

Ref: 21327
3 October, 2022

Harrison Grierson Consultants Ltd
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MANUKAU 2241

Attention: Bryce Powell

Dear Bryce,

**PROPOSED PRIVATE PLAN CHANGE
80 MCLARIN ROAD, GLENBROOK
CLAUSE 23 RMA FURTHER TRAFFIC INFORMATION REQUEST**

Further to the request for additional information received from Auckland Council in relation to the proposed private plan change at 80 McLarin Road in Glenbrook, we have considered the relevant aspects of the request and provide the following additional information. For ease of reference in our response we have numbered and repeated the respective query (in *italics*).

Traffic Matters

T1. Existing Transport Environment

Please advise what improvement works were implemented on connecting roads, and when. If works were implemented at least three years ago, please provide an assessment of the crash history before the works were implemented and an assessment of the crash history after the works were implemented; or, if the works were implemented less than three years ago, please provide an assessment of the crash history until at least December 2021.

The crash history has been summarised for the period 2016-2020. A more recent period is now available for review. Given the low volume of traffic on these roads it would be best-practice to base the review of crash history on a ten-year period except that in this case the environment has recently changed.

The ITA notes the road environment has changed as works associated with development of the Glenbrook 3 Precinct have been implemented and states these measures “would not have been in place for a sufficient period of time to determine their effectiveness”, but the ITA does not state when works were implemented.

Chapter 5 of our Integrated Transport Assessment (ITA) confirms intersection improvement works undertaken on the adjoining road network, as part of the package of infrastructure improvements associated with Glenbrook 3 Special Housing Area (SHA). These are summarised in Table 1 below, along with midblock improvements implemented along Glenbrook Beach Road and McLarin Road.

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Table 1 – Schedule of Glenbrook 3 Special Housing Area Infrastructure works

Section of Adjoining Road Network	Glenbrook 3 Precinct Transportation Improvement Works
Glenbrook Beach Road / Brookside Road Intersection	<ul style="list-style-type: none"> • Edge and curve delineation measures
Brookside Road / Mission Bush Road Intersection	<ul style="list-style-type: none"> • Intersection Warning Sign • Improvements to lighting • Edge and curve delineation measures • Removal of vegetation to improve visibility along the through movement between Brookside Road and Mission Bush Road • New Give Way signage
Mission Bush Road / Glenbrook-Waiuku Road Intersection	<ul style="list-style-type: none"> • Painted hatched area between Glenbrook-Waiuku Road northbound and the left-turn into Mission Bush Road • Installation of ‘no overtaking’ markings in both directions
Glenbrook Road / Brookside Road Intersection	<ul style="list-style-type: none"> • Resealing works • Improvements to lighting • Roadside hazard treatments • Edge and curve delineation measures
Glenbrook Beach Road	<ul style="list-style-type: none"> • Lower rural speed limit • Improve signage • Sealing of driveways within the berm to improve safety at the right angle bend approximately 1 metre north of steel mill
McLarin Road	<ul style="list-style-type: none"> • Reduced speed limit

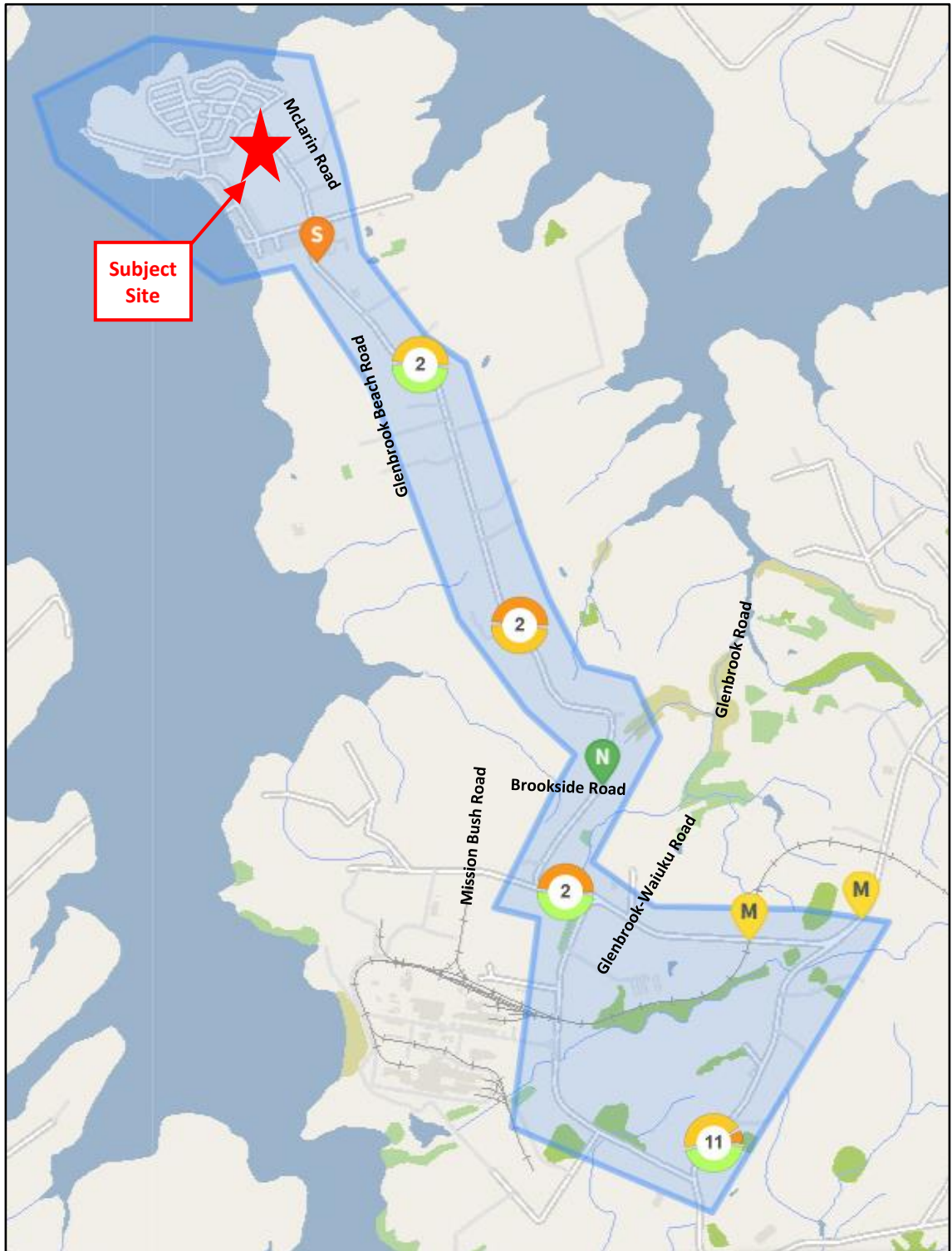
Based on information available from Auckland Transport (AT), the works were implemented during the summer season of 2019 – 2020. Consequently, less than three years have lapsed since their implementation.

The following timeframes have been adopted for a ‘before’ and ‘after’ crash analysis:

- ‘Before’ analysis between 01 July 2014 and 30 June 2019 (5 years)
- ‘After’ analysis between 01 July 2020 and 30 June 2022 (2 years)

An analysis of key crash types by location and severity is presented in Table 2, along with average crash numbers before and after implementation of improvement measures, while Figure 1 re-confirms the crash study area adopted in our ITA.

We note that in comparing crash statistics in such a manner, usually only injury crashes are considered. However, given that there have generally been few injury crashes, we have also used all crashes as a comparison point.



Source: <https://cas.nzta.govt.nz/query-builder/>

Figure 1 – 80 McLaren Road PPC Crash Study Area

Table 2 – Crash Analysis for ‘Before’ and ‘After’ Implementation of Glenbrook 3 Special Housing Area Infrastructure works

Section of Road	‘Before’ Period July 2014 to June 2019	‘After’ Period July 2020 to June 2022
McLarin Road	1 Crash: <ul style="list-style-type: none"> 1 x U-turn Average: 0.2 crashes / year	0 crashes Average: 0 crashes / year
Glenbrook Beach Road	12 crashes, including: <ul style="list-style-type: none"> 12 losses of control Average: 4 crashes / year	5 crashes, including: <ul style="list-style-type: none"> 4 x losses of control 1 x rear-end crash Average: 2.5 crashes / year
Brookside Road between Glenbrook Road and Glenbrook Beach Road	7 crashes, including: <ul style="list-style-type: none"> 4 losses of control 1 U-turn 1 Right-turn 1 hit obstruction Average: 1.4 crashes / year	1 crash: <ul style="list-style-type: none"> 1 x loss of control Average: 0.5 crashes / year
Mission Bush Road between Brookside Road & Glenbrook-Waiuku Road	1 crash: <ul style="list-style-type: none"> 1 x loss of control Average: 0.2 crashes / year	1 crash: <ul style="list-style-type: none"> 1 x loss of control Average: 0.2 crashes / year
Glenbrook Road	3 crashes: <ul style="list-style-type: none"> 2 x losses of control 1 x Left-turn side swipe Average: 0.6 crashes / year	2 crashes: <ul style="list-style-type: none"> 1 x loss of control 1 x failure to give way Average: 1 crash / year
Glenbrook-Waiuku Road between Brookside Road & Mission Bush Road	21 crashes: <ul style="list-style-type: none"> 16 x losses of control 2 x head-on collisions 1 x right-turn 1 x collision with parked vehicle 1 x rear-end shunt Average: 4.2 crashes / year	2 crashes: <ul style="list-style-type: none"> Both losses of control Average: 1 crash / year
Whole Study Area	Total 45 Crashes including: 25 x Non-injury 14 x Minor injury 6 x Serious injury 0 x Fatal injury Average: 9 crashes / year 4 injury crashes per year	Total 11 Crashes including: 4 x Non-injury 5 x Minor injury 2 x Serious injury 0 x Fatal injury Average: 5.5 crashes / year 3.5 injury crashes per year

A comparison for the reported injury crashes is shown in Table 3.

Table 3 – Injury Crash Comparison

Injury Type	‘Before’ Period July 2014 to June 2019	‘After’ Period July 2020 to June 2022
Minor Injury	Total: 14 Crashes 2.8 crashes per year	Total: 5 crashes 2.5 injury crashes per year
Serious Injury	Total: 6 crashes 1.2 injury crashes per year	Total: 2 Crashes 1.0 injury crashes per year
Fatal	Total 0 Crashes	Total 0 Crashes

The following key observations conclusions can be drawn from the crash summary provided in Table 2:

- While only 2 full years of crash data are available for the ‘After’ period, following the implementation of improvement works, a comparison with crash data prior to their implementation and construction of the Glenbrook 3 SHA indicates an overall decline in total crashes and in average crashes per year at most locations.
- Injury crash rates have reduced marginally between the two periods.
- McLarin Road continues experience negligible numbers of crashes
- There is a notable reduction in crashes along Glenbrook Beach Road and along Brookside Road.
- There is a notable reduction in crashes along Glenbrook-Waiuku Road, particularly loss of control type crashes in the vicinity of the intersection with Brookside Road.

The above reductions in reported crashes align with the timing of Glenbrook 3 SHA infrastructure improvements, which include roadside treatments such as edge lines and chevrons, and centreline treatments such as painted hatching, ‘no overtaking’ markings and raised pavement markers.

We note that the various lockdowns that Auckland experienced as a result of Government initiatives to contain the COVID-19 pandemic will have had some effect on the reported crashes in the region as a whole and similarly in this location.

Nevertheless, the above analysis reaffirms the conclusion of our ITA, that the proposed plan change at 80 McLarin Road is not expected to contribute towards any new adverse safety effects on the adjoining road network.

T2. Public Transport

Please provide further information on planned public transport services for the area.

The ITA states that public transport is expected to be provided in future including a bus service connecting Glenbrook Beach Rd to Waiuku. The source of this expectation (e.g., RPTP or other document), expected frequency of the service, funding status and expected implementation timeframe are not provided.

There are at present no confirmed plans for a bus service serving the subject site via Glenbrook Beach Road and McLarin Road, nor any confirmed triggers to determine when a public bus service would be introduced.

In referring to the expectation for a future bus service to connect to the subject site via Glenbrook Beach Road, the ITA is consistent with the approach and design philosophy for the recently completed Kahawai Point Special Housing Area (SHA). The SHA, located adjacent to the subject site, includes Collector Roads that were designed and vested to provide for school and future public bus services.

Such services would be expected to follow McLarin Road in the vicinity of the subject site. Locations for future bus stops and related infrastructure requirements would be determined during resource consent stages for the subject site and for land on the opposite side of McLarin Road.

T3. Road Hierarchy and Cross Sections

Please advise if the 20m Principal Road is applicable to any of McLarin Rd bordering the site. If so, please provide a map or diagram showing which parts of McLarin Rd each type of road is proposed to apply to.

The ITA describes three types of road with a description of where each is proposed to be applied. The 20m wide Principal Road is applicable to McLarin Rd west of the site, and the 17m Critical Local Road is applicable to McLarin Rd bordering the site. If the Principal Road only applies beyond the borders of the site, the reasons for including it in the proposed provisions are unclear.

The ITA has adopted the Glenbrook 3 Precinct road cross-sections for consistency. While McLarin Road itself only borders the subject site, its function as a Principal Road within the adjoining road hierarchy is considered to be of key importance to the transport context for the site as a whole. In addition to facilitating principal access to the adjoining road network, McLarin Road will also cater for local access to and from the subject site by motorised and non-motorised modes, including access to the future Neighbourhood Centre.

The upgrade of McLarin Road outside the subject site to its future form as a Principal Road is expected to take place in tandem with the development of the subject site. Its inclusion in the Proposed Plan Change provisions is therefore deemed to be appropriate.

T4. Potential Intersections

Please describe the speed measurement methodology and provide the speed data used to inform the sight distance assessments, along with the locations of the measurements

The ITA notes operating speeds of 20km/h and 30km/h have been adopted based on observations made at the site. These speeds are unusually low for this type of environment. The observation methodology, the number of observations made, the location the observations were made, and the range of speeds observed have not been stated.

The four proposed intersections (A, B, C and D) for 80 McLarin Road are shown on Figure 2. With the exception of vehicles approaching the subject site from the south on McLarin Road, the approach speeds of all other approaches are constrained by various topography or physical factors which are reflected in the approach speeds observed.

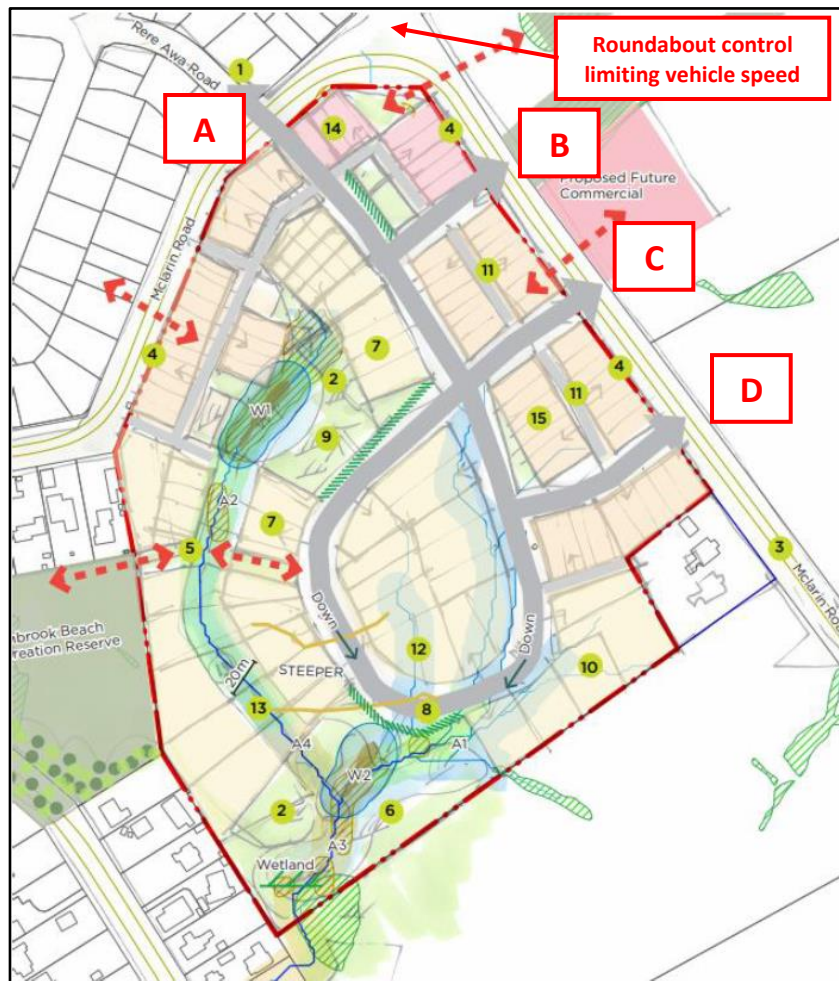


Figure 2 – 80 McLarin Road PPC Intersections

The operating speeds were assessed on site by means of floating vehicle driving appropriately for the environment. Particular factors influencing the speeds recorded along the northern and north-western frontages on McLarin Road include:

- The location of the roundabout intersection with Okoreka Road, which results in comparatively low speeds on its approaches and exits;
- The curved alignment and newly urbanised frontage of McLarin Road bordering the north-western boundary of the subject site.

Vehicle speeds do vary by location depending on horizontal and vertical alignment as well as intersection control, which in this case includes the existing roundabout at the intersection of McLarin Road and Okoreka Road.

Approach speeds on McLarin Road to the south of the site have been assessed at 60km/hr as there are no constraints to local traffic speeds while sight distances available exceed 150 metres which exceeds that indicated in the relevant AUSTROADS guide.

We trust that the above provides sufficient information to respond to the queries raised by Auckland Council. However, should there be further queries in relation to the above, we would be happy to discuss these with you.

Yours sincerely

TRAFFIC PLANNING CONSULTANTS LTD



Bryce Hall



Andrew Temperley

