Marama Te Wai Limited

Proposed Residential Plan Change
West Melton

Transportation Assessment

CARRIAGEWAY
CONSULTING
traffic engineering | transport planning

Table of Contents

Main Report

Photographs

Figures

Tables

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1. Introduction

1.1. Marama Te West Limited is seeking to rezone land towards the west of the township of West Melton to facilitate residential development. The land is presently zoned as Inner Plains, but if the plan change is approved, will become residential such that in total, up to 525 lots could be formed.

1.2. This Transportation Assessment sets out a detailed analysis of the transportation issues associated with the proposed plan change 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.

2. Site Overview

2.1. Location

2.1.1. The site plan change area (**the site**) is located on the western side of West Melton. The location of the site in the context of the local area is shown in Figure 1 and in more detail in Figure 2. The western part of the site is currently zoned as Inner Plans within the Selwyn District Plan ("*District Plan*") and is used for rural purposes. The eastern part of the site is presently zoned as Living West Melton and comprises larger residential lots.

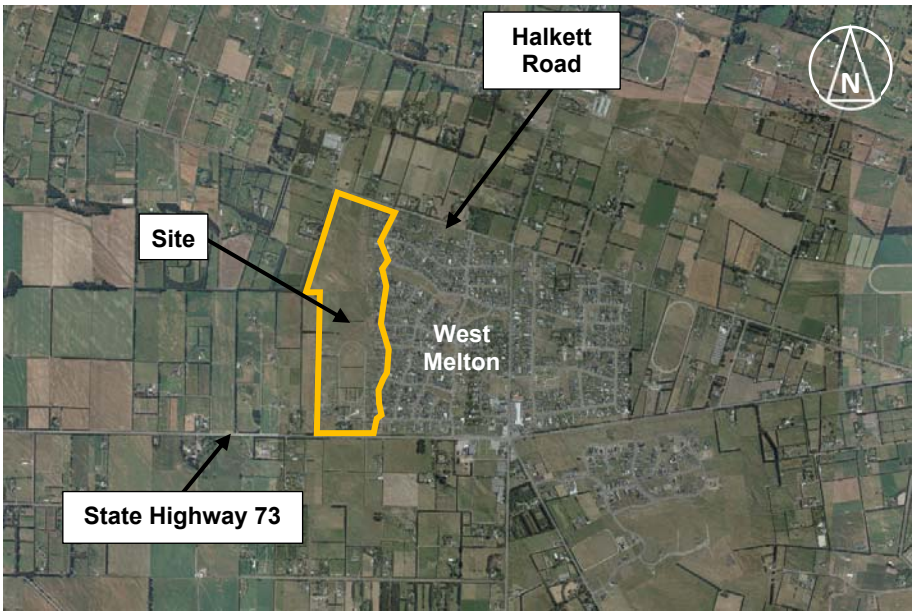

Figure 1: General Location of Site

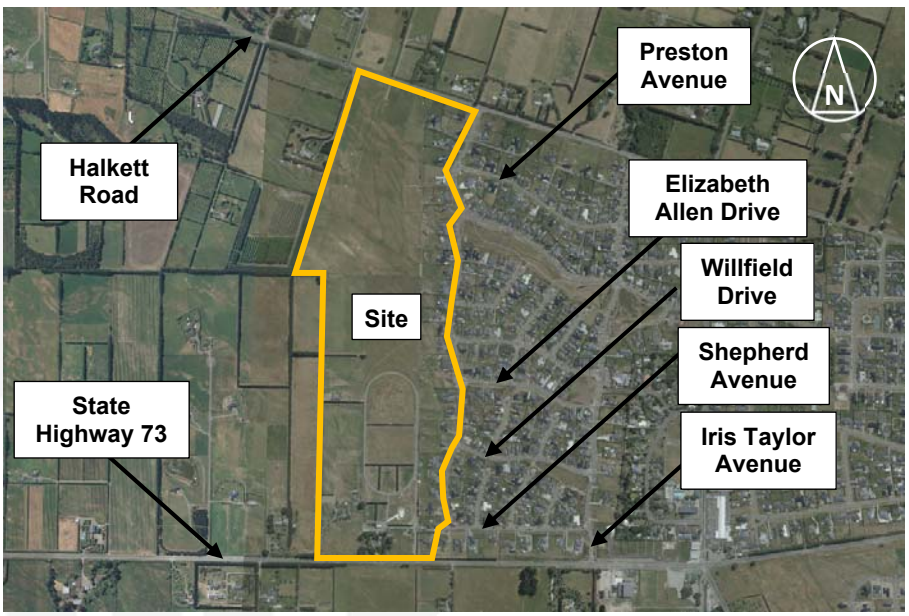

Figure 2: Aerial Photograph of Site and Environs

2.1.2. The eastern part of the site is presently developed with large residential properties, whereas the western part of the site is presently used for rural purposes. It has frontage onto Halkett Road to the north and State Highway 73 to the south. It is also proposed that linkages will be

formed onto Shepherds Avenue meaning that a proportion of residents could then gain access onto either Halkett Road or the highway via Iris Taylor Avenue or Preston Avenue.

2.2. Road Hierarchy

2.2.1. The Selwyn District Plan classifies State Highway 73 as a high capacity road of national importance, providing inter-district and regional links between significant transport destinations such as towns, cities, ports and other places of significance. Road and property access to state highways are both carefully managed to ensure that the highway operates efficiently.

2.2.2. Halkett Road, Iris Taylor Avenue and other roads in the immediate area are all Local Roads, indicating a purpose of providing direct property access.

3. Current Transportation Networks

3.1. Road Network

3.1.1. Adjacent to the site, State Highway 73 is subject to a 100km/h speed limit and provides one traffic lane in each direction. The alignment is flat and straight, and the legal width is 20m. There is a drainage ditch on the southern side of the highway.

Photograph 1: State Highway 73 Looking West (Site on Right)

3.1.2. As the highway enters West Melton, the speed limit reduces to 60km/h. On the existing western fringe of West Melton, Iris Taylor Avenue meets State Highway 73 at a priority ('give-way') controlled with traffic on the district road having to yield to vehicles on the state highway. On its immediate approach to the intersection, there is a raised grassed island within the centre of Iris Taylor Avenue which channelizes the traffic flows and means that there is sufficient width available for only one vehicle to stop at the 'give-way' markings.

3.1.3. The flush median on West Coast Road transitions to form a right-turn lane for vehicles turning into Iris Taylor Avenue. This is 10m in length with a 10m tapered section.

Photograph 2: State Highway 73 / Iris Taylor Avenue Intersection Looking North

3.1.4. East of Iris Taylor Avenue, State Highway 83 runs through West Melton and for a further 13.5km before terminating at State Highway 1 on the western outskirts of Christchurch.

3.1.5. Within the Preston Downs subdivision, Iris Taylor Avenue is subject to a 50km/h speed limit and has a 7.5 wide carriageway with a flat and curvilinear alignment.

Photograph 3: Iris Taylor Avenue Looking North

3.1.6. Around 100m north of the highway, Shepherd Avenue joins Iris Taylor Avenue from the west. The Iris Taylor Avenue / Shepherd Avenue intersection is notionally uncontrolled, with no signs or markings provided. However in practice, traffic on Iris Taylor Avenue retains priority.

Photograph 4: Iris Taylor Avenue / Shepherd Avenue Intersection Looking Northwest

3.1.7. Shepherd Avenue itself has a 7.0m wide carriageway and is subject to a 50km/h speed limit. Of note is that there is a swale on the southern side and nib kerbs, whereas towards the north is standard kerbing. There are multiple driveways on the road.

Photograph 5: Shepherd Avenue Intersection Looking East

3.1.8. Approximately 400m west of Iris Taylor Avenue, Shepherd Avenue turns through 90 degrees to run with a north-south alignment. The curve has a central island such that one traffic stream is physically separated from the other, with a minimum carriageway width of 4.9m provided.

Photograph 6: Curve on Shepherd Avenue Intersection Looking South

3.1.9. This part of Shepherd Avenue has a sinusoidal horizontal alignment with an overall north-south alignment, and it is joined by several local roads on the eastern side, including Willfield Avenue and Elizabeth Allen Drive. Shepherd Avenue then meets Preston Avenue some 850m north of the curve at a priority intersection. In turn, Preston Avenue then connects to Halkett Road at a priority intersection where there is a little widening of the priority route (suggesting few vehicles turn right into Preston Road).

Photograph 7: Halkett Road / Preston Road Intersection Looking East

3.1.10. Halkett Road has a flat and straight alignment, providing one traffic lane in each direction. The speed limit on the road is 60km/h. Towards the east it connects with State Highway 73 around 3.2km from Preston Road. Towards the west, Halkett Road connects to old West Coast Road some 8km northwest of West Melton, which in turn provides a connection to State Highway 72 and other district roads further west.

Photograph 8: Halkett Road Looking West

3.2. Non-car Modes of Transport

3.2.1. There are footpaths along most of the roads within the urban area of West Melton, including footpaths on the southern side of the highway (terminating near Iris Taylor Avenue), on both sides of Iris Taylor Avenue and the northern side of Shepherd Avenue (as can be seen on the photograjhs above). However, there are no footpaths on Halkett Road, or the western section of State Highway 73.

3.2.2. There is no specific infrastructure provided for cycling or public transport in the immediate area.

4. Future Changes to Land Use and Infrastructure

4.1. In 2020, NZTA announced that a number of measures were to be put in place on the roading network in West Melton, with a completion date of 2023. These are:

- traffic lights at the intersection of State Highway 73 and Weedons Ross Road. These will include phases to enable cyclists and pedestrians to cross the highway
- closing off the State Highway 73 / West Melton Road intersection at the northern end, to form a cul-de-sac
- a new link road connecting Weedons Ross Road to West Melton Road, linking to Weedons Ross Road at Kingsdowne Drive (around 300m south of the highway)
- a new roundabout at the intersection of this new link road and Weedons Ross Road

4.2. It is unlikely that these changes will affect through traffic on the highway, because the through traffic has only one choice of route (the highway) and while the changes might introduce some minor delays, these will not be noticeable in the context of the whole journey length.

4.3. However one outcome of the work will be to remove the existing bottleneck at the State Highway 73 / Weedons Ross Road intersection, which already experiences low levels of service for right-turning vehicles. This may make this route more attractive. Conversely through, the introduction of walking and cycling infrastructure is likely to mean that these forms of transport become more attractive due to the removal of severance is likely improvements (and perceptions of improvements) in road safety.

4.4. Overall, for the purposes of this assessment, no changes have been made to the traffic flows as a result of these schemes.

5. Current and Future Transportation Patterns

5.1. Traffic Flows

5.1.1. NZTA carries out regular traffic surveys on the state highway. The nearest traffic counter to the site on State Highway 73 is located east of Dawsons Road (counter 07300013, around 6km east of the site) and in 2019, the most recent year for which data is available, the highway carried 13,250 vehicles per day.

5.1.2. A closer assessment of the counter shows the following traffic patterns:

- Weekday morning peak hour (8am to 9am)
  - 1,110 vehicles (two-way)
  - 290 vehicles westbound (away from Christchurch)
  - 820 vehicles eastbound (towards Christchurch)
- Weekday evening peak hour (5pm to 6pm)
  - 1,100 vehicles (two-way)
  - 740 vehicles westbound (away from Christchurch)
  - 360 vehicles eastbound (towards Christchurch)
- Saturday peak hour (1pm to 2pm)
  - 750 vehicles (two-way)
- Sunday peak hour (3pm to 4pm)
  - 750 vehicles (two-way)

5.1.3. The pattern indicates a strong tidal flow into Christchurch in the weekday morning peak hour and away from Christchurch in the weekday evening peak hour. Traffic volumes during the weekend are 30% lower than during weekdays.

5.1.4. Traffic growth on this part of the highway over the past five years has been 5% (expressed as a proportion of the 2019 volume). This is very high, but in part may be due to the presence of new subdivisions around West Melton. The traffic counter on State Highway 73 in Darfield for example (07300041) has recorded just 1.7% annual traffic growth for the past five years expressed as a percentage of 2019 volumes. Put another way, in Darfield, for any given day in different years, there has been an increase of 100 vehicles year-on-year but east of West Melton, the increase has been 670 vehicles on any given day.

5.1.5. On this basis, allowing for traffic growth, the annual traffic growth applied to the highway adjacent to the site has been 1.7%.

5.1.6. According to the MobileRoad website, for the district roads:

- Halkett Road carries 700 vehicles per day;
- Preston Avenue carries 150 vehicles per day;
- Shepherd Avenue carries 150 vehicles per day; and
- Iris Taylor Avenue carries 1,620 vehicles per day.

5.1.7. Typically a road can be expected to carry around 10% of the daily flows in the weekday peak hours. Consequently the following peak hour volumes can be expected:

- Halkett Road: 70 vehicles in the peak hours;
- Preston Avenue: 15 vehicles in the peak hours;

- Shepherd Avenue: 15 vehicles in the peak hours; and
- Iris Taylor Avenue: 160 vehicles in the peak hours.

5.1.8. As part of work associated with the West Melton Community Centre, traffic surveys were carried out at the State Highway 73 / Iris Taylor Avenue intersection during 2016. The results are shown below.

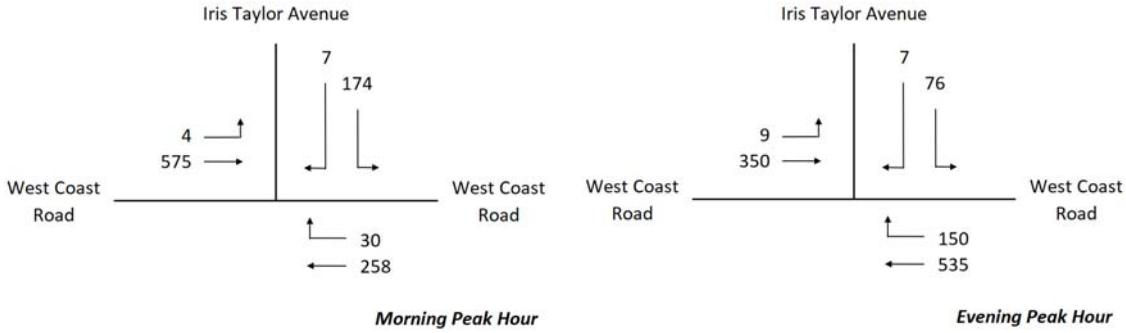

Figure 3: 2016 Peak Hour Traffic Flows at State Highway 73 / Iris Taylor Avenue Intersection

5.1.9. The through traffic on the highway has been increased by 7% (to allow for four years of growth at 1.7% per annum) and the intersection has been modelled using the computer software program Sidra Intersection. The results are summarised below.

Road and Movement		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
SH73 (east)	R	8.5	0	A	7.2	1	A
Iris Taylor Avenue	L	11.6	2	B	7.0	0	A
	R	13.8	0	B	17.1	0	C

Table 1: Current Performance of State Highway 73 / Iris Taylor Avenue Intersection

5.1.10. It can be seen that the intersection operates with low queues and delays, and good levels of service.

5.1.11. The intersection has been remodelled for 2030, through applying an increase of 17% to the volumes on the highway. For this assessment an allowance has also been made for extra bunching in the westbound traffic flow arising from the proposed State Highway 73 / Weedons Ross Road traffic signals.

Road and Movement		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
SH73 (east)	R	9.5	0	A	7.5	1	A
Iris Taylor Avenue	L	15.0	2	C	7.7	0	A
	R	16.8	1	C	19.6	0	C

Table 2: Anticipated Performance of State Highway 73 / Iris Taylor Avenue Intersection in 2030

5.1.12. It can be seen that the intersection continues to operates with low queues and delays, and good levels of service.

5.1.13. The traffic volumes at other intersections are sufficiently low that they can be expected to operate under 'free flow' conditions with minimal queues and delays.

5.2. Non-Car Modes of Transport

5.2.1. The volumes of pedestrians and cyclists in the area are presently negligible due to it being zoned for rural use and having very limited development. However as the area becomes dominated by residential land uses, it can be expected that there will be an increase in these types of road user.

5.2.2. Similarly, the extent of public transport services is largely dependent upon the number of potential passengers in an area, which in this case is currently minimal. As the extent of residential development increases then the number of potential passengers will also increase. At present there is just one bus service which serves West Melton and this runs into Christchurch from Darfield in the morning with the route reversed in the evening. Provision could be made for this to stop adjacent to the site if demand is sufficient.

5.3. Road Safety

5.3.1. The NZTA Crash Analysis System has been used to identify the location and nature of the recorded traffic crashes in the vicinity of the site. All reported crashes between December 2015 and November 2020 were identified on the western side of the Preston Downs subdivision, at the State Highway 73 / Iris Taylor Avenue intersection (and 100m on the highway either side) and the Halkett Road / Preston Avenue intersection (and 100m on Halkett Road on either side). This showed that just two crashes had been recorded.

5.3.2. Both crashes occurred on State Highway 73, west of Iris Taylor Avenue. One crash occurred when a driver looking at scenery was distracted and lost control of their vehicle, hitting a sign and objects off the road. The other crash occurred when the driver fell asleep and left the roadway. Neither crash resulted in any injuries.

5.3.3. Given the low number of crashes and the varying contributing factors and different locations, it is not considered that the crash record indicates any underlying road safety issues on the roading network in this area.

6. Proposal

6.1. The proposal is for a plan change to facilitate a residential subdivision with a total of around 525 lots.

Figure 4: Proposed Outline Development Plan

6.2. The eastern part of the site is already developed for residential use, being zoned as Living West Melton whereas the western part (comprising the bulk of the site) is used for rural purposes. As a result, the full yield of the site may not be achieved in the short to medium term, as it would require the intensification of land that is already developed.

6.3. From a transportation perspective, the key features of the ODP include a road running north-south through the site, with new intersections formed onto State Highway 73 and Halkett Road. There are also three east-west routes, which connect from this proposed spine road onto Shepherd Avenue, and align with Willfield Avenue, Elizabeth Allen Drive and Preston Avenue. The latter will require some minor realignment of the Preston Avenue / Shepherd Avenue intersection.

7. Traffic Generation and Distribution

7.1. Traffic Generation

7.1.1. 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.

7.1.2. In this case, employment opportunities within West Melton are limited, and thus residents will need to travel for work. As a result, there is already a high degree of commuting to/from the township (as evident in the traffic volumes noted above).

7.1.3. Typical residential dwellings each generate 8-10 vehicle movements per day, dwellings and the lower rate has been used within this assessment to account for trip-chaining. An allowance has been made for each dwelling to generate 0.9 vehicles movement in the peak hours. This is consistent with the traffic generation adopted for residential development within Selwyn District has for other proposed developments. With 525 properties permitted, this would result in 472 vehicle movements (two-way) in the peak hours.

7.2. Trip Distribution

7.2.1. Given that there is already a residential area adjacent to the site, it is reasonable that a similar trip distribution will occur. Assigning the generated traffic in the same proportions as seen at State Highway 73 / Iris Taylor Avenue gives the following distribution.

Time Period	To/From East		To/From West	
	Entering Site	Exiting Site	Entering Site	Exiting Site
Morning Peak Hour	66	382	9	16
Evening Peak Hour	293	149	17	14
Daily	1,975	1,975	125	125

Table 3: Total Traffic Generation of Site

7.2.2. It is more difficult to identify whether these vehicles will use the proposed new intersections to the north and south, or travel via roads within West Melton (such as Iris Taylor Avenue). However, allowing for the internal roads to have a 50km/h speed limit and for 60km/h on the external roads, it is considered that

- 25% of the traffic would travel via the new intersection to the north onto Halkett Road
- 15% of the traffic would travel via the east-west links to the north onto Preston Avenue
- 25% of the traffic would travel via the east-west links to the north onto Iris Taylor Avenue and onto the highway
- 35% of the traffic would travel via the new intersection to the south onto State Highway 73

8. Effects on the Transportation Networks

8.1. Roading Network Capacity

8.1.1. The State Highway 73 / Iris Taylor Avenue intersection has been remodelled using the observed traffic flows plus the traffic expected traffic generated by the site as described above, for 2030. The results are summarised below.

Road and Movement		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
SH73 (east)	R	11.4	0	A	8.1	1	A
Iris Taylor Avenue	L	47.8	9	E	8.5	1	A
	R	23.2	0	C	28.4	0	D

Table 4: Anticipated Performance of State Highway 73 / Iris Taylor Avenue Intersection in 2030 Plus Site Development

8.1.2. It can be seen that the changes in the delay and the levels of service are the most pronounced for the left-turn movement out of the site in the morning peak hour and the right-turn movement out of the site in the evening peak hour. The changes to the left-turn movement arise because the intersection onto the state highway towards the west result in fewer gaps into which left-turning vehicles can emerge. However Level of Service E is not unreasonable, and in practice if drivers consider that this delay is too great then there are alternative routes that can be used such as the intersection onto Halkett Road, or Preston Avenue, or using east-west links further from the site to travel to Weedons Ross Road.

8.1.3. Given that this intersection operates with a satisfactory level of service, it can be concluded that the proposed new intersection onto the highway will also operate satisfactorily because the volumes will be lower.

8.1.4. Similarly, traffic flows on Halkett Road are low, and therefore the performance of the proposed new intersection serving the site and the Halkett Road / Preston Avenue intersection will be satisfactory.

8.1.5. On this basis, it is considered that the traffic generated by the development of the site can be accommodated without adverse efficiency effects arising.

8.2. Non-Car Modes of Transport

8.2.1. The extent of walking and cycling in the area is likely to increase due to the development of increased numbers of residential properties, but overall it is likely to remain relatively low as there are only limited destinations within a viable walking distance. Roads within the site can be expected to have suitable footpath provision.

8.2.2. In practice it is anticipated that the existing footpath on State Highway 73 will be extended westwards to the proposed new intersection serving the site, but this can be achieved within the legal reserve.

8.2.3. The NZTA Cycle Network and Route Planning Guide indicates various combinations of traffic flows and speeds for when specific cycling infrastructure is required. Based on these, cycle lanes or sealed shoulders are already required on State Highway 73, but in practice the

presence of parked cars leads to only an intermittent level of provision. As set out above however, measures are proposed in future to provide for cycling. No internal cycling infrastructure is required due to the lower speed, lightly-trafficked nature of the roads.

8.2.4. That said, it is anticipated that the roads within the site will meet the Council's standards for new roads, including the provisions of footpaths and cycling infrastructure where necessary, and therefore no further comment has been made on the internal road network.

8.2.5. Although the provision of a bus service is beyond the scope of a plan change, the internal roading network can be constructed to allow a service to pass through the site in future, should such a service operate. In the shorter term, there are no (technical) reasons why a layby could not be constructed on State Highway 73 for the existing service to stop.

8.3. Form of Intersection on State Highway 73

8.3.1. In view of the traffic volumes on State Highway 73, it is considered that the proposed new intersection would need to be similar in layout to that of Iris Taylor Avenue, with an auxiliary right-turn lane being provided. The design of the intersection depends on the prevailing speeds, with a layout suited to a 100km/h speed limit being different to one appropriate for a 60km/h speed limit, and it is possible that the speed limit will be reduced due to the presence of the site

8.3.2. In either case, there is sufficient width within the legal reserve to achieve this (20m is available) but the current layout of the highway does not include wide shoulders and therefore there would be a requirement to widen the existing seal

8.4. Road Safety

8.4.1. The crash history in the vicinity of the site does not indicate that there are any particular features or factors that would affect, or be affected by, the development of the site.

8.4.2. New roads within the site can be expected to meet current standards, including for non-motorised travel and therefore it is unlikely that any new road safety issues will be introduced.

8.4.3. The proposed road alignments mean that appropriate sight distances can be provided at intersections, including on State Highway 73 and Halkett Road.

9. District Plan and NZTA Planning Matters

9.1. Introduction

9.1.1. The District Plan sets out a number of transportation-related policies and rules with which any new development is expected to comply. An assessment has been carried out of the proposed ODP layout against these rules[1].

9.2. Rule 5.1: Road and Engineering Standards / Appendices E13.3.1 and E13.3.2

9.2.1. The generally flat topography of the site means that the maximum gradients set out within this rule can be achieved.

9.2.2. With regard to the requirements for the roading network set out in Appendices E13.3.1 and E13.3.2, the roads within the site are able to meet the requirements of the District Plan for local residential roads.

9.2.3. In view of the potential connections towards the east of the site, the current formed widths of (particularly) Preston Avenue, Shepherd Avenue and Iris Taylor Avenue are appropriate for accommodating increased traffic loadings. In the event that widening is sought, the legal widths (20m) are able to accommodate this without additional land being required.

9.2.4. Taking into account that the internal roads are likely to have a speed limit of 50km/h, the minimum spacing between internal intersections (measured from centreline to centreline) is 75m. This is achieved under the ODP within the site but in due course, intersections may be located closer together in order to provide suitable permeability within the site. However this is a matter to be considered when subdivision consents are sought.

9.2.5. Within the site, crossroad intersections are proposed at Willfield Drive, Elizabeth Allen Drive and Preston Avenue. Given that the roads within the site will carry largely local drivers that are familiar with the roading pattern, and as the roads are intended to be low-speed residential roads, we consider that crossroad intersections can be supported. The alignment of Shepherd Avenue means that appropriate sight distances can be provided at each of the intersections.

9.2.6. Externally, a new priority intersection is proposed onto Halkett Road. Under the Plan, for the status of the roads in the hierarchy, any new intersection is expected to have a separation of at least 150m from any other intersection. This is achieved.

[1] The District Plan is presently being revised and it is likely that the rules/standards may change in future. Given that the Plan has just been notified, little weight can presently be given to the proposed new provisions. However, an assessment against the operative rules provides a good indication of any potential significant design issues that might arise under any new provisions in future.

9.3. Rule 5.2: Vehicle Accessways / Appendix E13.2.1

9.3.1. The ODP means that the vast majority of lots gain direct access onto one of the internal roads. It is possible that some lots may have access onto Halkett Road, but this is a Local Road that is expected to accommodate direct property access. Ultimately though, this is a matter to be considered when subdivision consents are sought.

9.3.2. It is understood that no lots will have direct access directly onto State Highway 73. This is an appropriate outcome given its status as a high-speed arterial road.

9.3.3. The flat topography of the site means that the maximum gradients permitted under this rule can easily be achieved.

9.4. Rule 5.3: Vehicle Crossings / Appendices E13.2.2 to E13.2.5

9.4.1. As the locations of the vehicle crossings are not presently fixed, they can be located in the position that either complies with, or most nearly complies with, the separation distances from intersections set out in Table E13.5 of Appendix E13.2.2.

9.4.2. However a separation distance of 60m is required on Halkett Road and this cannot be achieved because of existing property accesses which are likely to be difficult to relocate. That said, there appears to be only one driveway which lies within 60m, and since this will be have low traffic flows, it is not considered that adverse effects would arise from the non-compliance.

9.4.3. The flat and largely straight alignment of the roads shown on the ODP means that appropriate sight distances will be achieved from the vehicle crossings. The exception to this is likely to be at locations close to intersections or to curves in the road, but in such cases the vehicle speeds will be much lower than the permitted maximum (as drivers will have slowed to negotiate the intersection), and it is anticipated that the sight distances provided will be appropriate for the prevailing speed environment.

9.4.4. Compliance with the maximum number of vehicle crossings per lot can be achieved, as can the maximum width of the crossings.

9.5. Rule 5.5: Vehicle Parking and Cycle Parking / Appendices E13.1.1 to E13.1.3 and E13.1.6 to E13.1.12

9.5.1. Although details of the location and number of car parking spaces have not been shown on the ODP, the size of the proposed lots and the topography of the site mean that the appropriate number and size of car parking spaces can be provided. Parking spaces can be provided on the lot to which they relate, with the manoeuvring areas accommodating the Council's design motor car without the need to reverse into a space, or carry out more than one reversing movement when unparking. An appropriate queuing space of 5.5m can also be provided.

9.6. Summary of District Plan Compliance

9.6.1. On the basis of the above review, the ODP (and future subdivision pattern) is likely to comply with the District Plan requirements, other than in regard to the separation between intersections (Rule 5.1: Road and Engineering Standards) and with regard to the minimum sight distances from vehicle crossings close to intersections (Rule 5.3: Vehicle Crossings).

9.6.2. Both of these can be addressed and evaluated further when a subdivision consent is lodged, but it is considered that both are able to be supported from a technical perspective.

Accordingly, the site layout (as expressed on the ODP) can be supported from a transportation perspective.

9.7. NZTA Planning Matters

9.7.1. Under the NZTA Planning Policy Manual, for a highway with a 100km/h speed limit, any new intersection is required to be assessed under its own merits and there is no minimum separation required. However the separation proposed to Iris Taylor Avenue is in the order of 500m which is likely to be ample. The presence of the development of the site also creates the opportunity to lower the speed limit on the highway.

9.7.2. The further matter is the separation of the proposed new intersection from adjacent driveways. A separation distance of 200m on State Highway 73, and this cannot be achieved because of existing property accesses which are likely to be difficult to relocate. That said, the property access is to a rural lot, which is likely to be infrequently used, and therefore it is not considered that adverse effects would arise from the non-compliance.

10. Conclusions

10.1. This report has identified, evaluated and assessed the various transport and access elements of a proposed residential plan change to the west of West Melton. Overall it is considered that the traffic generated by the development of the site can be accommodated on the adjacent roading network without capacity or efficiency issues arising. Levels of service at the intersection most likely to be affected (State Highway 73 / Iris Taylor Avenue) remain satisfactory, with relatively low queues and delays. Change in queues and delays at other intersections will also be low because traffic flows are lower.

10.2. The crash history in the vicinity of the site does not indicate that there would be any adverse safety effects from the proposal.

10.3. The ODP indicates that the subdivision pattern will largely meet the requirements of the District Plan, other than in respect of the separation distances at several intersections, and sight distances at vehicle crossings close to intersections. However, both of these non-compliances can be supported at this stage, and can be considered further when subdivision consents are sought.

10.4. Two new intersections are proposed to the north and south (Halkett Road and State Highway 73 respectively) and in both cases, the intersections are closer to vehicle crossings than anticipated in relevant planning documents. However both driveways are lightly trafficked and at this stage it is considered that the non-compliances can be supported.

10.5. Overall, and subject to the preceding comments, the plan change can be supported from a traffic and transportation perspective and it is considered that there are no traffic and transportation reasons why the plan change request could not be recommended for approval.

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December 2020

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