



Guildford Borough Local Cycling and Walking Infrastructure Plan - Appendices

SURREY COUNTY COUNCIL & GUILDFORD BOROUGH COUNCIL

25 JULY 2024



GUILDFORD
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COUNTY COUNCIL

AtkinsRéalis Job Number: 5222532	Document Reference: Guildford Local Cycling and Walking Infrastructure Plan - Appendices
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Revision	Purpose Description	Originated	Checked	Reviewed	Authorised	Date
01	For client review	CR	GC	BC / RS	SJ	08 May 2024
02	Amendments following clients comments	CR	GC	BC	SJ	12 June 2024
03	Amendments following clients comments	CR	GC	BC	SJ	24 July 2024
04	Reduced file size	CR	GC	BC	SJ	25 July 2024
05						

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Disclaimer

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Structure

6	The Guildford Borough LCWIP report is divided into two documents:
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22	Main document: Presents the main information into the development of the LCWIP and it is divided into 11 sections:
26	1. Executive Summary
28	2. Introduction
30	3. Previous Studies
38	4. Evidence Base / Background Data
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	10. Route Prioritisation, Costings and Funding Opportunities
	11. Next Steps
	Appendices document: this document, which presents supplementary information, as described in the Contents.



Appendices

Appendix 1. Background Information Maps

A1.1 Introduction

The maps and figures included within this appendix supplement the LCWIP Evidence Base (Section 4 of the Main Document).

A1.2 Propensity to Cycle Tool

The Propensity to Cycle Tool (PCT) is an online tool and dataset designed to assist with strategic planning of cycling networks. It illustrates an indicative current and potential future distribution of cycle trips to work and to school based on different growth scenarios. The model identifies preferred 'fast' and 'quieter' cycle corridors between origin and destinations pairs, and assigns trips to these routes. 'Fast' routes are based primarily on the shortest distance (i.e., most direct route), while 'quieter' routes also consider motor vehicle traffic volumes. The hilliness of a route is also a key factor considered within the model when estimating potential cycling activity.

The Guildford LCWIP PCT analysis was conducted using data downloaded in March 2022. The following data categories were utilised for the analysis:

- » Geography: Lower Super Output Area (LSOA) geography was selected because it provides greater granularity of origin/destination pairs

within Guildford and is appropriate for the scale of the study area.

- » Growth Scenario: 'Go Dutch' was selected to reflect the high aspirations of the LCWIP for a step-change in levels of cycling in the Borough. The 'Go Dutch' scenario models the increase in cycling as a function of distance and hilliness, plus a number of socio-demographic and geographical characteristics, to reflect what could happen if the proportion of commuters that would be expected to cycle if all areas of England and Wales had the same infrastructure and cycling culture as the Netherlands, where approximately 28% of trips are made by cycle.
- » Growth Scenario: The 'Go Cambridge' scenario is analogous to the 'Go Dutch' scenario, except it uses children living in Cambridge as the reference point, instead of the Netherlands. With the 'Go Cambridge' scenario, the modal share of cycling is 21.5%. It was chosen for this study because it is an intermediate between the 'Go Dutch' scenario and the 'Government Target' scenario (doubling cycle mode share).
- » Direct Desire Lines: Direct point-to-point desire lines in the PCT (desire lines between LSOAs) were reviewed to identify desire lines with higher levels of potential demand. The PCT model then applied these desire lines to the actual network, and the outputs were analysed as described below.

- » Cycling Flows: 'Fast' routes were the primary output as they represent the most direct desire lines for cycling, which are more likely to attract new cyclists and support growth in cycling. The top 25 'quieter' routes (in terms of highest cycle flows) were also reviewed during network refinement for potential alternative route options with minimal detour.
- » Most Cycled Network Links: The PCT aggregates all 'fast' route trips to provide a total of cycle flows along each link in the network. Commuter and school flows, however, are disaggregated and viewed independently. Cycle flows were categorised as high, medium, and low to illustrate the preferred routes (i.e., highest flows) and identify an initial cycle network with coverage across Guildford. This is the key output of the PCT utilised from the PCT analysis.

The following sections summarise the analysis of the journey to work and journey to school PCT data. However, it is important to note that commuting and education only account for 28% of all trips.¹ Therefore, the available data is only representative of a small percentage of overall trips and potential demand for cycling.

¹ 2019 National Travel Survey, Table NTS0409a. Commuting accounts for 15% of all trips, education/escort to education 13% of all trips.

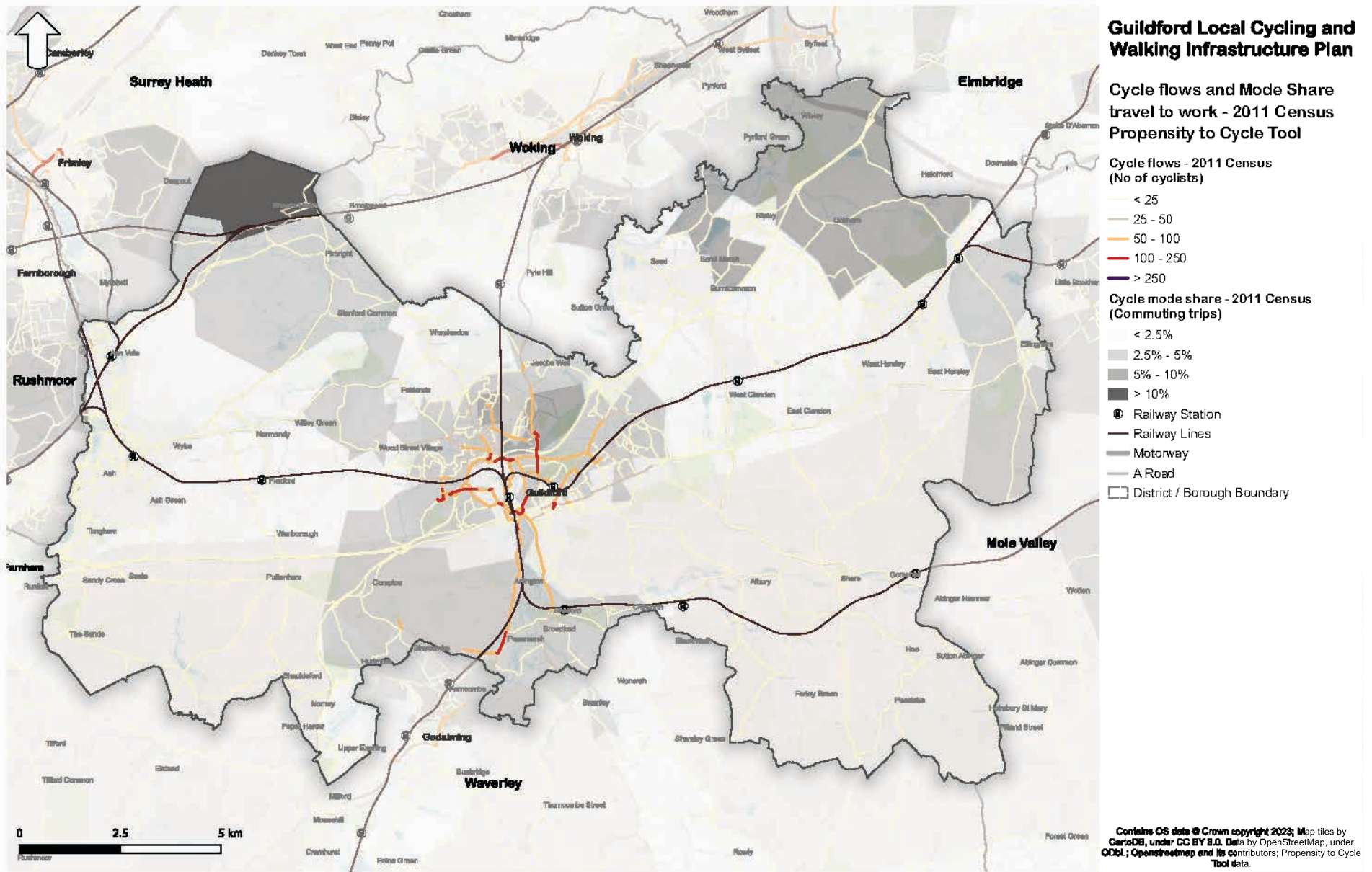


Figure 1. Journey to work cycling mode share based on 2011 Census data



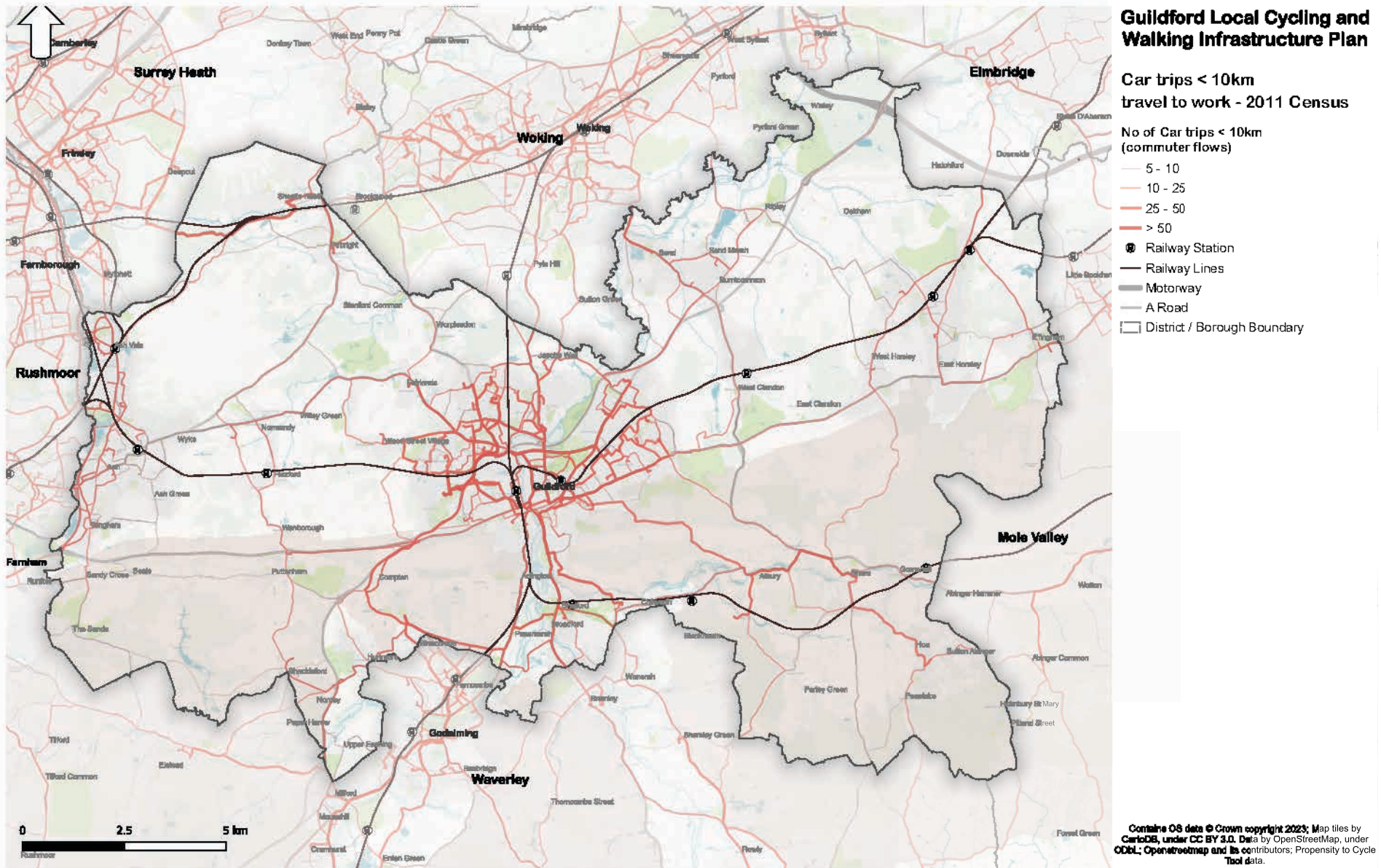


Figure 2. Short car trips (<2km)

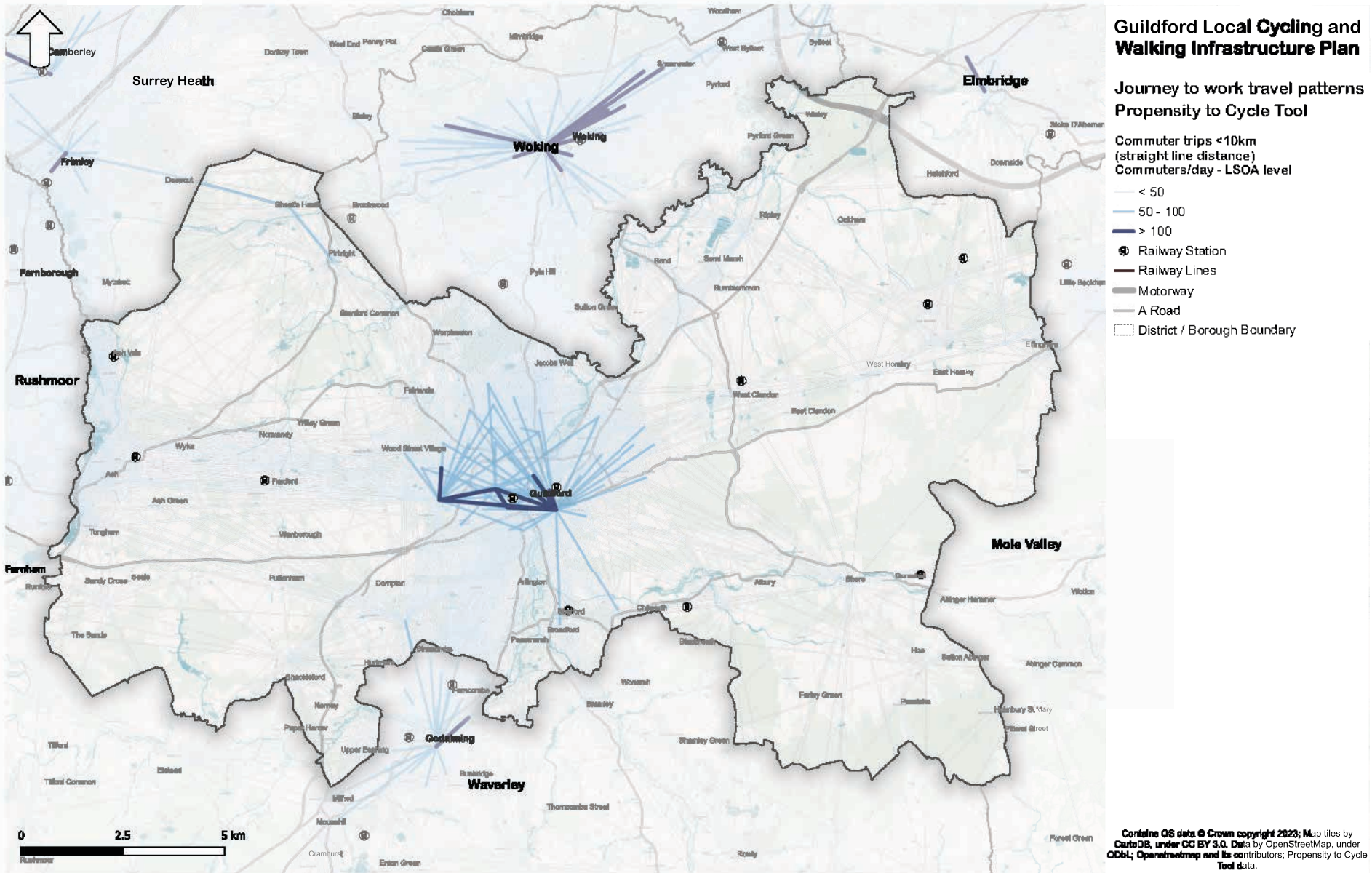


Figure 3. Journey to work travel patterns, commuter trips <10km at LSOA level



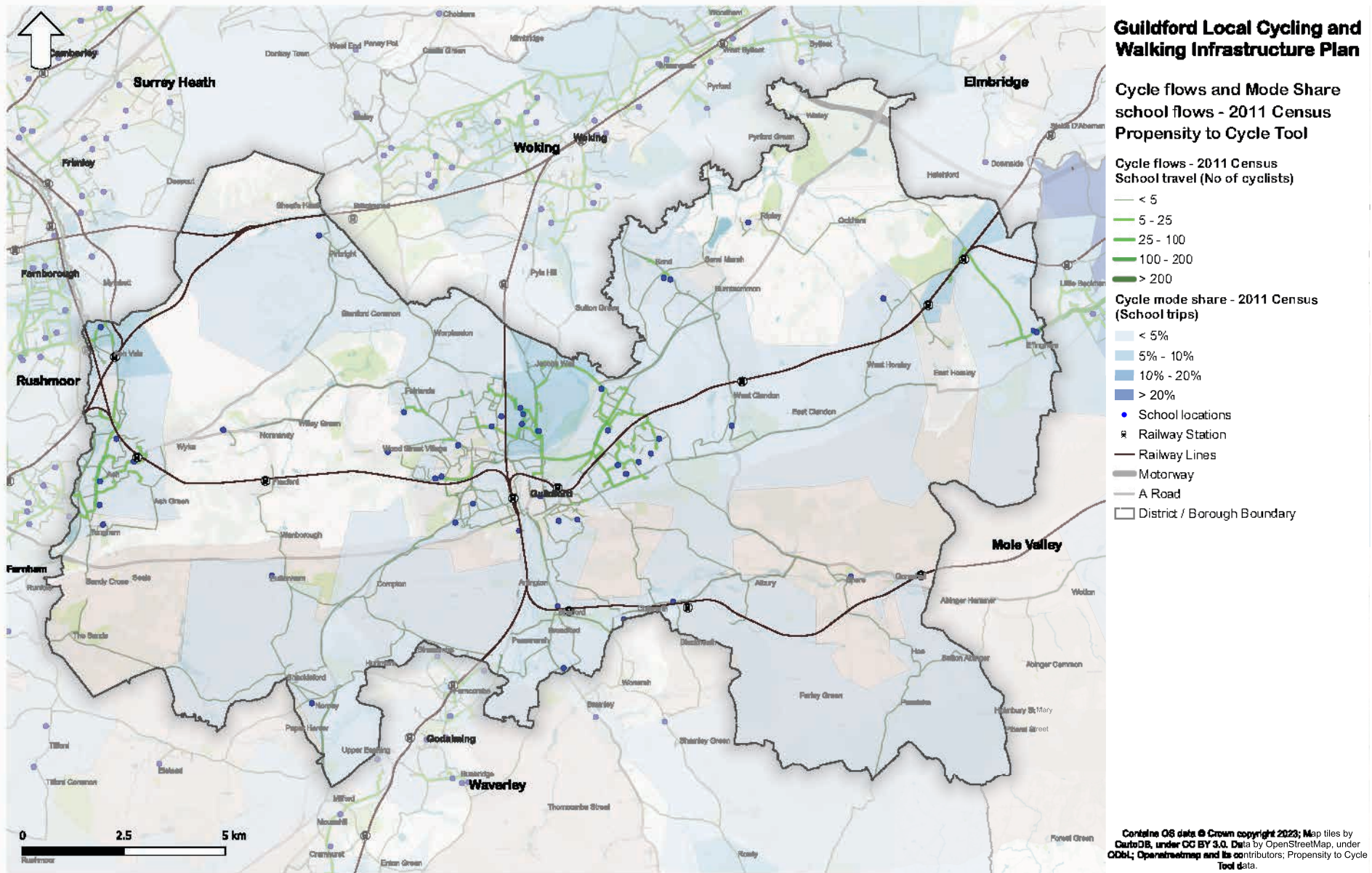


Figure 4. School cycle flows and mode share - 2011 census

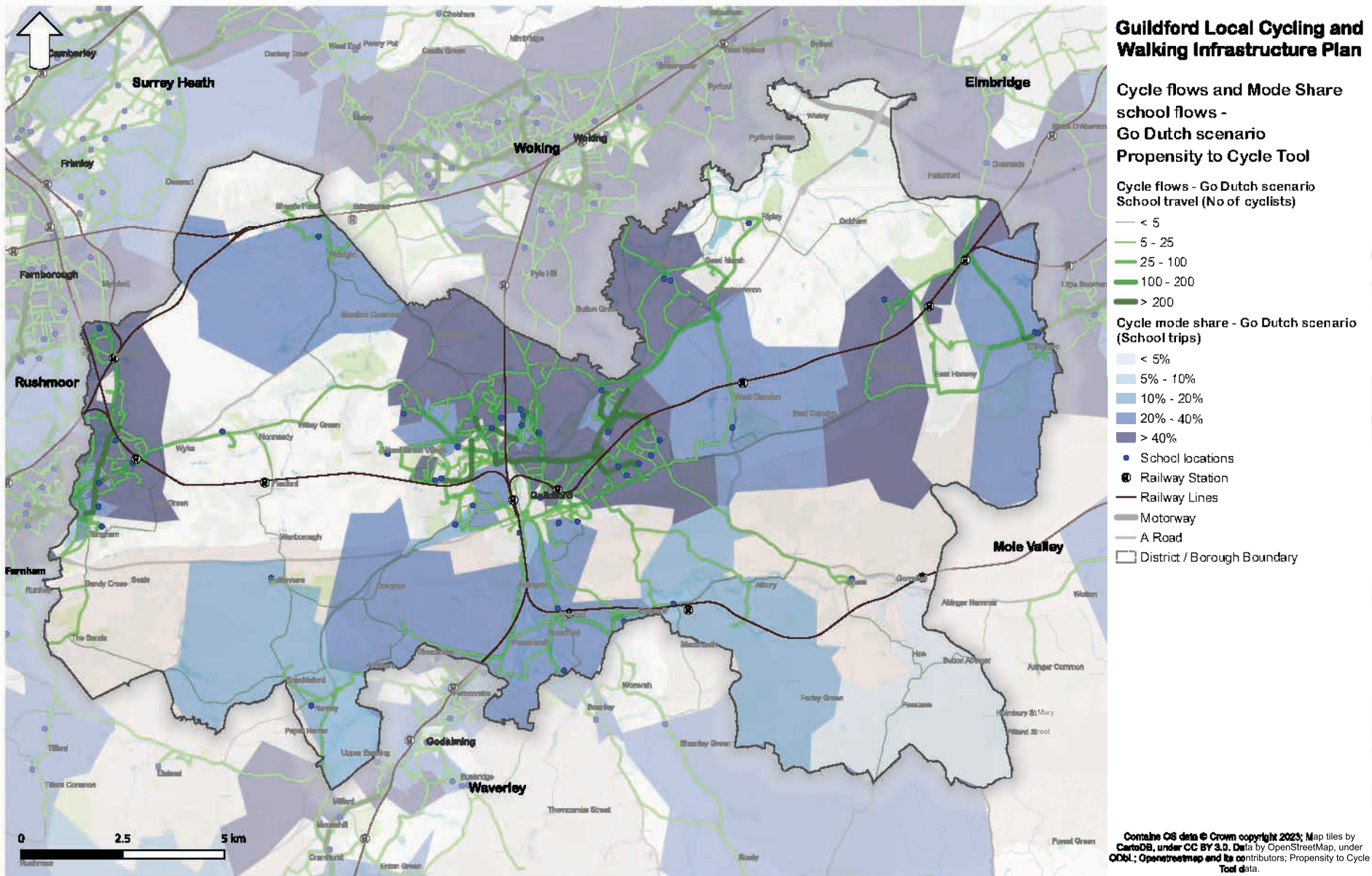


Figure 5. School cycle flows and mode share - Go Dutch Scenario

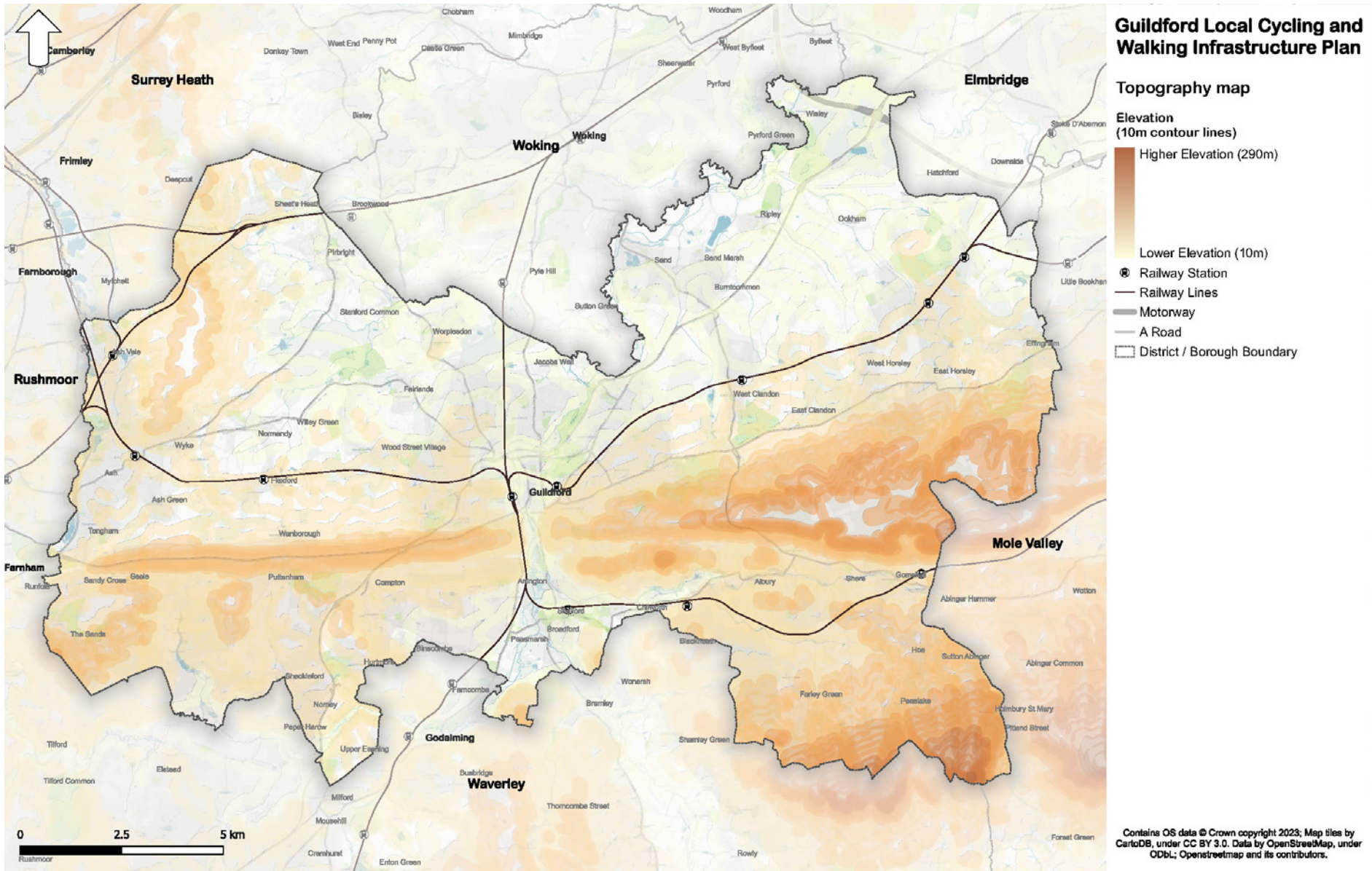


Figure 6. Topography map

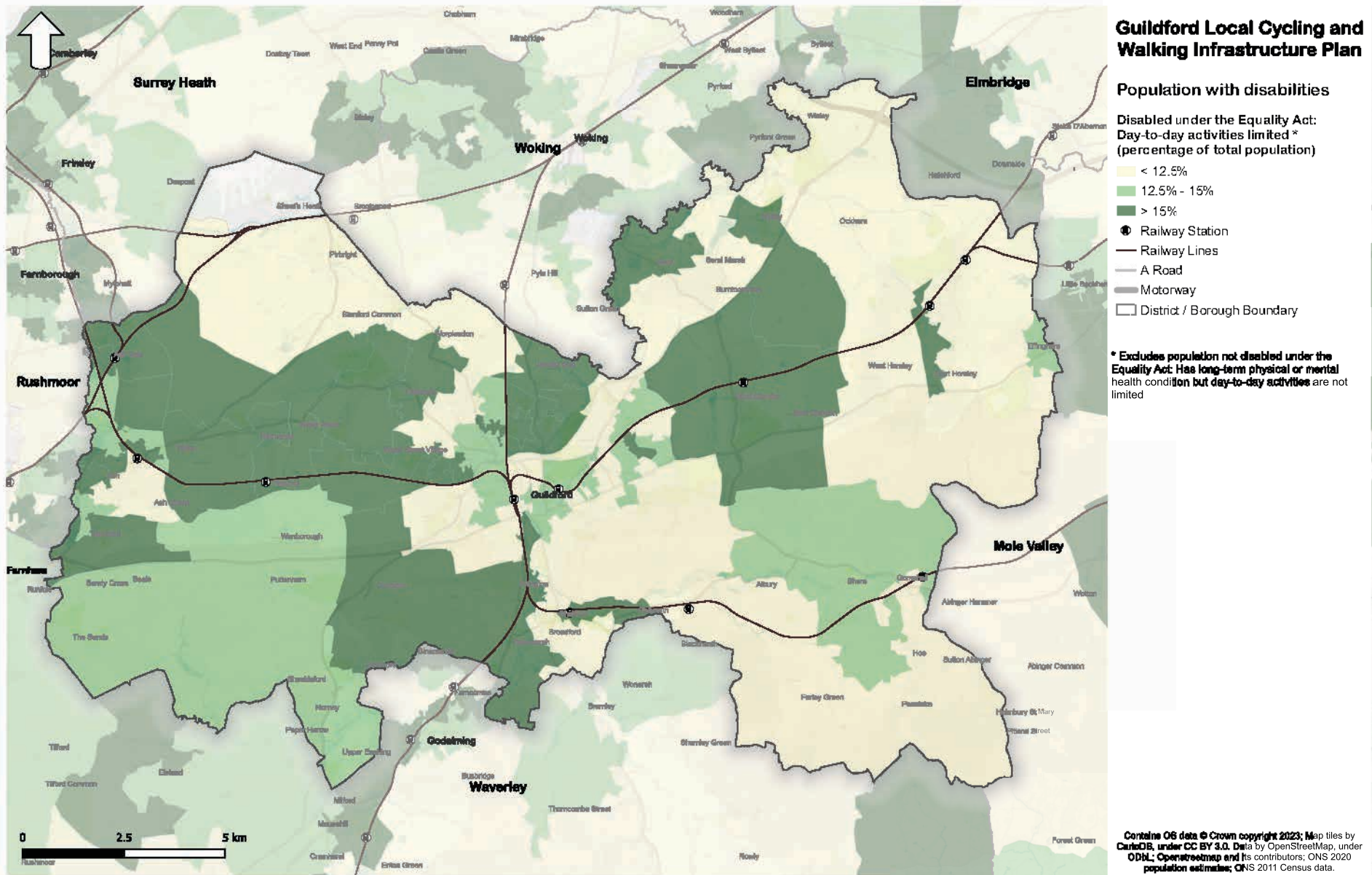


Figure 7. Population with disabilities in Guildford

