

Peer review - Transport

Coniston Park Plan Change – Farm Road and Racecourse Road, Ashburton

Prepared for	Ashburton District Council
Job Number	ADC-J007
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Prepared by	Mat Collins, Associate Transportation Engineer
Reviewed by	Dave Smith, Technical Director

1. Introduction

Abley Limited (Abley) was engaged by Ashburton District Council (Council) to provide independent transport planning advice in respect of a Private Plan Change application to rezone land from Residential D to Residential C (Plan Change) located on Farm Road and Racecourse Road in Ashburton (site).

The site location is shown in Figure 1.1 and the proposed Outline Development Plan (OPD) is shown in Figure 1.2.

We have reviewed the following document:

- Integrated Transport Assessment (ITA), prepared by Novo Group, dated April 2024.



Figure 1.1 Site Location

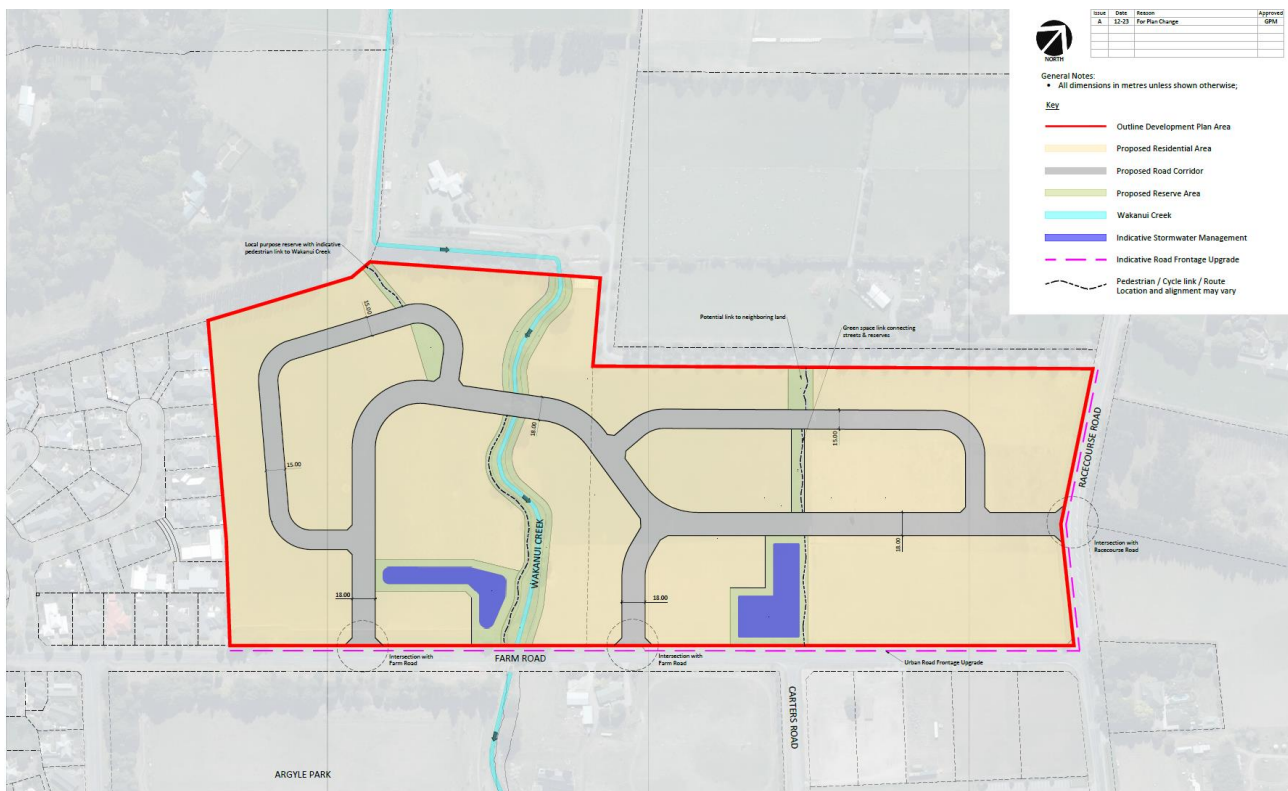


Figure 1.2 Outline Development Plan

2. Scope of our peer review

The peer review is limited to evaluating the potential effects on the existing transport network. It does not cover internal site transport matters such as road cross-sections or internal intersection locations.

3. Consideration of the ITA scope

Some District Plan Transport Chapter Policies reference high traffic generating activities, but no District Plan Rules directly address them, and therefore the District Plan does not give guidance on the content of an ITA. Therefore, we used NZ Transport Agency Waka Kotahi (NZTA) Research Report 422 (RR422) to determine the ITA's scope. We classify the ITA scope as Moderate to Broad, per Table 6.2 of RR422, based on:

- The Plan Change's potential to generate high peak hour vehicle trips (157 veh/hr in the morning peak hour and 173 veh/hr in the evening peak hour).
- The hierarchy of roads affected: West Street and Alford Forest Road (State Highways), Harrison Road (Principal Road), and Farm Road (Collector Road).

Referring to Table 6.3 of RR422, we consider that the ITA scope should be expanded to include the following information:

- Walking, cycling and public transport network. We recommend that the ITA include detail on any existing networks, including any gaps or barriers to walking and cycling to and from the site (noting that there are no public transport services in Ashburton). In para 28 – 30 the ITA makes some generalised comments on these topics, however a more comprehensive assessment including identifying any works needed to ensure the site connects to the existing walking and cycling network, and any gaps or deficiencies in the wider network that may need to be addressed by Council.
- Information on funded or proposed road network improvements, which may support the Plan Change.
- Consideration of trip distribution based on existing travel patterns and how generated trips may route through the current network.
- An assessment of safety and efficiency effects at key intersections, which may include traffic modelling. This should be informed by the predicted trip distribution.

4. ITA content

4.1 Traffic Generation section

The ITA calculates the anticipated peak hour vehicle generation rate based on traffic surveys conducted in West Melton, adopting a peak hour trip rate of 0.76 veh/hr/dwelling in the AM peak and 0.84 veh/hr/dwelling in the PM peak. In addition, the ITA has also included 40 peak hour vehicle trips, to reflect the potential for a childcare centre or local retail activity within the site. We consider that these are reasonable assumptions.

4.2 Connectivity and Integration section

As noted above, we recommend that the ITA provide greater detail regarding walking and cycling accessibility and connectivity to and from the site.

4.3 Frontage Road Upgrades

The ITA states that Farm Road will be urbanised along the site frontage by widening the carriageway from the centreline, and that the remaining half of the carriageway will be formed when land fronting the south side of Farm Road urbanises. In our experience, it is common for the developer to upgrade the full carriageway and the berm on their side of the road, and the berm on the opposite side of the road to be upgraded when that frontage urbanises. Should the Plan Change be approved, we recommend that the following matters are considered during resource consent applications and engineering plan approvals:

- maintenance issues and subsequent safety issues, as pavement failure can occur if there is a strength differential between the two halves of the carriageway.
- safety issues if the crown of the carriageway is offset from the centreline of the road
- excessive disruption, upgrading the full carriageway as one project will reduce the total disruption compared with two projects that upgrade half of the carriageway per time.

4.4 Farm Road and Racecourse Road Intersections section

Racecourse Road

We note that the ITA identifies that the Outline Development Plan (ODP) does not provide the required intersection spacing on Racecourse Road, between the proposed primary road and existing Farm Road intersection. We recommend that the ITA provide commentary on matters given in Austroads Guide to Road Design Part 4: Intersections and Crossings: General (AGRD-04) – Appendix B, in particular consideration of Safe Intersection Sight Distance and Approach Sight Distance.

Further, we recommend that a concept design is provided for the Racecourse/ Primary Road intersection, including how this integrates with the existing right turn bay and taper on Racecourse Road, to confirm that this can comply with Austroads guidance for minimum right turn bay and taper length. This should include consideration of the existing speed limit on Racecourse Road, while it is possible that the speed limit on Racecourse Road will be reduced if the site urbanises, this can only be undertaken by the Road Controlling Authority and is therefore not an outcome that can be controlled by the Plan Change.

Farm Road

The ITA considers that the spacing for the two proposed intersections on Farm Road comply with District Plan requirements for a 50 km/hr speed limit. We recommend that the ITA also comment on the spacing between the proposed intersections and the Farm Road/Carters Road intersection, as it appears that this may not comply with District Plan requirements for a 50 km/hr speed limit.

15 July 2024

Coniston Park Limited
c/- David Harford Consulting Limited

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Attention: David Harford

By email: david@dhconsulting.co.nz

Dear David,

TRANSPORT FURTHER INFORMATION RESPONSE RESIDENTIAL PLAN CHANGE FARM ROAD / RACECOURSE ROAD, ASHBURTON

1. We have provided an Integrated Transport Assessment (ITA) for the proposed residential Plan Change on the corner of Farm Road and Racecourse Road, Ashburton. You have provided a copy of the Request for Further Information (RFI) from Council's consultant transport engineer. The following letter sets out our response to the RFI matters raised.

Response

2. The RFI lists a variety of aspects for further discussion. At a broad level, it is worth noting that the planning context guides what level of assessment is appropriate and in a transport context this includes the scale of the proposal, and what can be reasonably anticipated to develop on the site and surrounding area, under the current zoning. For clarity, although the existing landuse is rural, this is not a rural zone. The Plan Change seeks to increase the residential density from the current *Residential D* zoning to proposed *Residential C* zone.
3. The existing *Residential D* zone provides for residential development such that the District Plan already anticipates development of an urban environment, residential activity, and residential trips (including walking and cycling). The focus in terms of assessment is therefore what additional effects will arise from the increased residential density in this case that equates to an increase of around 126-166 dwellings. This is a relatively small scale of additional development in the context of network capacity and additional trips (all modes).
4. The land on the opposite side of Racecourse Road from the site and to the south-east of the site is also zoned *Residential D* and the land on the opposite side of Farm Road (excluding the existing reserve) is zoned *Residential C*. As such the surrounding environment is already anticipated to be developed for residential use under the current District Plan rules and this forms the basis from which to assess the transport effects of the Plan Change sought.
5. In terms of the existing transport environment, the 60km/h (urban) speed limit already extends the majority of the way along the Racecourse Road frontage of the site, to a point



north of the proposed road intersection. The full frontage of Farm Road is also 60km/h. The preliminary indication from Council¹ was that further speed reductions (to 50km/h and shifting the rural / urban speed transition on Racecourse Road to a point north of the site) would be co-ordinated with future subdivision of this site. Design of an Outline Plan for the site to the anticipated speed limit is appropriate and standard practise. In this instance there is already an urban speed environment adjacent to nearly all of the site and further speed reductions and adjustments can be readily co-ordinated with future subdivision. This approach underpins the response to a number of the points discussed below.

6. The specific matters outlined in the RFI are summarised (with reference to the RFI section numbering) and addressed in turn below.

Information on funded or proposed road network improvements, which may support the Plan Change. [Section 3.0].

7. We are not aware of any key improvements of particular relevance to the site. As outlined above, urban development of the site and surrounding area is already anticipated to occur. Given the scale of additional dwellings, the assessment in the ITA did not identify any significant capacity or safety related infrastructure constraints / limitations that would need to be addressed to allow for the increase in density.

Any gaps or barriers to walking and cycling to and from the site including any works needed to ensure the site connects to the existing walking and cycling network, and any gaps or deficiencies in the wider network that may need to be addressed by Council [Section 3.0].

8. There are already footpaths and sealed local roads for walking and cycling trips to key destinations (ref para 28/29 of the ITA) which are generally located south and west of the site. Whilst some roads have not yet been upgraded to urban infrastructure there are parallel routes with existing facilities that can be used in the interim without resulting in any noticeable inconvenience or additional travel distance for pedestrians or cyclists. For example, use of Middle Road instead of Carters Road between Farm Road and Allens Road.
9. The initial indication from Council is that they are aware they may need to fund gaps in infrastructure along Racecourse Road (between the site and State Highway 1) once the variety of residential zoned sites and associated upgrades are completed. This primarily relates to a few locations developed historically without typical urban infrastructure (for example the block between Charlesworth Drive and Allens Road). The road carriageway is however of sufficient formation and is straight and flat so as to safely accommodate vehicular traffic existing and proposed. Racecourse Road is not anticipated to be a key route for pedestrian and cycle trips noting that key destinations are generally located South and West (with travel via Farm Road). Noting this, the progressive development of facilities along Racecourse Road, associated with further residential development, and any Council upgrades, will not impact pedestrian and cycle access to key destinations.

¹ By email from Mark Chamberlain 19 September 2023.



Consideration of trip distributionand safety and efficiency effects at key intersections [Section 3.0].

10. Para 48 of the ITA and Table 3 set out the trip distribution used for the assessment. It is noted that there is no existing trip distribution information relevant to this site and noting the location of the site, frontage road volumes / flows, particularly on Racecourse Road, are not likely to be representative of trip distribution for future residents in this location. For this reason, the ITA based future distribution on typical residential flows (arrival / departure rates and times) and split this relative to the location of key travel destinations for work and school, that is largely South and West of the site for local trips (within Ashburton) and along Racecourse Road for trips to the wider road network.
11. Table 3 in the ITA shows that even as dispersed across the proposed intersections with the two frontage roads, the peak hour volumes are very low (we note there is a typographical error in Table 3 which shows 590 instead of 59 trips). As these volumes disperse further across the road network, the increase in traffic at any one location / intersection will be even lower. Noting the volumes proposed, and the very low existing traffic volumes on the road network near the site, these are well below the point where capacity is likely to be a concern. For this reason we do not consider any modelling would be warranted.
12. Paragraph 49 of the ITA also outlined that the Farm Road / Racecourse Road intersection layout already includes turning lanes. This existing intersection layout provides good capacity to cater for key turning movements. That is the design already exceeds what would be anticipated to cater for the existing and proposed capacity. For this reason, no modelling of this intersection was considered warranted.

Whether both sides of Farm Road should be widened / urbanised [Section 4.3].

13. Where land on the opposite side of the road is also zoned for urban activities, we would normally anticipate that each subdivision contributes to the upgrade by completing the half of the road along the frontage adjacent to their site. Exceptions to this are where there would be a safety issue / effect arising from that approach for the duration between the first and second side being upgraded. No such issues were identified in respect of Farm Road, this approach appears to be consistent with the frontage upgrade approach used to the south (near 71-76 Farm Road). That said, either way we do not consider this to be a significant issue in considering whether or not the additional density can be supported on this site. Rather, this would be a matter for consideration at the subdivision consenting and engineering approvals stages.

Various points re maintenance, crown v centreline and construction disruption relating to Farm Road upgrades [Section 4.3].

14. These matters are more appropriately addressed at the time of subdivision when detailed engineering drawings are available. The cross sections provided are indicative to enable the effects to be generally considered at a high level, applicable to the Plan Change process.



Proposed Primary Road - Racecourse Road Intersection: Safe Intersection Sight Distance [Section 4.4]

15. The location of the intersection at apex on the outside of the curve on Racecourse Road will ensure that the future intersection can achieve Safe Intersection Sight Distance (97-123m in each direction for 50km/ and 60km/h speed limits respectively). This was the primary reason for the location (prefer to paragraph 38 of the ITA) as it allows visibility in each direction, from the minor road, to be unrestricted.

Concept design for the Racecourse Road - Primary Road intersection” [Section 4.4]

16. As outlined in the ITA and discussed above, given the low volumes and urban speeds we anticipate a basic ‘T’ intersection would provide ample capacity. A right turn lane could be provided on Racecourse Road to further reduce any disruption for through traffic albeit the volume turning right here is anticipated to be low suggesting this would be un-necessary. There is ample space for a ‘T’ intersection in this location with or without the right turn lane on Racecourse Road. In respect of the existing the Racecourse Road intersection with Farm Road, the right turn taper which currently extends to the location of the proposed intersection. Noting the 60km/h speed limit has already been extended beyond Farm Road (and beyond the proposed road intersection) in recent years, the right turn taper can now be reduced as it does not need to accommodate the same level of deceleration (previously designed for a 70-100km/h speed limit).
17. As above, there are no constraints identified that would prevent the design and layout of the intersection, and changes to the existing road markings, being readily addressed at subdivision stage. That is there is a good degree of certainty in this instance that standard design processes can achieve a safe and efficient intersection and road design layout through the subdivision process. Where this is the case, the subdivision consent and road safety audits are best suited for development and analysis of detailed design matters.

Proposed Road - Farm Road and Farm Road - Carters Road intersection spacing [Section 4.4]

18. The District Plan (refer to Rule 10.9.11.d.) does not apply separation distances to intersections on the opposite side of the road, except in rural zones. As above, the site and adjacent land is already zoned *Residential D* and is proposed to be rezoned *Residential C*. Accordingly no separation distance between the intersections will be required in this location.
19. It is also noted that both the proposed road and Carters Road are ‘T’ intersections with priority to traffic on Farm Road. Farm Road is straight and flat which will provide for good visibility between the intersections. They are proposed to be sufficiently separated so as to avoid conflict between turning movements.
20. Noting the above, the proximity of the intersections is not anticipated to have any adverse transport effects.
21. We trust the above is sufficient, however, should you require any further information please do not hesitate to contact the undersigned.



Yours sincerely,

Novo Group Limited

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