

30 July 2021

Terra Nova Planning
Florence House,
16 Florence Avenue,
Orewa 0931,
New Zealand

Dear Shane,

Private Plan Change request – McKinney Road, Warkworth

Stantec is pleased to provide the following response to the Clause 23 request for further information received from Auckland Council on the above project.

1. Introduction

Following receipt of the resource consent application for the above subdivision, Auckland Council has issued a request for further information under Clause 23 of the Resource Management Act 1991 (Clause 23 request) dated 16 June 2021. This letter addresses the transport related matters raised within the Clause 23 request, for the Private Plan Change (PC). These queries are quoted for ease of reference and responded to below.

2. Response to Clause 23 Requests

2.1 Point Tra1 – Sight Distance

“Provide additional detail for the sight distance assessment at McKinney Road/SH1 intersection. This should include details of the deficiency and assessment as to whether mitigation measures are required.”

Reason: “Section 2.1.2.5 of the ITA notes that SH1/McKinney Rd has “poor visibility” but does not provide supporting details. There is no assessment of how deficient the visibility is in relation to accepted standards.”

A desktop sight distance assessment has been undertaken, as outlined below.

As shown in **Figure 1**, drivers approaching SH1 along the McKinney Road approach have 80m of sight distance from intersection to the northeast, and 250m of sight distance to the southwest.



Figure 1: Sight Distance Measurements from SH1 / McKinney Road intersection

Sight distances have been assessed based on the Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (Austroads Guide).

SH1 has an 80km/h speed limit (design speed 90km/h) to the north of the SH1 / McKinney Road intersection and 100km/h (design speed 110km/h) to the south.

Sight distance requirements for the McKinney Road approach based on the Austroads are summarised as follows:

- Approach Sight Distance (ASD) – 151m northeast and 209m southwest;
- Safe Intersection Sight Distance (SISD) – 226m northeast and 300m southwest; and
- Minimum Gap Sight Distance (MGSD) – 125m northeast and 153m southwest.

The sight distance to the northeast is limited by the position of the vertical crest curve in the SH1 alignment, approximately 80m northeast of the McKinney Road / SH1 intersection. Although the Austroads' sight distance requirements aren't currently met, the opening of the Ara Tūhono – Pūhoi to Warkworth Road bypass (P2Wk) will reduce the overall traffic demands on the McKinney Road / SH1 intersection.

Vegetation along the boundary of SH1 can be removed to improve visibility. Alternatively, speed limits in the vicinity of the intersection can be reduced to 60km/h if and when the P2Wk is operational and completed, to better reflect the developing residential speed environment in the vicinity of the site. This reduction in speed will also reduce the required sight distance.

2.2 Point Tra2 – Sight Distance

"Please provide sight assessment of new road accesses, including consideration of street trees i.e., can be retained or not."

Reason: "The ITA states that proposed accesses can meet the Approach Sight Distance, Safe Intersection Sight Distance, and Minimum Gap Sight Distance requirements. However, it appears there are a number of trees located within the road reserve on McKinney Road, and a single tree impacting the distance on John Andrew Drive."

A detailed assessment will be considered at the subsequent subdivision stage. Section 5.0 of the TA provides for sight distance requirements on McKinney Road and John Andrew Drive. A high-level assessment (at Plan Change level) indicates that the proposed development site access arrangements can meet these requirements. Furthermore, there are also no trees along the frontage of McKinney Road, where the potential connection will be provided.

2.3 Point Tra3 – Road Function

“Provide further details on the proposed road between McKinney Road and Titapu Road. Will the road be designed with a movement or access focus, and how will this relate to the design characteristics?”

- *If it is a local road, will it include bicycle lanes and how will vehicle speeds be encouraged and enforced?*
- *The ITA specifies narrow roads – what are the road widths proposed?*
- *If the road is a collector road, what measures will be in place to minimise vehicle access?”*

Reason: “The ITA identifies a new road between McKinney Road and Titapu Road as the main access. The ITA states that this new internal road will be a collector road and be designed for a 30 km/hr operating speed. These two features are contradictory; a collector road designed for movement is typically at speeds of 50 km/hr. A local road is used for access and therefore is more likely to operate at lower speeds such as 30 km/hr.”

Section 4.1.1 of the TA outlines the characteristics of this collector road and proposed to incorporate the following:

- A two-way carriageway;
- Separated cycle facilities and pedestrian routes;
- Kerbing;
- On-street parking bays;
- Street lighting;
- Street trees;
- Stormwater treatment; and
- Sufficient space for services under the berm on both sides of the road.

Whilst 30km/hr speed limits on collector roads are unusual, it is considered appropriate for this residential environment with challenging gradients. All new roads will be designed in accordance with Auckland Transport Code of Practice and / or the Transport Design Manual. The lower speed environment is also considered to align with the intentions of Auckland Transport’s “Vision Zero” objective.

The design details are to be outlined during the subsequently subdivision stage.

2.4 Point Tra4 – Fairwater Rd – Pedestrian Access

“Please provide details on how pedestrian access to Fairwater Road will be achieved for all ages and abilities given the grades?”

Reason: “There is insufficient detail on how to achieve pedestrian access to Fairwater Rd given the grades through this area and the two driveways serving at the end of Fairwater Rd.”

A preliminary and high-level analysis of the on-site contours suggest the gradient of the Fairwater Road pedestrian access would be around 12%. It is considered that this connection can be provided in accordance

with relevant standards, should appropriate design measures (i.e. rest areas) be provided. The detailed design will be provided at the subsequently subdivision stage.

2.5 Point Tra5 – Growth Assumptions

“Please provide detailed explanation on why a 10% blanket background growth assumption was used in section 6.3 of the ITA.”

Reason: “The 10% blanket increase in vehicle traffic is potentially too low given the similar amount of land identified as MHS in the Warkworth Structure Plan south of the plan change area. This affects McKinney Rd / SH1 intersection SIDRA models. It may be necessary to reassess effects on the intersection if the growth assumption is found to be significantly different.”

A 2% traffic growth rate per year is considered acceptable for McKinney Road and its neighbouring environment. Furthermore, there is limited information on any other major developments in the area at the time of this submission. As such, a 10% growth over a five-year period is a robust assumption that would include potential future developments in the area – the extent and nature of which are unknown at this stage.

2.6 Point Tra6 – McKinney Rd/Sh1 Intersection

“Please provide a safety review of the McKinney Rd / SH1 intersection. Please include any details of any parameters changed within SIDRA such as gap acceptance.”

Reason: “To understand the safety effects due to change in distributions anticipated – particularly the increase in right turn movements”

A further safety review is not required as only two crashes were reported at the intersection, and the Puhoi – Warkworth Highway ensures a decrease in through-traffic on SH1 at this intersection. Standard gap acceptance parameters in the SIDRA model were used.

2.7 Point Tra7 – John Andrew Dr / McKinney Rd

“Please provide an analysis of John Andrew Drive / McKinney Road intersection, analysing the anticipated future operation with a southern leg servicing the land directly south of the plan change area.”

Reason: “The ITA also does not include an assessment of the intersection of John Andrew Drive.”

For analysis purposes, the Transport Assessment used the assumption that 100% of trips would go to the SH1 / McKinney Road intersection, considering this intersection would be the main intersection in the area. As the SH1 / McKinney Road intersection has an acceptable LOS, we do not anticipate any concerns at the John Andrew Drive / McKinney Road intersection. Although some traffic may choose use the John Andrew Drive / McKinney Road intersection towards the Warkworth town centre, it is considered to be minimal. Further analysis can be undertaken during the subdivision consent stage if required.

2.8 Point Tra8 – Corridor Upgrades

“Please confirm if corridor upgrades, particularly fronting the plan change area, will be provided.”

Reason: “John Andrew Drive is included on the walking and cycling network as well as the public transport network in the Warkworth Structure Plan, while McKinney Road is also included in the walking and cycling network. The ITA also comments on a pedestrian desire line travelling north at the intersection of McKinney Road and SH1.”

Although John Andrew Drive and McKinney Road are included in the walking and cycling network, the main active mode access is provided from Fairwater Road, connecting to the new Collector Roads, illustrated in **Figure 2**. Frontages along McKinney Road and Don Andrew Drive will be established with AT standards during the development stage.

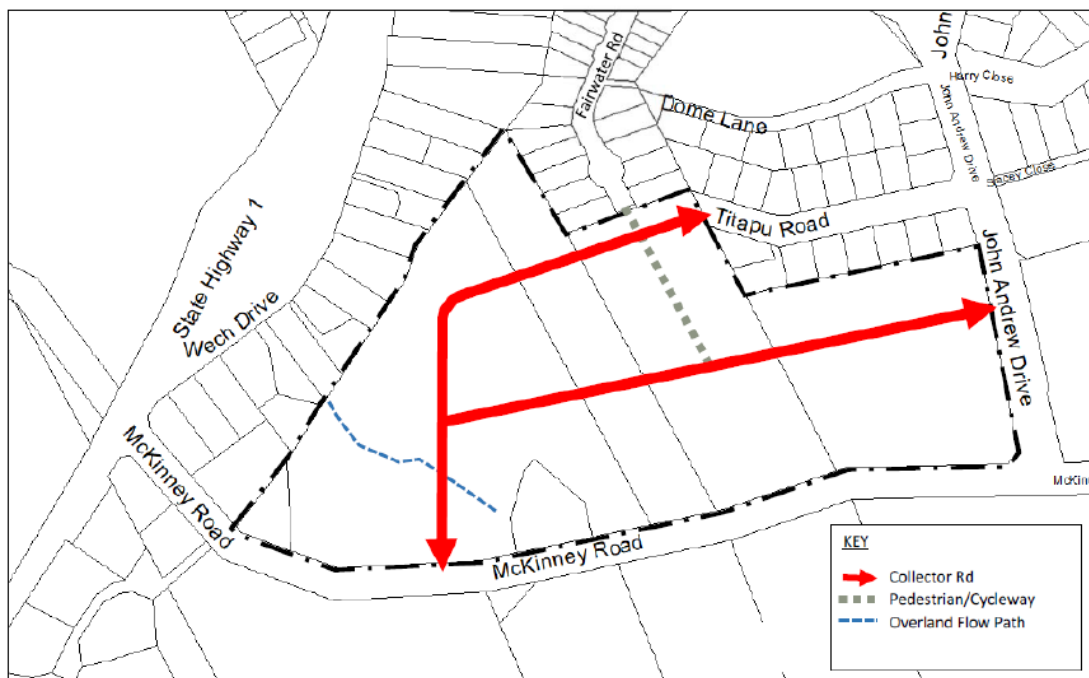


Figure 2: Pedestrian / Cycle access

2.9 Point Tra9 – Implementation Plan

“Please provide an implementation plan for the proposal as the ITA is not clear as to who is funding the surrounding network upgrades.”

Reason: “Typically (and in accordance with Section 3.6 of the AT ITA guidelines¹) an ITA will include an implementation plan including what upgrades are required, when they are required, who is responsible for them and if they are funded in the Regional Land Transport Programme (RLTP).”

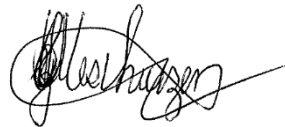
No external upgrades are required except for the road frontages along McKinney Road and John Andrew Drive. These upgrades will be provided by the development and the details determined at the subdivision stage.

We trust this assessment meets your requirements, however, please do not hesitate to contact us if you have any queries on the above.

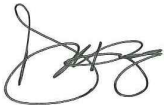
Yours sincerely



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