	A
Outlet Road (west)	4.8	0.0	A	7.1	0.0	A
Northlake Drive	14.6	9.7	B	11.7	2.5	B

Table 3: Performance of the Outlet Road / Northlake Drive / Joe Brown Drive Priority Intersection (Under Full Development of Current Zonings, without Proposed REA)

4.2.10. It can be seen that the greatest queue and delays arise in the morning peak hour, where queues of up to 10 vehicles are forecast to arise with each experiencing delays of nearly 15 seconds.

4.2.11. Although this level of delay is not unusual, as set out previously, it is expected that prior to this point the intersection will be upgraded to a roundabout (which is understood to be a temporary arrangement until such future time as a direct western connection is provided between the Northlake zone and Aubrey Road in the Peak View Ridge area). There is no confirmed design for this at present and accordingly a notional mini-roundabout design has been tested at the intersection. The results are summarised below.

Approach	Morning Peak Hour			Evening Peak Hour		
	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Outlet Road (south)	5.0	1.5	A	5.6	5.2	A
Joe Brown Drive	11.1	1.3	B	7.2	0.8	A
Outlet Road (north)	10.2	1.3	B	7.1	0.5	A
Northlake Drive	7.4	4.3	A	8.4	2.0	A

Table 4: Performance of the Outlet Road / Northlake Drive / Joe Brown Drive Future Roundabout (Under Full Development of Current Zonings, without Proposed REA)

- 4.2.12. Under the full extent of development permitted within Northlake as noted above, a roundabout would provide an excellent level of service and very low queues and delays.
- 4.2.13. An assessment has also been undertaken for the Aubrey Road / Outlet Road intersection, for which an understanding of the traffic flows using Aubrey Road is required. As noted above, current peak hour volumes are in the order of 290 to 300 vehicle movements (two-way) but the Hikuwai analysis showed that around 10% of these vehicles can be expected to be associated with vehicles turning the Hikuwai development and which are already accounted for. Thus for the purposes of this analysis, a through traffic movement of 270 vehicles (two-way) has been allowed for.
- 4.2.14. The intersection has been modelled allowing for the 1,530 lots within the Northlake zone (as per Table 1 above) and the results are summarised below:

Approach		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Aubrey Road (east)	R	7.2	0.1	A	9.9	0.4	A
Outlet Road	L	6.3	0.3	A	5.2	0.2	A
	R	27.8	20.2	D	13.8	3.6	B
Aubrey Road (east)	L	6.1	0.0	A	6.1	0.0	A

Table 5: Performance of the Aubrey Road / Outlet Road Priority Intersection (Under Full Development of Current Zonings, without Proposed REA)

- 4.2.15. It can be seen that the intersection operates with good levels of service in the evening peak hour. In the morning peak hour, the queue of vehicles turning right from Outlet Road reaches 20 vehicles with delays of 28 seconds, but for a busy urban intersection, this is not unreasonable.

4.3. Existing Volumes of Non-Car Modes of Travel

- 4.3.1. Within the wider area, the development of the Northlake zone has introduced footpaths alongside the formed roads plus shared walking and cycling routes as required under the Structure Plan along Northlake Drive and Riverbank Road. Consequently, although the area immediately adjacent to the proposed REA is largely undeveloped at present, and it can reasonably be expected that pedestrians and cyclists will currently be infrequent road users, as the area becomes more developed in accordance with its underlying zoning, there will likely be an increase in walking and cycling.

- 4.3.2. There is presently no scheduled public transport service in Wānaka.

4.4. Existing Road Safety Record

- 4.4.1. The NZTA Crash Analysis System has been used to establish the location and nature of the recorded traffic crashes in the vicinity of the site. Since the Northlake subdivision has only recently been developed, a wider area has been included within the search than would typically be the case for a long-established subdivision. Therefore, the length of Outlet Road has been assessed from Northlake Drive to Aubrey Road, including intersections) plus the whole of the Northlake subdivision, for the past ten years (2016 to 2025 plus the partial record for 2026).



4.4.2. Over this timeframe and area, there have been nine crashes recorded:

- One crash recorded occurred on Mt Linton Avenue when a driver lost control on a curve and struck a lamp post. The police report notes that driver intoxication may have been a factor. The crash did not result in any injuries;
- One crash occurred at the Aubrey Road / Outlet Road intersection when a driver pulled out from Outlet Road to turn right, and struck a westbound vehicle on Aubrey Road. The crash did not result in any injuries;
- One crash occurred at the Northburn Road / Sawden Street intersection when a driver pulled out from Sawden Street, and struck a southbound vehicle on Northburn Road. The crash did not result in any injuries;
- One crash occurred at the Outlet Road / Lindis Road intersection when a driver lost control and left the road, striking street trees. The police report notes that driver intoxication was a factor. The crash did not result in any injuries;
- One crash occurred at the Northlake Drive / Mt Linton Avenue intersection when a driver pulled out from Mt Linton Avenue and struck an eastbound vehicle on Northlake Drive. The crash did not result in any injuries;
- One crash occurred on Northlake Drive just east of Mount Burke Street when a driver collided with a parked vehicle. The police report notes that the driver was distracted when their mobile phone fell on the floor. The crash did not result in any injuries;
- One crash occurred on Outlet Road at the curve to the north of Northlake Drive when a southbound driver 'cut the corner' and collided with a northbound vehicle. The crash did not result in any injuries;
- Two crashes have occurred at the Outlet Road / Northlake Drive / Joe Brown Drive intersection:
 - One crash occurred when a driver pulled out from Joe Brown Drive and was struck by a northbound vehicle on Outlet Road. The crash resulted in minor injuries; and
 - One crash occurred when a driver pulled out from Northlake Drive and was struck by a southbound vehicle on Outlet Road, with vehicles then colliding with a northbound vehicle on Outlet Road. The crash did not result in any injuries.

4.4.3. Based on the differing locations of the crashes and the different contributing causes, it is not considered that there are any road safety deficiencies on this part of the roading network.

5. Proposal

- 5.1. The proposed REA relates to land towards the northwest of the Northlake Structure Plan area. It subsumes one 'island' of Activity Area C1, and increases the extent to which residential development can occur.
- 5.2. The existing Structure Plan and proposed zoning plan are shown below. It should be noted that the proposed Structure Plan is in a different format to the existing Structure Plan to align with the standard format of others in the Proposed District Plan.



Figure 8: Extract from Approved Structure Plan in District Plan

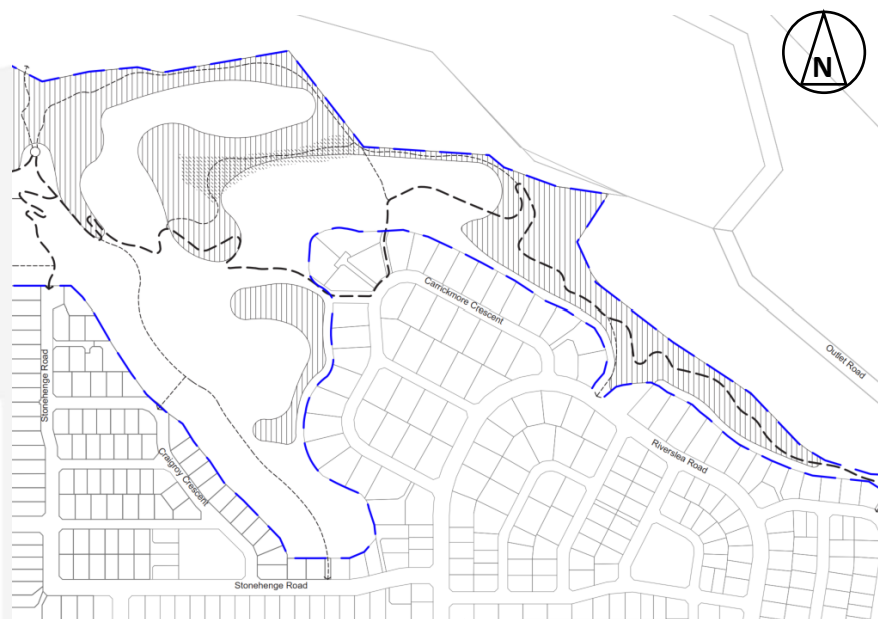


Figure 9: Extract from Proposed Structure Plan

- 5.3. Since the proposal is for a REA, there are no confirmed plans for the development pattern which may ultimately arise. However from information provided, it is understood that the REA would permit approximately 65 additional residential lots, over and above the current zonings.

6. Traffic Generation and Distribution

6.1. Traffic Generation

- 6.1.1. The same traffic generation rate has been used for this analysis as for the previous plan change and the previous work for PC45, with a basic rate of 0.9 vehicle movements per residence in each of the peak hours, reduced slightly to 0.85 vehicle movements per residential unit in the peak hours to take into account the commercial development within Northlake subdivision.
- 6.1.2. Anticipating that the proposed REA results in 65 new residences, this would give rise to 55 vehicle movements (two-way) in the peak hours.
- 6.1.3. In the morning peak hour, PC45 allowed for 75% of these vehicles to be exiting the site, with 65% of the generated vehicle movements entering the plan change area in the evening peak hour. The same proportions have been adopted.

6.2. Trip Distribution

- 6.2.1. With regard to the distribution of these vehicles, PC45 noted that 20% of the traffic was expected to travel to/from the east with 80% travelling to/from the west, and the same distribution has been used.
- 6.2.2. The traffic generation for the additional 65 lots enabled by the proposed REA will therefore be:

Peak Hour	Traffic Volumes					
	East		West		Total	
	In	Out	In	Out	In	Out
Morning	3	8	11	33	14	41
Evening	7	4	29	15	36	19
Daily	52	52	208	208	260	260

Table 6: Traffic Generation of Proposed REA (65 Additional Lots)

- 6.2.3. Taking into account the desire of the Council to avoid the use of Northburn Road and Mt Linton Avenue, all of these vehicles have been assigned to Northlake Drive. From there, all vehicles turning towards Wānaka can be expected to turn right at the future Outlet Road / Northlake Drive / Joe Brown Drive roundabout, and then right again at the Aubrey Road / Outlet Road intersection. For the purposes of this analysis, 50% of the traffic travelling to/from the east has been assigned to Joe Brown Drive with the remainder assigned to the Aubrey Road / Outlet Road intersection.

7. Effects on the Transportation Networks

7.1. Roading Capacity

- 7.1.1. At present (and as set out above), the anticipated development yield equates to 1,530 standard residences (allowing for the lower traffic generation associated with retirement units) within the Northlake zone, and with the proposed REA this would increase to 1,595 residences. This is below the 1,600 residences allowed for within PC45, and for which the roading infrastructure in the area was initially designed.
- 7.1.2. For clarity, if the 150 lots associated with Sticky Forest were added, the total number of residential lots using the Northlake roading network increases to 1,745 lots, beyond the PC45 threshold. However as set out above, it is expected that lots will use the roading network towards the west of Northlake, and therefore will largely be separate from traffic generated by the REA.
- 7.1.3. The Outlet Road / Northlake Drive / Joe Brown Drive intersection has been tested under the configurations of both the existing priority intersection and a roundabout, and the results are summarised below.

Approach	Morning Peak Hour			Evening Peak Hour		
	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Outlet Road (south)	5.0	0.2	A	4.9	0.7	A
Joe Brown Drive	6.2	0.4	A	9.3	0.6	A
Outlet Road (north)	4.8	0.0	A	7.4	0.0	A
Northlake Drive	17.9	13.4	C	12.6	2.9	B

Table 7: Performance of the Outlet Road / Northlake Drive / Joe Brown Drive Priority Intersection (Under Full Development of Current Zonings, with Proposed REA)

Approach	Morning Peak Hour			Evening Peak Hour		
	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Outlet Road (south)	-	-	-	-	-	-
Joe Brown Drive	+0.1	-	-	+0.6	+0.1	-
Outlet Road (north)	0	-	-	+0.3	-	-
Northlake Drive	+3.3	+3.7	B to C	+0.9	+0.4	-

Table 8: Difference in Performance of the Outlet Road / Northlake Drive / Joe Brown Drive Priority Intersection (Under Full Development of Current Zonings, with and without Proposed REA)

Approach	Morning Peak Hour			Evening Peak Hour		
	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Outlet Road (east)	5.0	1.6	A	5.7	5.8	A
Joe Brown Drive	11.6	1.5	B	7.4	0.8	A
Outlet Road (west)	10.8	1.3	B	7.3	0.5	A
Northlake Drive	7.4	4.8	A	8.4	2.2	A

Table 9: Performance of the Outlet Road / Northlake Drive / Joe Brown Drive Future Roundabout (Under Full Development of Current Zonings, with Proposed REA)

Approach	Morning Peak Hour			Evening Peak Hour		
	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Outlet Road (east)	-	+0.1	-	+0.1	+0.6	-
Joe Brown Drive	+0.5	+0.2	-	+0.2	-	-
Outlet Road (west)	+0.6	-	-	+0.2	-	-
Northlake Drive	-	+0.5	-	-	+0.2	-

Table 10: Difference in Performance of the Outlet Road / Northlake Drive / Joe Brown Drive Future Roundabout (Under Full Development of Current Zonings, with and without Proposed REA)

- 7.1.4. It can be seen that the effects of the REA are minimal, with only small changes in queuing and delays, and with levels of service generally remaining unchanged. The exception to this is that Northlake Drive changes from Level of Service B to C in the morning peak hour with the existing priority intersection but this is not unreasonable for an urban intersection in the busiest periods.
- 7.1.5. The Aubrey Road / Outlet Road intersection has also been re-assessed, as summarised below.

Approach		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Aubrey Road (east)	R	7.2	0.1	A	10.2	0.4	B
Outlet Road	L	6.6	0.3	A	5.5	0.2	A
	R	49.0	32.0	E	15.3	4.2	C
Aubrey Road (east)	L	6.1	0.0	A	6.1	0.0	A

Table 11: Performance of the Aubrey Road / Outlet Road Priority Intersection (Under Full Development of Current Zonings, with Proposed REA)

Approach		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Aubrey Road (east)	R	-	-	A	+0.3	-	A to B
Outlet Road	L	-	-	A	+0.3	-	-
	R	21.2	+11.8	D to E	+1.5	+0.6	B to C
Aubrey Road (east)	L	-	-	A	-	-	-

Table 12: Difference in Performance of the Aubrey Road / Outlet Road Priority Intersection (Under Full Development of Current Zonings, with and without Proposed REA)

- 7.1.6. It can be seen that the effects of the REA in the evening peak hour are small, with increases in queues and delays of less than one vehicle and at most 1.5 seconds. However in the morning peak hour, the increase in queue length and delay for vehicles turning right out of Outlet Road is more substantial, with 12 more vehicles in the queue and an additional delay of 21 seconds per vehicle.
- 7.1.7. It is commonly accepted that when intersections move from Level of Service D to E, some form of intervention may be required in order to increase capacity. In this case, the legal width of both Aubrey Road and Outlet Road is 20m and thus a small roundabout could be considered (in the same way as capacity was increased at the Aubrey Road / Anderson Road intersection, which both also have 20m legal widths and which meet at a similar angle). To evaluate this possibility, the same roundabout design as presently in place at Aubrey Road / Anderson Road intersection has been tested using the traffic flows set out above, and the results are summarised below.

Approach		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Aubrey Road (west)		11.4	1.7	B	8.5	0.7	A
Outlet Road		7.3	4.8	A	7.3	1.9	A
Aubrey Road (east)		6.1	1.2	A	6.6	3.7	A

Table 13: Performance of the Aubrey Road / Outlet Road Intersection with Roundabout (Under Full Development of Current Zonings, with Proposed REA)

- 7.1.8. The modelling shows that the introduction of a small roundabout at the intersection will substantially improve capacity, with delays reducing to a maximum of around 11 seconds, and queues reducing to less than five vehicles.
- 7.1.9. It is noted that the proposal is presently for a REA and thus resource consents will be required in due course for subdivision and development of the site. It is considered that it would therefore be appropriate for an assessment of the potential for a roundabout at the Aubrey Road / Outlet Road intersection to be assessed in further detail when these consents are applied for.
- 7.1.10. Overall, it can be concluded that the proposed REA is able to be accommodated at the two key intersections, but potentially subject to improvements at the Aubrey Road / Outlet Road intersection.



7.2. Traffic Routing

- 7.2.1. Northlake Drive and Outlet Road were designed to accommodate large traffic volumes and the increase of a further 55 vehicles (two-way) in the peak hours due to the REA is unlikely to have any material effect on their safety or efficiency. However there are a number of routes that could be used by vehicles travelling between the proposed REA and Northlake Drive.
- 7.2.2. As set out above, a route is provided for Sticky Forest traffic (and other lots to the northwest of the Northlake subdivision) via Stonehenge Road and Riverslea Road to Northlake Drive. Both Stonehenge Road and Riverslea Road have a 20m legal width and 8.4m formed width, and therefore align with Road Type E13 of the Council's Land Use and Subdivision Code of Practice, which is a road type able to serve up to 800 lots. This is considerably more than would be generated by full development of this area (including the proposed REA). In due course, Stony Burn Drive will be extended from Stonehenge Road to meet Northlake Drive and this will also be constructed to meet Road Type E13.
- 7.2.3. There is also a network of narrower roads in the immediate area, including the northern part of Stonehenge Road, Craigroy Crescent, Carrickmore Crescent and Lauderdale Lane in the Northlake subdivision, and Callaghans Creek Rise, Craigie Burn Lane and Leven Stream Lane within Pembroke Heights. These have a legal width of 15m which aligns with Road Type E12 of the Code of Practice, for which there is an expectation that the road serves no more than 200 residences.
- 7.2.4. Because this is a residential area, it can be expected that drivers will be familiar with the roading network and will select their route based on local knowledge. Typically routes are selected to minimise journey time, and in this case, using roads that meet Road Type E13 means that drivers have fewer intersections to negotiate and a straighter road geometry, which means that their average journey speed will be higher than routes using the Road Type E12 roads (which typically have more intersections and more curves where drivers need to slow down).
- 7.2.5. On this basis, it is considered that the current roading network naturally directs and encourages drivers to use those higher capacity roads of Road Type E13 as they will have a shorter journey time. While there might be some use of the Road Type E12 roads, the number of vehicles will be low, and they will be spread over the different roads meaning the increase on each will be small. Given this, it is not expected that the capacity of the E12 roads would be exceeded. However, this is a matter that can be revisited when subdivision consents are lodged for the REA, as further measures could be implemented to further discourage use of the E12 roads (if necessary). One example of this would be traffic calming on E12 roads, which will slow vehicle speeds and increase the travel time for journeys made using those roads, which in turn will make E13 roads more attractive. Such measures can be implemented wholly within the road reserve.

7.3. Non-Car Modes of Travel

- 7.3.1. The development of the REA is likely to result in increased levels of walking and cycling in the immediate area. However any increase will be modest, and existing infrastructure is easily able to accommodate this. Existing roads have footpaths on each side for pedestrian movements and the low traffic volumes and speeds mean that cyclists can share the road safety with motorised traffic (plus child cyclists and their caregivers can now use the footpath under recent legislative changes).

- 7.3.2. It can be expected that new roads constructed within the REA itself will make appropriate provision for walking and cycling. However there are no impediments to providing suitable infrastructure for pedestrians and cyclists, and this is a matter than can be considered further when subdivision consents are lodged, and also through engineering approvals.
- 7.3.3. The operative Structure Plan for this area requires the provision of walking and cycling links (as shown on Figure 5 above). The proposed Structure Plan also includes walking and cycling routes, albeit that these are proposed to be in different locations (highlighted below for ease of reference).

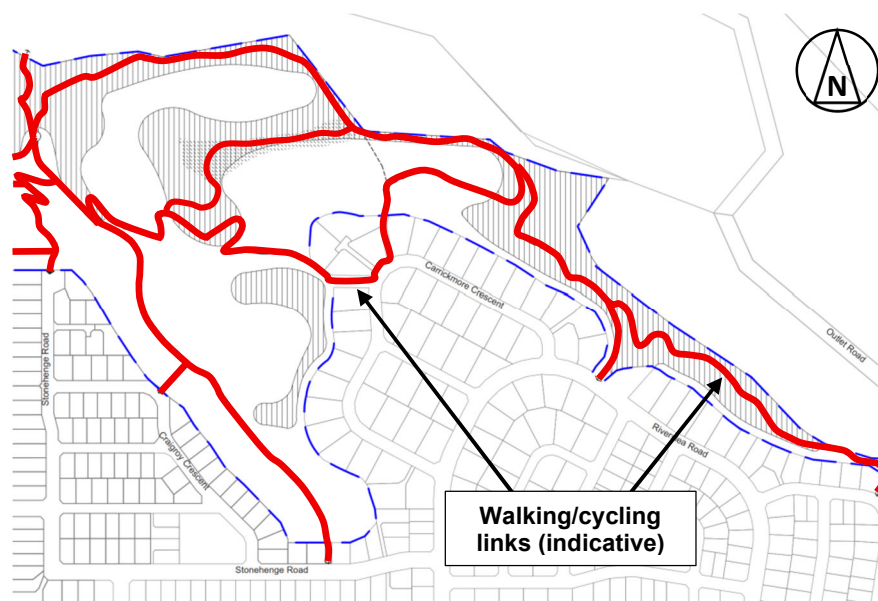


Figure 10: Extract from Proposed Structure Plan, Walking and Cycling Routes Highlighted

- 7.3.4. For clarity, the wording of 'indicative' in this instance refers to the *alignment* of the walkway/cycleway being subject to confirmation through detailed design, and not that the walkway/cycleway might not be provided.
- 7.3.5. The routes along the western and northern edges of the REA generally correspond to the routes shown in the operative Structure Plan, but the proposal also includes additional routes. As such, it is considered that the proposed Structure Plan includes for a higher degree of walking and cycling connectivity than the operative Structure Plan.
- 7.3.6. The extent of development is not sufficient that a public transport service would be justified. However the widths of Stonehenge Road and Riverslea Road are sufficient to accommodate a bus service, if one was to be introduced in future. Such a route would be within a viable walking distance of REA, and there is no reason why a bus service would need to pass directly into the REA (especially as the small number of residences means that there will be relatively few passengers).

7.4. Road Safety

- 7.4.1. The crash history in the vicinity of the site does not indicate that there are any particular features or factors that would be affected by development of the proposed REA. As set out previously, the transportation networks within the site have been designed to meet current codes and guidance, and therefore can be expected to function safely.
- 7.4.2. Consequently, the increase in traffic flows arising from development of the proposed REA is not expected to result in any adverse road safety effects arising.



8. District Plan Matters

- 8.1. The District Plan sets out a number of transportation-related requirements with which any development is expected to comply. As this is a request for a REA, there is no confirmed layout against which an assessment can be undertaken. However, a 'high level' review of the site has been carried out against the transport-related provisions of the District Plan, with particular reference to previous stages of the Northlake and Pembroke Heights subdivisions.
- 8.2. With regard to previous subdivisions, a high degree of compliance with the District Plan has generally been achieved. In each case though, a small number of lots have had non-compliances with sight distances (Site Standard 14.2.4.2(iv) / Rule 29.5.17) and with the proximity of vehicle crossings to intersections distances (Site Standard 14.2.4.2(vi) / Rule 29.5.21). However the non-compliances have arisen due to proximity to intersections or curves in roads, which serve to reduce vehicle speeds and for which reduced sight distances and/or separation between vehicles crossings and intersections can be justified.
- 8.3. Accordingly, while it can be expected that these non-compliances might arise for the proposed REA, it can also be expected that the effects arising will be less than minor.
- 8.4. Overall then, it is not considered that there are any additional transport-related District Plan provisions that should be included within the provisions of the REA.





9. Conclusions

- 9.1. This report has identified, evaluated and assessed various transportation matters arising from a proposed Residential Expansion Area to allow a small increase (an additional 65 lots) in residential development within Northlake.
- 9.2. The Northlake zone was considered on the basis of up to 1,600 residences being constructed in the area. However since that time, there have been two relevant changes. Firstly, the Council has identified that no further traffic is to use Northburn Road, and measures are required as part of other subdivisions within the Northlake zone to achieve this outcome. This necessarily diverts traffic onto a route via Northlake Drive, Outlet Road and Aubrey Road (the route that was expected when the Northlake Special Zone was first advanced). Current consents require that in due course, the Outlet Road / Northlake Drive / Joe Brown Drive intersection will be converted to a roundabout.
- 9.3. Secondly, an area of land known as Sticky Forest has been identified for development with a development potential for 150 lots. However evidence presented to the Environment Court as part of the rezoning of this area identified that the traffic from Sticky Forest would use Northburn Road rather than Northlake Drive, Outlet Road and Aubrey Road. As such, Sticky Forest traffic can be expected to only affect the roading network in the western parts of Northlake.
- 9.4. Although the Outlet Road / Northlake Drive / Joe Brown Drive intersection is proposed to be converted to a roundabout, assessment shows that in practice it has sufficient capacity as a priority intersection to accommodate traffic generated by the REA (and thus it also has ample capacity if a roundabout is put in place).
- 9.5. Assessment also shows that the existing Aubrey Road / Outlet Road priority intersection does not have sufficient capacity for the REA, and large queues and delays are expected for the right-turn movement out of Outlet Road in the morning peak hour. Further evaluation has shown that a mini roundabout would improve capacity in this location, and testing using the same design as the recently-installed roundabout at the Aubrey Road / Anderson Road intersection shows that this will have ample capacity.
- 9.6. Accordingly, it is considered that the effects of the proposed REA on queues and delays are minimal, albeit that it is recommended that the matter of installing a roundabout at the Aubrey Road / Outlet Road intersection is addressed when consents are sought for development in the REA.
- 9.7. It is expected that the roading pattern in the area means that the majority of traffic generated by the proposed REA will naturally use roads that are designed for higher traffic flows. There may be some small number of trips that are made using roads that have a lesser capacity but even in those cases, the multiple routing options mean that the increase on any give road will be small. This could be further managed, if needed, through implementation of traffic calming measures.
- 9.8. Consequently, it is considered that the existing/consented roading network within Northlake, plus expected future changes, is able to accommodate the increase in traffic.
- 9.9. The crash history in the vicinity of the site does not indicate that there would be any adverse safety effects from the proposal, noting that the Northlake roading network is newly-constructed and consented, and therefore meets current guides and standard (or any deviations from these have been approved by the Council).



- 9.10. Provision for pedestrians and cyclists is expected to be appropriate, and can be commensurate with infrastructure in adjacent areas of Northlake. However this is a matter that can be considered further when resource consents are sought. The operative Northlake Structure Plan includes required walking and cycling links, but the proposed Structure Plan provides a higher level of walking and cycling connectivity than this.
- 9.11. It can be expected that the subdivision of the REA will have a high degree of compliance with the transport-related provisions of the District Plan, but that, in common with other (developed) areas of the Northlake zone, there will be justifiable non-compliances with sight distances and separation of vehicle crossings from intersections. No new transport provisions are proposed (or required) as part of the REA provisions.
- 9.12. Overall, and subject to the preceding comments, the proposed REA can be supported from a traffic and transportation perspective and it is considered that there are no traffic and transportation reasons why it could not be recommended for approval.

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October 2026





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