

SUMMARY OF EVIDENCE OF ROBERT CHRISTOPHER WILSON ON BEHALF OF MARK AND MELISSA PROSSER

INTRODUCTION

- 1 My name is Robert (Bob) Christopher Wilson. My qualifications and experience are set out in my Evidence in Chief.
- 2 This Summary of Evidence sets out the key points within my Evidence in Chief.

SUMMARY OF EVIDENCE

- 3 In my evidence I address the following issues:
 - (a) Analysis of location-based transportation Greenhouse Gas (GHG) emissions from the Prosser Proposal compared to other LLRZ candidate locations.
- 4 My evidence has been prepared to discuss how well the proposed Prosser development proposal aligns with the objectives and policies of the **NPS-UD**, namely whether the urban environments that form part of the Proposal:
 - (a) support reductions in greenhouse gas emissions
- 5 The approach of my evidence is based on the New Zealand Government Ministry for the Environment Measuring emissions: A guide for organisations: 2023 detailed guide, and with reference to EN16258:2013 - Methodology for calculation and declaration of energy consumption and GHG emissions of transport services.
- 6 The scope of my assessment is confined to the operational location based transportation GHG emissions of the Prosser Proposal site compared to other LLRZ candidate locations identified in the supplementary evidence of David John Robert Smith¹ and shown in Figure 1.

¹ namely: Oxford, Pegasus Bay, Fernside, Ashley-Sefton, Waikuku.

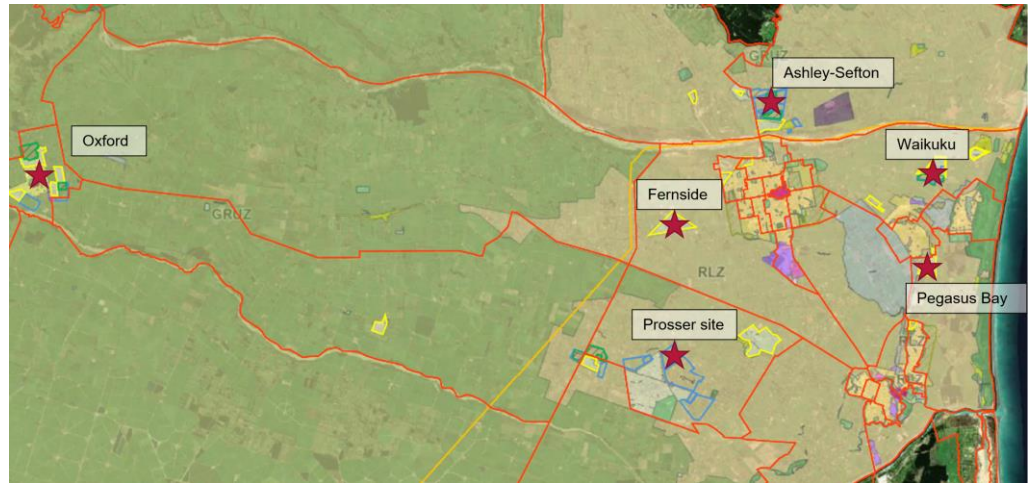


Figure 1 - Locations of Proposed LLRZs.

7 Mr Smith has provided me with the trip distance and transport mode data for the six sites from the 2018 census² summarised in Table 1.

Table 1 - Summary Transport Distanced (km) one way

Location	Site	Employment Travel Distance (km) one-way	Education Travel Distance (km) one-way	Retail Travel Distance (km) one-way
Mandeville-Ohoka	Prosser Site	14.29	12.07	14.94
Oxford	Oxford	13.30	7.11	34.52
Pegasus Bay	244 Woodend Beach Road	8.82	8.26	11.30
Fernside	247 Oroarkes Road	10.01	9.22	14.71
Ashley-Sefton	19 Dixon Road	13.05	7.78	17.47
Waikuku	58 Tulls Road	11.49	9.25	14.82

8 Using the varying distances in each location scenario while assuming a consistent number of dwellings and commuting trips.

9 The transportation distances data is input on a trips per household frequency approach based on the following assumptions:

- Retail trips – 1 round-trip to an urban centre per dwelling per day for 6 days per week, 50 weeks per year.
- Employment trips – 1 round-trip per dwelling per day for 5 days per week, 48 weeks per year.

² See Attachment one of the Supplementary Evidence of David Smith

- Education trips - 1 round-trip per dwelling per day for 5 days per week, 40 weeks per year.
- 10 The assessment analyses the operational GHG emission associated with person transport of the Prosser proposal development over a 1 year period, compared to the aforementioned alternative candidate locations in the Waimakariri District.
- 11 For each transport mode the following GHG emissions factor from the New Zealand Government Ministry for the Environment (MfE) Measuring emissions: A guide for organisations: 2023 detailed guide were utilised:
- Car – 0.252 kgCO₂e/km - MfE default private car emission factor
 - Public Transport (PT) - 0.155 kgCO₂e/km - MfE national average bus emissions factor
 - Walking & Cycling – 0 kgCO₂e/km – assumed zero GHG emissions
- 12 My evidence demonstrates that the Prosser Proposal supports reductions in GHG emissions compared to the majority of LLRZ candidate locations.

Transport GHG Emissions per Location by Mode

Travel Component ● Private Vehicle ● Public Transport

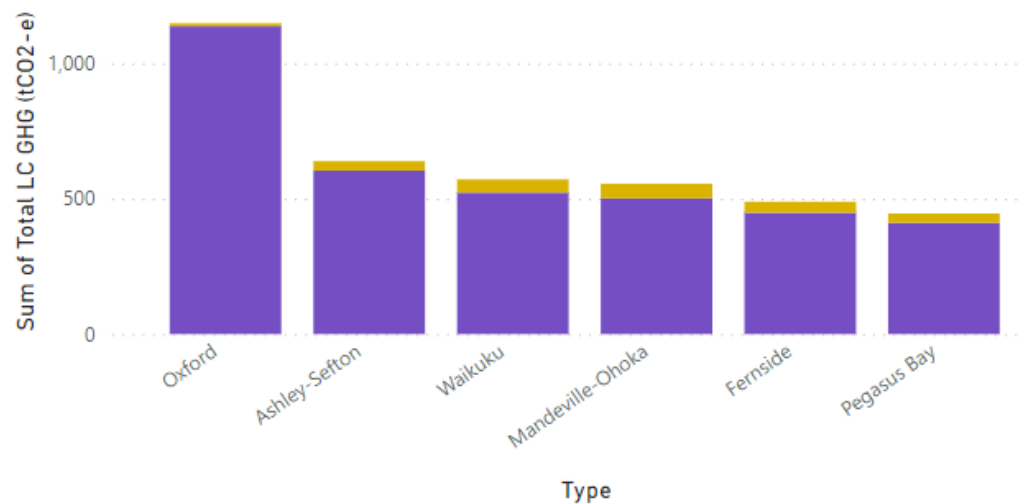


Figure 2 Transport GHG Emissions per Location by Mode

- 13 As shown in Figure 2, the Prosser Proposal site location of Mandeville-Ohoka results in the third lowest transport GHG emissions of analysed locations with approximately 555 tCO₂e per year.

- 14 The only assessed locations with lower GHG emissions are Fernside and Pegasus Bay with approximately 489 and 445 tCO₂e per year respectively.

Robert Wilson
22 July 2024

