

Drury East Precinct

To: Gregory Dewe, Fulton Hogan Land Development
From: Daryl Hughes and Gabriela Surja, Stantec
Date: 19 February 2021
Re: Transport Memo – Fulton Hogan Fast Track Referral Application

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Rev. no	Date	Description	Prepared by	Checked by	Reviewed by	Approved by
1	05/02/2021	Draft Report	G Surja	D Hughes	D Hughes	D Hughes
2	19/02/2021	Final Report	G Surja	D Hughes	D Hughes	D Hughes

1 Introduction

Fulton Hogan Land Development ("FHLD") propose to lodge an application for a referred project under the Covid-19 Recovery (Fast-track Consenting) Act 2020 (the "Act") to utilise the fast-track consenting process via an expert consenting panel. This application relates to the development of a contiguous landholding at 86 and 94 Fitzgerald Road, 251 and 383 Waihoehoe Road, 65, 76 and 108 Fielding Road ("the site").

This landholding forms part of a larger land area within Drury East that is currently subject to a private plan change process Drury East Private Plan Change ("PC49") to rezone the land from Future Urban to Business – Mixed Use and Residential zones under the Auckland Unitary Plan ("AUP") which will enable quality urban development and well-functioning urban environments.

This proposal for a referred project will give effect to the purpose of the Act to promote employment and New Zealand's recovery to the economic and social impacts of Covid-19 through enabling the construction and delivery of a comprehensive development that offers employment opportunities and an accelerated supply of quality housing choice and diversity.

To support the application for a referred project, this memo provides a high-level review of the transport aspects of the proposal, including:

- Summary of the proposal and site description.
- Summary of work completed to date.
- High level transport assessment of proposal.
- Overview of works required to achieve the proposal.

2 Site Description and Proposal

2.1 Site Description

FHLD have entered into unconditional sale and purchase agreements for the land which the project will be located on. These agreements provide Fulton Hogan with full control of the sites for development. These sites are 86 and 94 Fitzgerald Road, 251 and 383 Waihoehoe Road, 65, 76 and 108 Fielding Road which is currently zoned Future Urban ("FUZ") under the AUP. The proposed development area is approximately 32.33 ha.

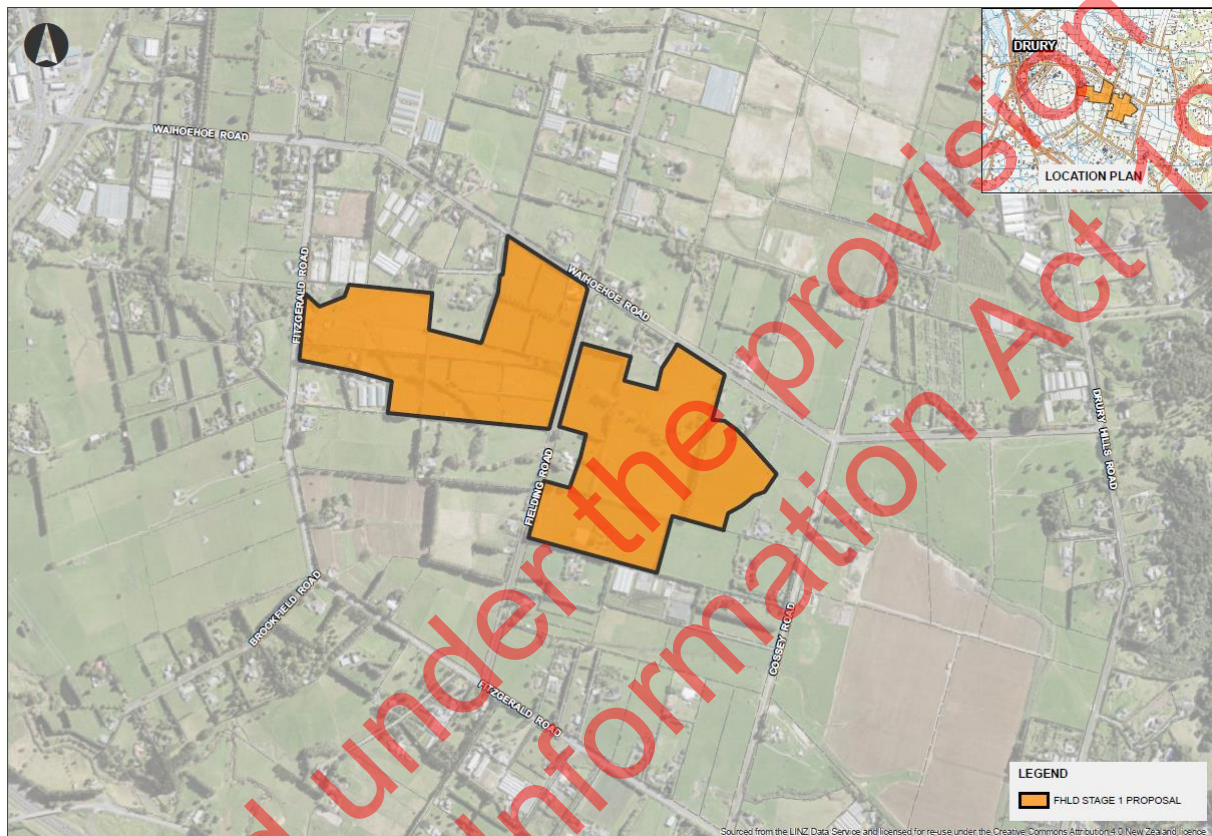


Figure 2-1: FHLD site subject to this application for a referred project

The site is located approximately 0.6 – 2.6km east of the existing town of Drury and is largely bounded by Fitzgerald Road to the west and south, Drury Hills Road to the east, and Waihoehoe Road to the north. These roads are rural in nature, with no walking or cycling facilities. Other key corridors in proximity of the site are SH1, SH22 and Great South Road.

2.2 Proposal

FHLD are proposing the staged development of this land into 248 residential lots, 28 residential superlots and supporting roading and servicing infrastructure.

The development will include establishment of new roads and upgrades of existing roads to provide multi-modal access, and to connect the activities within the site to the wider network including the new Drury East train station. This is discussed later in the memo.

Figure 2-2 shows the proposed development.

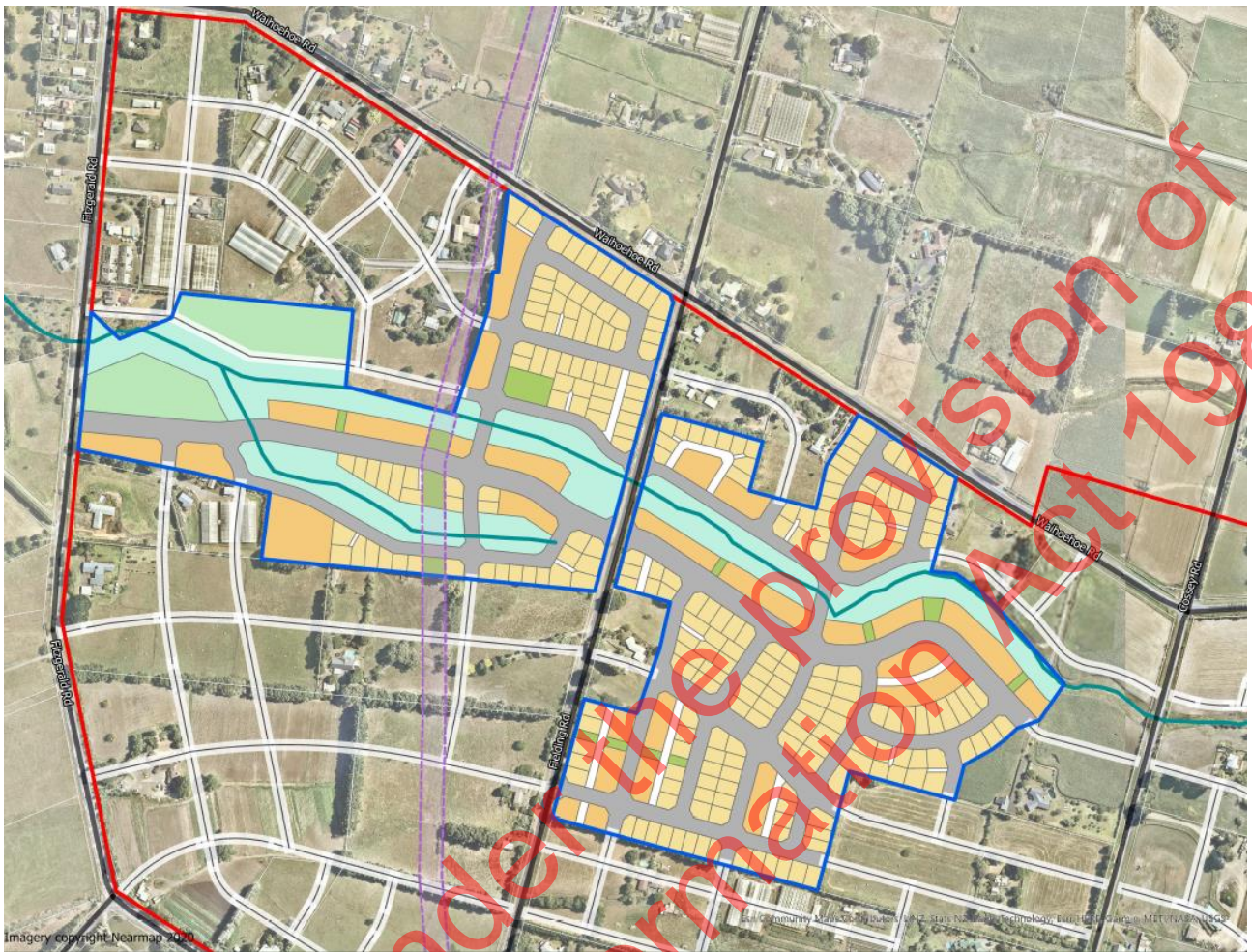


Figure 2-2: Plan of proposed development at 86 and 94 Fitzgerald Road, 251 and 383 Waihoehoe Road, 65, 76 and 108 Fielding Road

3 Background Analysis

Extensive investigations and transport modelling of Drury have been undertaken by Stantec to inform the transport assessments supporting PC 49. The extent of this background analysis includes the site area for this application and can therefore be relevantly applied to transportation considerations for the proposed subdivision and development of the land as shown on the masterplan prepared by Aurecon. The various background assessments undertaken for PC 49 and informing our conclusions and recommendations for the application are summarised below:

3.1 Plan Change

An Integrated Transport assessment (ITA) was prepared by Stantec to support PC 49. The ITA demonstrate how the intended development can be accommodated on the surrounding road network while maintaining acceptable levels of safety and efficiency well into the future, with an additional upgrade to the Great South Road / Waihoehoe Road intersection in the first two decades.

Traffic modelling for the plan change was comprehensive and conservative, and holistically assessed the transport impact of the developments within the Drury East area. The focus of the model was to determine how the developments can be accommodated on the surrounding network for the next three decades (up to 2048). The traffic modelling has been undertaken using a three-tiered approach, consisting of a macro strategic model (MSM), a mesoscopic project model (SATURN), and a localised intersection operational model (Sidra Intersection). The Auckland Forecasting Centre (AFC) MSM model – the base for both the Plan Change model and the Southern Growth Alliance (SGA) model – has been reconfigured to align with the proposed development yields and realistic timeframes in the Drury East. The Plan Change modelling has been undertaken on the basis of these reconfigured land uses. Further detail of the traffic modelling methodology is available in the Plan Change ITA (March 2020).

The original modelling prepared for the Plan Change was based on the timeframes for infrastructure upgrades identified by the SGA through their ITA for the Drury-Opāheke and Pukekohe-Paerata Structure Plans. The modelling was subsequently updated to include the New Zealand Upgrade Programme (NZUP) upgrades announced by the Government in January 2020. This traffic model has then informed the land use and trip generation thresholds included in the proposed Precinct Plan provisions for PC 49, shown below in Table 3-1 and Table 3-2. These tables outline the additional infrastructure upgrades (in addition to the NZUP projects) that are required to support the enabled development. Also inherent within the proposed precinct provisions are a suite of additional measures deemed necessary to urbanise the environment and enable strong walking, cycling and public transport uptake.

Extensive liaison and discussions with Auckland Council and their transport experts have been undertaken to date.

3.2 Additional Studies

In addition to the above process, FHLD, together with Kiwi Property and Oyster Capital, have maintained extensive communication with the authorities, which include Auckland Council, Auckland Transport, SGA and Waka Kotahi.

Stantec has undertaken transportation assessments and traffic modelling for all three of the plan changes in Drury East, to demonstrate whether the developments proposed by the plan changes require any of the Drury Transport Infrastructure Programme Upgrades (DTIP Upgrades). The modelling results were presented to Auckland Council in July 2020. The assessments consist of some sensitivity tests relating to the provision of local upgrades within Drury West and Drury East areas, however all assuming no provision of any of the DTIP upgrades. The assessments conclude that the developments proposed by Kiwi Property, Oyster Capital and FHLD in the Drury East area, that would be enabled by the plan changes, do not rely on the DTIP upgrades. Alongside the NZUP schemes, the Drury East and Drury West trigger upgrades are sufficient to support the developments. It is noted that although delays would exist throughout the network, especially by 2048, these are not to the extent where developments would be impeded.

SGA has provided initial feedback on the transport assessments and transport modelling outlined above via a memo dated 8 December 2020, which includes several technical observations for SGA's consideration in their modelling sensitivity testing. A meeting was held on 12 February 2021 for SGA to report back on part of their modelling findings. SGA noted that the results of their modelling test on the full build-out scenario (year 2048) compare reasonably well with the PC modelling results.

Further liaisons are expected to occur to discuss the remaining of SGA's findings of the transport assessment, with the next meeting scheduled for 25 February 2021.

Table 3-1: GFA Thresholds Proposed for PC 49

New/ Additional Dwelling Threshold	New/ Additional Retail GFA Threshold	New/ Additional Commercial GFA Threshold	Transport Upgrades Required to Exceed the Dwelling, Retail/Commercial GFA Thresholds
Prior to any new dwellings, retail or commercial development			Interim safety upgrade to the Waihoehoe / Great South Road to provide safe crossing facilities for pedestrians and cyclists on all approaches.
3,406	62,430m ²	34,800m ²	Upgrade of the Waihoehoe / Great South Road intersection to signals.
4,640	83,960m ²	46,800m ²	Capacity upgrade of the Waihoehoe / Great South road intersection (western arm only).
6,428	107,650m ²	60,000m ²	Capacity upgrade of the Waihoehoe / Great South road intersection (on all approaches).

Table 3-2: Trip Generation Thresholds Proposed for PC 49

Inbound Trip Generation in vehicles per hour (vph)	Outbound Trip Generation in vehicles per hour (vph)	Transport Upgrades Required to Exceed the Trip Generation Thresholds
Prior to any new dwellings, retail or commercial development		Interim safety upgrade to the Waihoehoe / Great South Road to provide safe crossing facilities for pedestrians and cyclists on all approaches.
AM Peak: 1,890 PM Peak: 2,860	AM Peak: 2,340 PM Peak: 2,470	Upgrade of the Waihoehoe / Great South Road intersection to signals.
AM Peak: 2,620 PM Peak: 3,730	AM Peak: 3,220 PM Peak: 3,270	Capacity upgrade of the Waihoehoe / Great South road intersection (western arm only).
AM Peak: 3,510 PM Peak: 4,910	AM Peak: 4,020 PM Peak: 4,560	Capacity upgrade of the Waihoehoe / Great South road intersection (on all approaches).

4 The Masterplan

The masterplan for the development is aligned with the transport principles and outcomes that have been developed as part of the plan change process. The masterplan provides residential development opportunities supported by initial collector road connections. Active modes and public transport links within the site will be provided to enhance site connectivity from an early stage. At this stage, the new Drury Central train station is also anticipated, which will be fed from the newly developed residential catchments in the wider Drury Central areas.

High-level transport assessments of the proposal as part of this application for a referred project (underpinned by extensive traffic modelling and analysis undertaken to date as part of the plan change) have been undertaken and are discussed below.

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5 Assessment

The trip generation assessment for the site has been estimated at a high-level using first principles approach as per the RTA guide¹, and based on the types of activities that are proposed within the site. We understand that Kiwi Property and Oyster Capital are also pursuing applications for referred projects for which Stantec are also providing transportation advice on. To ensure a holistic view of the assessment and capacity of the transport network consideration was also given to the proposed and capacity of the transport network in Drury East by Kiwi Property and Oyster Capital, which consist of retail and residential activities.

The proposed retail development by Kiwi Property has been assessed using the average peak hour generation rate corresponding to similar shopping centre total floor areas. The residential developments by Oyster Capital, Kiwi Property, and FHLD have been assessed using the average rates appropriate for similar housing typologies.

Assumptions have been made in regard to the proportion of generated trips that are external to Drury East. This has been conservatively set at 90% for both retail and residential activities. Further assumptions have been made in regard to the inbound and outbound trip proportions for the residential and retail activities. For retail, a 50/50 split is assumed for both PM peak and weekend peak. For residential, an 80/20 split is assumed for outbound and inbound trips, proportionally, in the AM peak; and vice versa in the PM peak.

The resulting trip generations for the proposed activities within the referred project application areas of Oyster Capital, FHLD and Kiwi Property are summarised in Table 5-1.

Table 5-1: Trip Generation - Kiwi Property, Oyster Capital, and FHLD fast-tracked sites

Activities	TRIP GENERATION (veh/hr)					
	AM Peak		PM Peak		Weekend Peak	
	IN	OUT	IN	OUT	IN	OUT
Retail	188	0	942	942	1249	1249
Residential	207	827	827	207	517	517
Total	395	827	1769	1149	1766	1766

As can be seen in The resulting trip generations for the proposed activities within the referred project application areas of Oyster Capital, FHLD and Kiwi Property are summarised in Table 5-1.

Table 5-1, the highest trip generation occurs in the weekend peak, at 1,766 vehicle per hour for both inbound and outbound directions. These are lower than the trip generation thresholds outlined in Table 3-2 that correspond to the signalisation upgrade of the Waihoehoe / Great South Road intersection. This indicates that major capacity upgrade of the existing local road network is not required to accommodate the trip generation resulting from this proposal by FHLD in isolation, or for the two other proposals for retail and residential developments by Kiwi Property and Oyster Capital. For the avoidance of doubt, our assessment reveals that there is sufficient capacity in the existing transport network to accommodate the extent of development proposed in all three applications for referred projects without any major capacity upgrades. However, it is proposed to provide an interim safety upgrade at that location, as outlined further below.

5.1 Transport Works Required

5.1.1 Multi-modal connections

Public transport and active modes are at the heart of the development philosophy, and as such, the development will ensure that appropriate multi-modal connections are provided within the site from the initial stage of the development, in particular between the site and the Drury Central train station. A shared path will run north of the green corridor between Fitzgerald Road and Cossey Road. Provision of public transport services within and surrounding the site is subject to further discussions with Auckland Transport, and could take form of a diversion of existing PT services or a provision of additional shuttle services at the initial stage.

5.1.2 Site Access

The site will be mainly accessible via the following points:

- Fitzgerald Road / New east – west collector road intersection;
- Waihoehoe Road / Fielding Road intersection; and
- Fielding Road / New east-west collector road intersection.

¹ Roads and Traffic Authority: Guide to Traffic Generating Developments, Version 2.2, New South Wales

The form and layout of these intersections are subject to discussions with Auckland Transport, however, it is anticipated that they will be signalised to ensure efficient and safe movements of traffic, public transport and active modes to and from the site. These intersection upgrades will be delivered and funded by FHLD.

Further, the upgrade of the Waihoehoe Road / Fitzgerald Road intersection is also anticipated to occur within the timeframe for delivery of this referred project, if accepted. The form and layout of the upgraded intersection are subject to discussions with Auckland Transport but we do not foresee any fundamental issues with implementing this upgrade.

5.1.3 Road Urbanisation

At present, the existing roads in the area are rural in nature, with soft shoulders and no walking or cycling facilities. It is therefore proposed that the key corridors within and surrounding the site will be upgraded to cater for higher movement of traffic and provide appropriate links for active modes. These include Waihoehoe Road, Fitzgerald Road and Fielding Road. The interim upgrades will involve provision of footpath and cycle lane on each side of the road and two traffic lanes. All of the necessary interim upgrades can be achieved within the existing road reserve corridor widths of 20m without the requirement for any further land acquisition to achieve the upgrades, as shown in Figure 5-1.

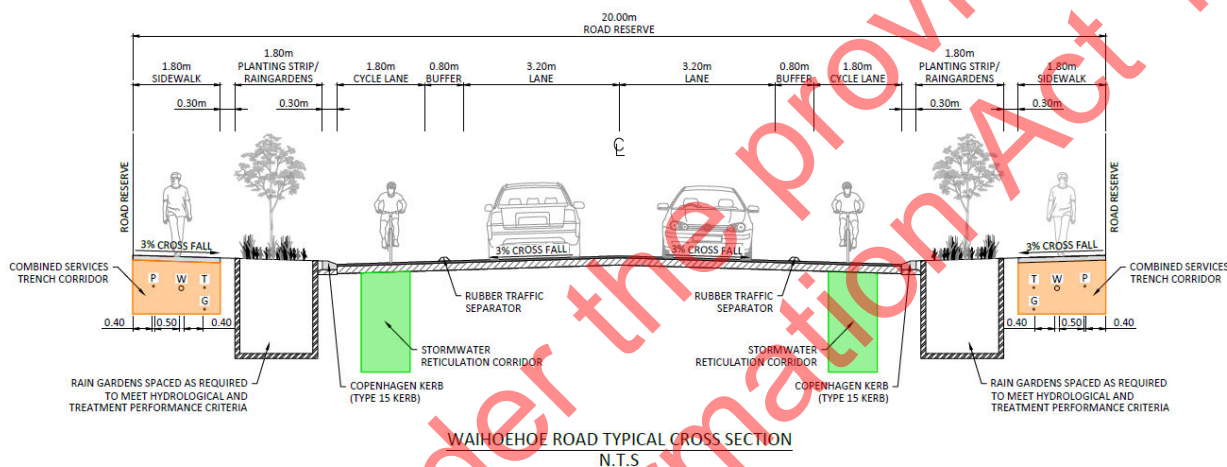


Figure 5-1: Interim cross-section for a 20m corridor

Within the site and along all developed site frontages, full/final cross sections will apply, according to the proposed road hierarchy and cross section as detailed in the PC 49 ITA. Using this method, the interim cross sections will be converted to full and final cross sections as each land block is developed.

5.1.4 Great South Road / Waihoehoe Road Intersection

Consistent with the approach proposed in PC 49, an interim safety upgrade to the Great South Road / Waihoehoe Road intersection will be undertaken prior to any development taking place. This is proposed to be undertaken by fitting raised pedestrian and cycle crossings on each intersection arm, as shown in Figure 5-2. This is a common retrofit upgrade that Auckland Transport is proposing or has recently installed in several locations around Auckland where walking and cycling facilities are considered sub-standard, but a capacity upgrade is not required.



Figure 5-2: Interim Safety Upgrade on Great South Road / Waihoehoe Road

6 Conclusion

In summary, there is no traffic engineering and transport planning reasons that would preclude implementation of the development by FHLD as shown on the masterplan by Aurecon.

The proposal for development within the site subject to this application will require transport infrastructure upgrades in order to cater for the new land use and associated demands. Based on the previous transport assessments and the review of the masterplan, it is expected that all anticipated upgrades can be accommodated on the surrounding road network in a sustainable manner and in the existing public road corridor. Further design work on these upgrades will be undertaken in the subsequent planning and design stages.

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