Agenda item 6

Report to: **Partnership Board –Transport for the South East**

Date of meeting: **27 October 2025**

By: **Chief Officer, Transport for the South East**

Title of report: **TfSE's Regional Travel Survey**

Purpose of report: **To provide an update with the Regional Travel Survey**

RECOMMENDATION:

The members of the Partnership Board are recommended to comment on the Regional Travel Survey and endorse the proposed next steps.

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1. Introduction

1.1 Transport for the South East (TfSE) commissioned a Regional Travel Survey (RTS) in October 2024 to improve understanding of travel behaviour across the region and to support future transport planning. The survey was designed to capture trip frequency by travel mode and purpose, as well as to record the origins and destinations of randomly selected trips. It also sought to identify changes in commuting and leisure trips following the pandemic and to examine how travel patterns vary by key sociodemographic factors such as age, income, and car ownership.

1.2 This report provides a high-level summary of the approaches, key findings from the survey and next steps. More detailed analysis can be found in the final report in Appendix 1.

2. Approach

2.1 Data collection took place in two phases. The first phase was an online survey carried out in November 2024, which achieved approximately 6,400 responses through the YouGov panel. This provided a fast and cost-effective way to reach a large cross-section of the population.

2.2 The second phase, a targeted "top up" intercept survey, was undertaken in May 2025 at selected locations across the region. This added around 400 responses to improve representation in LTAs and demographic groups that were under-sampled in the online survey, such as younger adults, students, and some socioeconomic categories.

3. Key Findings

3.1 Findings show that leisure is the most common trip purpose in the region, followed by shopping. Commuting comes next, with over half of respondents commuting three or more times per week, although one third report commuting less than before the

pandemic. Car remains the dominant mode, accounting for 35-76% of trips depending on the LTA, with walking taking second place. Convenience, cost, and journey time are the top factors influencing mode choice.

3.2 Car ownership varies significantly by location, with urban centres such as Brighton & Hove, Reading, and Southampton reporting over 30% of households without a car. EV adoption is steadily increasing, with around 5% of cars being electric and a further 9-10% hybrids. Most trips are short, typically under 10 miles for shopping, leisure, and personal business, highlighting the importance of local connectivity and active travel infrastructure.

3.3 Overall, the RTS represents a step change for regional planning, enabling more robust evidence for local plans, model rebasing, and validation of big data sources such as mobile phone data. It provides TfSE with a strong evidence base to inform strategic investment planning, the rail strategy and EV charging infrastructure, as well as supporting the development of a bespoke TfSE forecasting suite. Its value lies not only in the data itself, but in its ability to rapidly generate actionable insights at both regional and LTA levels.

4. Next Steps

4.1 TfSE will share the data and interactive dashboard with LTAs via the Regional Centre of Excellence. A launch session is planned for early November, subject to Board approval. We are also exploring opportunities to collaborate with universities and external partners to generate further insights and validate our transport analyses.

4.2 The data has already been incorporated into several TfSE internal workstreams, including the SIP refresh, rail strategy, and State of the Region report. We will encourage LTAs to use the data to support their technical work, such as local plans, transport strategies, and modelling. Individual training and support can be provided on request.

4.3 Given the valuable insights provided by the survey and the economies of scale achieved, we plan to conduct the survey every two years, subject to budget availability, to ensure trends and changes in the region are effectively monitored.

5. Conclusions and recommendations

5.1 The Partnership Board is recommended to provide comments on the project and approve the proposed next steps.

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Regional Travel Survey Analytical Report

September 2025

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1. Introduction

1.1 Survey purpose, scope and methodology

Steer, along with YouGov and Perspective Research, undertook the design, collection and delivery of a Regional Travel Survey (RTS) for Transport for the South East (TfSE). The survey data can be used for strategic planning and modelling purposes by TfSE and Local Transport Authorities (LTAs).

This section presents the survey purpose, sample scope, methodology, overview of responses and comparisons to Census data.

Survey purpose

The purpose of the survey was to generate improved regional insights from a focused sample of residents as an alternate and enhanced source of information to that provided by National Travel Survey (NTS).

The survey was therefore designed to capture insights on household travel patterns and behaviours across all sixteen LTAs in the region.

This included how, when and where residents are making trips across the region. In addition, the survey captures changes to household travel patterns following the pandemic.

Sample scope

The objectives of the sample were twofold:

1. To be as representative as possible of residents across the entire at the total level.
2. To be comprised of a sufficient numbers of residents from each LTA, thus enabling meaningful analysis at the LTA level where necessary.

A target sample of ~6,500 responses was therefore set across the sixteen LTAs in the TfSE region. This sample offered best value for money whilst providing sufficient coverage at the LTA level.

Sample minimums were set for LTAs at 100 responses to ensure that each LTA was sufficiently represented. The LTA target samples were determined so as to be proportionate to the LTA's population (Census 2021).

1.1 Survey purpose, scope and methodology

Methodology

Survey design

Working collaboratively with TfSE, a questionnaire was developed, and as an adaptation of the NTS questionnaire, broadly covering the following areas:

- Socio-economic indicators (e.g. age, gender, household size, income, education level, social class, ethnicity).
- Trip diaries including origin and destinations (i.e. location postcodes), trip purpose, modes used and time/day of travel
- Household car ownership
- Additional questions such as why chosen a particular mode, changes in commute frequency pre and post pandemic.

Trip diary information was focussed on a specific day of the week within the last seven days from the survey date. Different days of the week were randomly sampled for each respondent to ensure good representation of all day types. Where a respondent reported that they had not travelled on the day of week selected, a second day was offered so as to maximise the volume of data collected.

Data collection

A mixed approach of online and face to face survey has been adopted to complete the survey. Both methods used the same survey instrument.

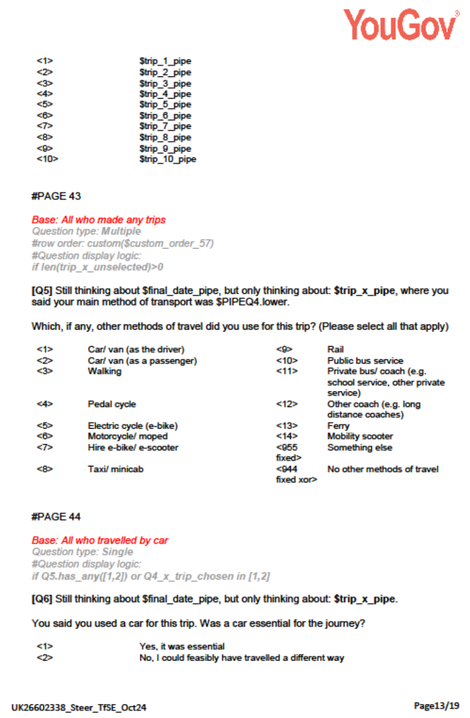
An initial **online survey** of circa 6,100 responses was undertaken in November 2024 usinguGov panel. This provided a fast and cost-effective means of generating a cross-sample.

After completion of the online survey and preliminary analysis of the demographic profiles, a **top-up intercept survey** was undertaken to improve the representativeness of the final sample. This targeted 400 responses at selected locations across the TfSE areaduring May 2025.
This top-up data was merged with the YouGov panel data to create one consolidated dataset.

Data weighting

The raw data has been weighted at LTA level to be representative of the population size and different age groups. The data has not been weighted by other socio-economic parameters such as social grade and/or ethnicity. The weighted data has been used for the analysis of the survey, and comparisons to NTS.

Click on the below image to view the Survey Questionnaire.



YouGov

<1> $trip_1_pipe
<2> $trip_2_pipe
<3> $trip_3_pipe
<4> $trip_4_pipe
<5> $trip_5_pipe
<6> $trip_6_pipe
<7> $trip_7_pipe
<8> $trip_8_pipe
<9> $trip_9_pipe
<10> $trip_10_pipe

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Base: All who made any trips
Question type: Multiple
#row order: custom($custom_order_57)
#Question display logic:
if len(trip_x_unselected)>0

[Q5] Still thinking about $final_date_pipe, but only thinking about: $trip_x_pipe, where you said your main method of transport was $PIPEQ4.lower.

Which, if any, other methods of travel did you use for this trip? (Please select all that apply)

<1>	Car/ van (as the driver)	<9>	Rail
<2>	Car/ van (as a passenger)	<10>	Public bus service
<3>	Walking	<11>	Private bus/ coach (e.g. school service, other private service)
<4>	Pedal cycle	<12>	Other coach (e.g. long distance coaches)
<5>	Electric cycle (e-bike)	<13>	Ferry
<6>	Motorcycle/ moped	<14>	Mobility scooter
<7>	Hire e-bike/ e-scooter	<955 fixed>	Something else
<8>	Taxi/ minicab	<944 fixed xor>	No other methods of travel

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Base: All who travelled by car
Question type: Single
#Question display logic:
if Q5.has_any([1,2]) or Q4_x_trip_chosen in [1,2]

[Q6] Still thinking about $final_date_pipe, but only thinking about: $trip_x_pipe.

You said you used a car for this trip. Was a car essential for the journey?

<1> Yes, it was essential
<2> No, I could feasibly have travelled a different way

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1.2 Data cleaning approach and limitations

The survey collected extensive data on respondents' resident and trip origin and destination postcodes and/or locations. Following review of the raw data, it was identified that there was incomplete information on trip destinations, distance, time and modes that required cleaning before the analysis could proceed.

Overview

A data frame was designed and developed that would allow for trip related insights to be generated. Prior to populating the frame, the data was subject to cleaning processes. At a high level this involved:

- Manual review of each row of data, supported by some AI tools such as Google AI and Copilot.
- Use of Python and GIS techniques to reshape raw data, improve data quality and remove invalid trips.

Approach

The detailed process of cleaning and validating the data used a six-step approach as set out below.

1. Origins and Destinations Mapping

Origins: Origins were generally provided as home postcodes. These postcodes were cleaned (capitalised and trimmed of extra spaces) to avoid formatting inconsistencies. Postcodes were then mapped in a tiered sequence to ensure incomplete data is not entirely removed: **Full postcode, Postcode sector, Postcode district**

If a postcode could not be matched to Gov.UK postcode data automatically, a manual review was conducted to check for typographical errors or deactivated postcodes.

Destinations: Destination data were categorised through a manual review process into the following types (Table 1.1):

Table 1.1: Destination categorisation

Type	Survey response
Postcode	Postcode (full or partial)
Manual	Detailed destination information (no postcode)
Settlement	Generic information (town, area name)
Can't plot	Unclear or missing

Mapping of destination data to postcodes then followed a structured approach:

- Clean postcode data: processed similarly to origins including for manual destination types (looking up postcodes).
- Postcode-based destinations followed the same hierarchical matching process.
- 'Settlements' were matched to a settlement reference list containing coordinate data. (e.g. Brighton, Newport)
- Ambiguous destination entries (e.g. "home", "church", "park") that were either undefined or overlooked in the initial categorisation underwent further manual review.

All origins and destinations were allocated to a TfSE district or marked as 'Outside TfSE'.

2. Initial Trip Validation

Duplicate trips were identified by checking for matching destination, time, duration, mode, and case ID.

Flagged duplicates were manually reviewed and removed where necessary.

1.2 Data cleaning approach and limitations

3. Trip Structuring and Return Trips

Each trip was assigned a unique origin-destination (OD) coordinate pair.

For return trips:

- If a trip was marked as a return, the origin and destination of the previous trip were reversed.
- If the final trip in a sequence was marked as a return, the trip was configured to start from the last recorded destination and return to the original 'home' origin.

4. Route Calculation via ArcGIS

Trips with defined OD coordinates were processed in ArcGIS to generate an implied (calculated) trip time (in minutes), trip distance (in kilometres), and route used for each.

The "Route" analysis tool was used to calculate the shortest path (by time and distance) between OD pairs, based on the road network. The assumed mode of the trip for this analysis was driving.

5. Travel Time Calculation and Comparison

The calculated travel time and distance were linked to each trip record.

If the stated mode of the trip in the survey was car-based, the calculated travel time was used directly.

For other modes, travel time was estimated using the calculated distance and an average speed based on the declared mode (see Table 1.2 for assumed speeds by mode).

The difference between the stated and calculated travel times was then assessed and any outlier trips were flagged for further inspection.

The range for the difference between the stated and calculated travel times was set at min -50% and max 100%. Any trip outside this range was flagged as invalid. Absolute time threshold of 20 minutes difference was also applied to check for trip validity.

6. Trip Distance Calculation

A limit for maximum distance by mode was set (see Table 1.3), and any trip over the maximum limit was flagged as invalid or out of scope.

Table 1.2: Assumptions for average speed by mode

Mode	Speed (km/hr)
Walk	5
Cycle/e-scooters	16
Bus	30
Taxi	35
Ferry	40
Rail	45

Table 1.3: Assumptions for distance limits set by mode

Mode	Maximum distance (km)
Walk	20
Mobility scooters	50
Pedal cycle	250
Electric-cycle/ hire bikes/rental e-scooters	250
Car/van as a passenger	300
Car/van as a driver	300
Rail	300
Mopeds/ Motor cycles	300
Private bus/coach (e.g. school buses)	300
Public bus service	300
Other coach (e.g. long distance)	350
Ferry	350

1.2 Data cleaning approach and limitations

7. Final Trip Validation Criteria

A validation process was undertaken using the following checks to identify whether:

- The origin and/or destination were located within the TfSE area.
- Any trip had null values for calculated time or distance.
- The percentage difference between the stated and calculated travel time exceeded a predefined threshold (depending on destination type).
- The total travel time exceeded a set maximum duration.
- The trip distance surpassed mode-specific limits.

Limitations

The cleaned survey data comprises a mixture of specific survey responses, and an assessment of trip origins/destinations made from the data provided. This means that it is imperfect at best and includes both respondent biases and subjectivity from the cleaning process.

That said, the data collection and analysis process followed a recognised and industry standard approach. Further the underlying trips rates have been reviewed and compared to those contained in the National Travel Survey (see Section 2) as an additional level of validation.
However . a degree of caution is required when using the data, particularly at the sub-regional level where sample sizes and data quality might vary.

Outputs

The following files accompany this report:

- (Unprocessed/Raw) Survey data (from YouGov)
- (Processed/Cleaned) Survey data
- Trip data (subset of the Survey data, with valid and invalid trips represented in separate rows)

1.3 Overview of survey responses

A total of 6,820 people responded to the survey across the TfSE area. Unweighted responses by LTA are shown in Table 1.5.

Initial online survey responses

Survey responses by key demographic groups have been summarised and reviewed to ensure they are sufficiently large. Sufficiently large in this context means they can reasonably be weighted up to reflect the population of the TfSE area. This has been undertaken considering the sample size by LTA.

Therefore, after completing the initial online survey, unweighted survey counts were compared against the 2021 Census for each LTA to check that respondents were sufficiently representative of the population.

This led to some target areas being identified for top-up intercept surveys. These were in cases where:

- There were too few responses for a particular socio-economic group.
- The socio-demographic characteristics of the respondent population materially differed from the LTA population (compared to Census 2021).

This ultimately resulted in the following categories and number of top-up intercept surveys (see Table 1.4) being undertaken in:

Brighton and Hove, Isle of Wight (IoW), Reading, Slough and Southampton.

Table 1.4: Intercept survey targets by type

User types	Number of survey responses
Students (and under 24s)	200
Under 34 years	50
C2DE social grade	100
Other employment status*	50

Deviation in ethnic group representation was identified during the planning of these intercept surveys. However, it was agreed that top-up surveys should focus on other socio-economic and demographic indicators given their likely correlation with race/ethnicity with regards to travel behaviour.

Considerations on sample representation

This programme of research was not designed to, nor expected to capture all respondent demographics proportionately from across the region. Rather it has been undertaken on a 'best efforts' basis, ensuring that key population groups are sufficiently represented.

As noted, some of the greatest variations are present in the ethnicity demographic. However, it is expected that factors affecting travel behaviour will be correlated with other measures such as social grade, car ownership, employment status, age, etc.

Table 1.5: Total responses by LTA

LTA	Responses
Bracknell Forest	247
Brighton and Hove	464
East Sussex	436
Hampshire	796
Isle of Wight	346
Kent	1010
Medway	339
Portsmouth	280
Reading	317
Slough	132
Southampton	442
Surrey	777
West Berkshire	201
West Sussex	534
Windsor and Maidenhead	166
Wokingham	333
Total	**6,820**

* Other employment status refers to those who are stay at home parents, unpaid caregivers, homemakers etc.

1.4 Comparison of unweighted survey respondents with Census 2021

The tables in this page and the following two pages (Table 1.6 to Table 1.12) show the difference (percentage points) in the demographic profile of the unweighted survey respondents compared to the 2021 census.

Data from Local Authorities has been aggregated to the LTA level.

Material discrepancies between the Census and the sample profile are highlighted. These are calculated as percentage point difference, labelled as %s.

- +5% – +9% discrepancy (percentage points)
- ≥ +10% discrepancy (percentage points)
- -5% – -9% discrepancy (percentage points)
- ≥ -10% discrepancy (percentage points)

Age and Gender

As shown in Table 1.6, older people are marginally over-represented whilst the younger population is under-represented in the sample as a whole.

Across age and gender categories, the majority of LTAs are within five percentage points of the Census, and all are within ten points with the exception of Males Age 55+ in Bracknell Forest which are over-represented in the sample.

Table 1.6: Survey responses vs Census 2021 – age and gender

LTA	Male 18-34	Male 35-54	Male 55+	Female 18-34	Female 35-54	Female 55+
Bracknell Forest	-6%	-4%	10%	-4%	-1%	5%
Brighton and Hove	-3%	-1%	0%	4%	0%	0%
East Sussex	-1%	-1%	-1%	-1%	1%	2%
Hampshire	-2%	0%	2%	-1%	0%	2%
Isle of Wight	-1%	-5%	3%	-2%	2%	4%
Kent	-2%	0%	2%	-2%	1%	2%
Medway	-6%	0%	1%	4%	1%	1%
Portsmouth	-1%	1%	1%	-5%	2%	2%
Reading	2%	-3%	-1%	4%	-1%	-1%
Slough	0%	-2%	4%	3%	-2%	-4%
Southampton	5%	-3%	-2%	-1%	0%	1%
Surrey	-4%	0%	3%	-2%	1%	2%
West Berkshire	-7%	2%	3%	0%	1%	1%
West Sussex	-2%	1%	1%	-1%	1%	1%
Windsor and Maidenhead	-3%	-1%	5%	-1%	-1%	2%
Wokingham	-6%	-3%	7%	-4%	0%	7%

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1.4 Comparison of unweighted survey respondents with Census 2021

Demographic metrics

Disability

As shown in Table 1.7, people with disabilities are under-represented across all LTAs. There were however at least 10 disabled persons in each LTA. Given this was not a focus of the research this is a reasonable outcome.

Ethnicity

People from minority ethnic groups, particularly Asian communities in Slough, were under-represented in the sample (Table 1.8). Comparable imbalances in representation were also identified across other demographic characteristics, including socio economic group and gender.

Social Grade

People from the combined ABC1 social grade are over-represented compared to those from the C2DE equivalent by up to 17 percentage points. This was despite a targeted programme of intercepts to increase the C2DE group.

Table 1.7: Survey vs Census 2021 - disability

LTA	Disability
Bracknell Forest	-8%
Brighton and Hove	-10%
East Sussex	-12%
Hampshire	-8%
Isle of Wight	-15%
Kent	-9%
Medway	-9%
Portsmouth	-4%
Reading	-6%
Slough	4%
Southampton	-8%
Surrey	-6%
West Berkshire	-9%
West Sussex	-7%
Windsor and Maidenhead	-7%
Wokingham	-6%

Table 1.8: Survey vs Census 2021 - ethnicity

LTA	Asian	Black	Mixed	White	Other
Bracknell Forest	-5%	-1%	-1%	5%	2%
Brighton and Hove	-1%	0%	-1%	5%	-2%
East Sussex	-1%	1%	1%	0%	0%
Hampshire	-1%	1%	0%	1%	-1%
Isle of Wight	-1%	0%	0%	0%	1%
Kent	-3%	-1%	0%	4%	-1%
Medway	-4%	-1%	0%	7%	-1%
Portsmouth	-5%	-1%	1%	7%	-1%
Reading	-10%	-4%	-2%	17%	-2%
Slough	-30%	2%	3%	25%	0%
Southampton	-2%	0%	6%	-2%	-1%
Surrey	-4%	-1%	-1%	7%	0%
West Berkshire	-3%	0%	-1%	4%	0%
West Sussex	-2%	-1%	1%	3%	-1%
Windsor and Maidenhead	-8%	-1%	0%	12%	-2%
Wokingham	-8%	-1%	-2%	11%	0%

Table 1.9: Survey vs Census 2021 – social grade

LTA	ABC1
Bracknell Forest	10%
Brighton and Hove	4%
East Sussex	6%
Hampshire	6%
Isle of Wight	5%
Kent	11%
Medway	3%
Portsmouth	5%
Reading	17%
Slough	14%
Southampton	6%
Surrey	6%
West Berkshire	10%
West Sussex	7%
Windsor and Maidenhead	8%
Wokingham	7%

1.4 Comparison of unweighted survey respondents with Census 2021

Economic metrics

Household Car Ownership

As shown in Table 1.10, households (HHs) owning two or more cars were under-represented in the survey, with an over representation of one car households.

Table 1.10: Survey vs Census 2021 – HH cars

LTA	0	1	2	3 or more
Bracknell Forest	5%	22%	-18%	-9%
Brighton and Hove	8%	1%	-6%	-3%
East Sussex	0%	18%	-8%	-9%
Hampshire	-1%	18%	-8%	-9%
Isle of Wight	-1%	15%	-7%	-7%
Kent	-1%	16%	-8%	-7%
Medway	4%	14%	-9%	-9%
Portsmouth	-2%	15%	-10%	-3%
Reading	11%	1%	-8%	-4%
Slough	15%	1%	-9%	-7%
Southampton	7%	10%	-12%	-5%
Surrey	3%	15%	-9%	-9%
West Berkshire	4%	15%	-12%	-8%
West Sussex	4%	15%	-10%	-9%
Windsor and Maidenhead	5%	11%	-7%	-9%
Wokingham	1%	21%	-11%	-11%

Employment Status

Most employment groups were within five percentage points of the census, with retired people generally over-represented. Students are somewhat under-represented despite a programme of intercepts which targeted this group.

Table 1.11: Survey vs Census 2021 – employment

LTA	Employed	Unemployed	Student	Retired	Other
Bracknell Forest	-8%	0%	-3%	13%	-2%
Brighton and Hove	4%	-1%	1%	1%	-5%
East Sussex	2%	1%	-4%	4%	-3%
Hampshire	0%	0%	-3%	7%	-4%
Isle of Wight	-2%	0%	-3%	8%	-3%
Kent	3%	0%	-4%	5%	-4%
Medway	4%	2%	-5%	0%	-1%
Portsmouth	10%	2%	-9%	0%	-3%
Reading	-8%	-2%	11%	0%	-2%
Slough	-5%	5%	5%	1%	-6%
Southampton	1%	0%	4%	-3%	-2%
Surrey	4%	-1%	-4%	4%	-3%
West Berkshire	5%	-1%	-3%	2%	-4%
West Sussex	-1%	1%	-3%	5%	-2%
Windsor and Maidenhead	4%	0%	-6%	6%	-5%
Wokingham	-4%	0%	-5%	13%	-4%

Highest Qualifications

Those with no formal qualifications* are under-represented, and those with level 4+ are over-represented. This correlates somewhat with the under representation of C2DE grades across the research.

Table 1.12: Survey vs Census 2021 – qualification

LTA	None	Apprenticeship	Levels 1-3	Level 4+	Other
Bracknell Forest	-11%	-5%	-16%	13%	20%
Brighton and Hove	-10%	-3%	-10%	16%	7%
East Sussex	-12%	-4%	-13%	8%	20%
Hampshire	-12%	-4%	-16%	14%	18%
Isle of Wight	-12%	-6%	-14%	5%	27%
Kent	-14%	-4%	-17%	16%	19%
Medway	-11%	-5%	-9%	12%	13%
Portsmouth	-16%	-4%	-13%	23%	10%
Reading	-14%	-3%	-4%	12%	9%
Slough	-16%	-3%	-4%	11%	12%
Southampton	-14%	-4%	-5%	9%	14%
Surrey	-10%	-4%	-15%	11%	18%
West Berkshire	-13%	-5%	-13%	12%	18%
West Sussex	-12%	-4%	-16%	15%	18%
Windsor and Maidenhead	-10%	-3%	-14%	13%	13%
Wokingham	-8%	-4%	-15%	10%	18%

* Noting that the Census includes 16-18 years olds who were not included in this research.

2. Comparison with the National Travel Survey (NTS)

2.1 Introduction

The National Travel Survey (NTS) is an annual household survey in England that collects data on personal travel behaviour to inform government transport policy.

This section compares the findings from the NTS 2023 for the UK South East (SE) with the RTS for the TfSE area to help both provide confidence in the RTS data and support informed decision making when using one or both datasets.

Overview

Whilst the questionnaire for the RTS was developed to allow the survey data to be compared to the NTS data as far as is practical, some differences remain that limit the level of comparison that can be made.
In particular, differences in data collection methodology, approach to data weighting and some remaining discrepancies in definitions used. This means that a comparison of the two data sets is expected to exhibit differences.

It is recommended that the RTS is used to enhance and enrich insights from the NTS.

About the NTS

Data collection (pan England)

The NTS uses two primary methods to collect data from approximately 16,000 individuals across 7,000 households in England:

- a face-to-face (F2F) interview to gather personal and household information, and
- a 7-day self-completed travel diary for each household member to record their trips.

Households are selected at random as a representative and regionally stratified sample of addresses across England.

Weighting

Given the year-round data collection period and the the self-completion format of the survey, the NTS applies a composite weighting method. This accounts for the likelihood of household and individual selection, non-response and/or drop-off rates, before applying factors to match national population estimates for age, sex, and region.

The combined weights are then adjusted to ensure the survey sample accurately reflects the UK population at the regional level. NTA also weights trips by trip purposes.

Limitations

There are some key differences to be aware of when comparing the NTS with RTS data.

- **Temporal scope** – the NTS is for 2023 whereas the RTS data was collected in November 2024 and May 2025.
- **Sample size** – the RTS sampled 6,820 individuals. The total (UK wide) sample of the NTS is 7k households, implying a smaller underlying sample for the SE than RTS.
- **Geographic scope** – the two data sets do not represent the same geographic area. The NTS definition of the UK SE includes Buckinghamshire and Oxfordshire – all of which are not part of TfSE region.
- **Survey methodology** – the NTS respondents report trip diaries for a representative week as compared to the RTS which collected data for a representative day of a week. Whilst the RTS aimed to ensure data for all days of the week were appropriately collected from different respondents, a truly like for like comparison is not possible.
- **Weighting*** – the NTS weights the sample by age and gender at regional level. In comparison the RTS data is weighted by age only but at the more granular LTA level. Moreover, the NTS uses additional weights for trips by different trip purposes (e.g. commuting v/s leisure trips) which were not applied for the RTS.

*More information can be found on NTS weighting can be found here.

2.2 Comparisons of the RTS to the NTS, by mode

Figures 2.1 to 2.6 across this page and the next present a comparison between the NTS 2023 for the South East and Regional Travel Survey of: average reported travel time in minutes, trip distance in miles and trip frequency. Each is shown by mode and purpose.

Averages by mode

As shown in Figures 2.1 to 2.3, average travel time, distance and trip frequency by mode are similar when comparing RTS and NTS.

There are however some finer discrepancies. For example:

- **Bus:** Respondents travel similar distances (Figure 2.2) by bus yet report that average trips are double the time (Figure 2.1) in the NTS compared to RTS (40 mins vs 20 mins).
- **Taxi:** Trips are reported to be both 50% longer (Figure 2.1) and cover 50% more distance (Figure 2.2) in RTS.
- **Rail:** Trips are reported to cover longer distances (Figure 2.2) , with a lower average travel time (Figure 2.1) in RTS.
- **Trip frequencies** (i.e. trips/person/day) in Figure 2.3 are similar for bus, cycle and surface rail (<0.1 trips/person/day). However, reported car trip frequencies are higher in the NTS (1.7 trips/person/day, compared to 1.3). The walking trip rate is significantly higher in RTS.

Figure 2.1: RTS vs the NTS 2023 – travel time & mode

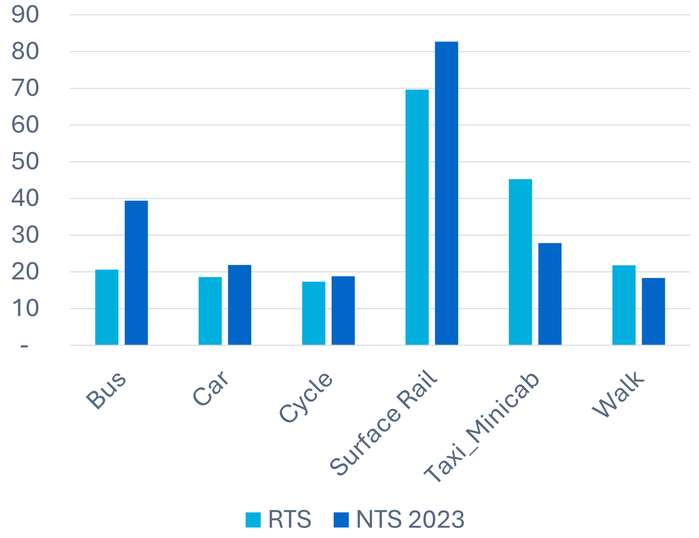


Figure 2.2: RTS vs the NTS 2023 – distance & mode

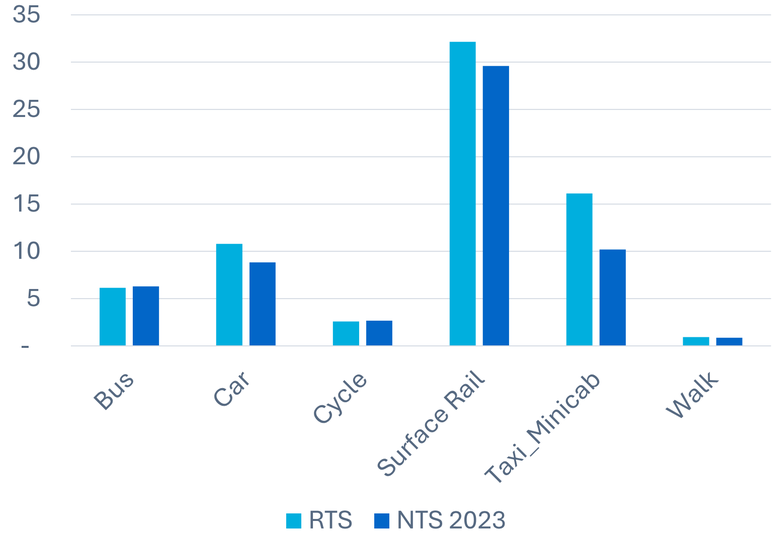
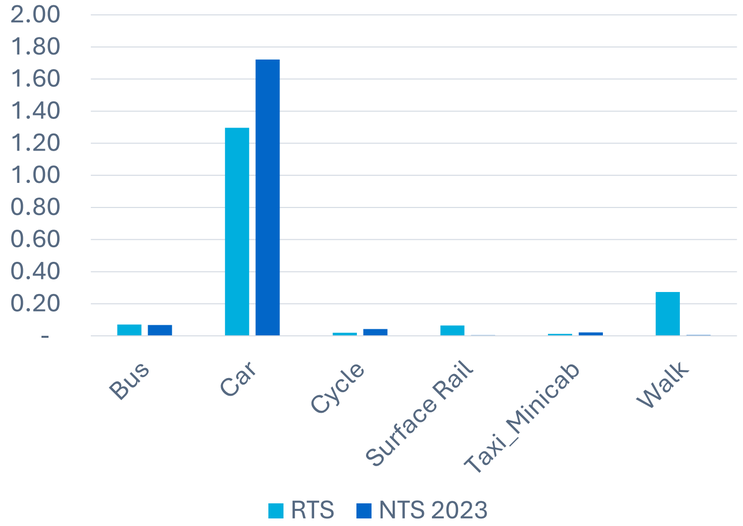


Figure 2.3: RTS vs the NTS 2023 – frequency & mode



2.3 Comparisons of weighted RTS to the NTS 2023, for trip purpose data

Average travel time, travel distance and trip frequency by purpose

As shown in Figures 2.4 to 2.6, the travel times, travel distances and trip frequencies recorded are broadly similar for the RTS and NTS. The following are noted as exceptions.

Contrasting the comparison of **travel times** for different trip purposes for the NTS and RTS presented in Figure 2.4 with **distances** in Figure 2.5 shows that:

- **Business trip travel times** are 33% higher for the NTS compared to RTS. The comparison of **travel distance** for the two surveys presented in Figure 2.5 is similar (greater for the NTS than RTS).
- The NTS **education trips** are significantly shorter than in both distance and travel time than those reported in RTS. This may be due to differences in how education trips are classified in the two surveys (accompanied vs unaccompanied trips).

Considering **trip frequency** (trips/person/day) as presented in Figure 2.6:

- Education and leisure trip frequencies are reported to be materially higher in the NTS than in RTS at 0.35 and 0.7 trips/person/day respectively.

It should be noted that the NTS assigns additional weights different trip purposes by importance which may have impacted the findings.

Figure 2.4: RTS vs the NTS 2023 – travel time & purpose

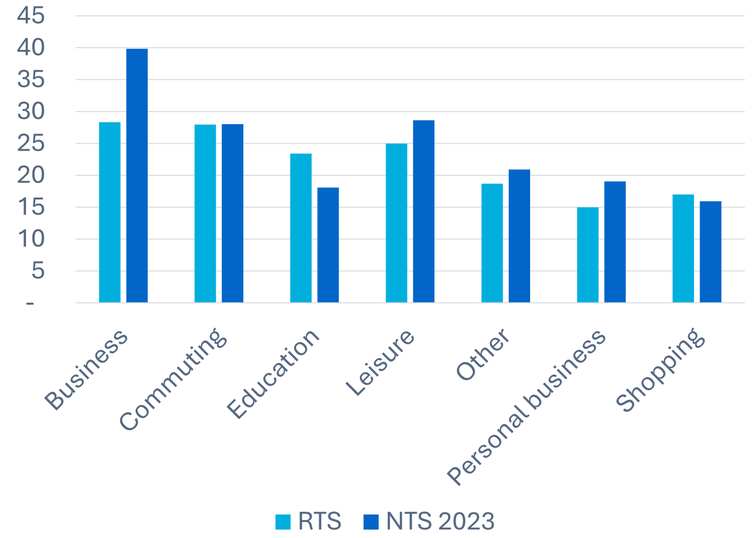


Figure 2.5: RTS vs the NTS 2023 – distance & purpose

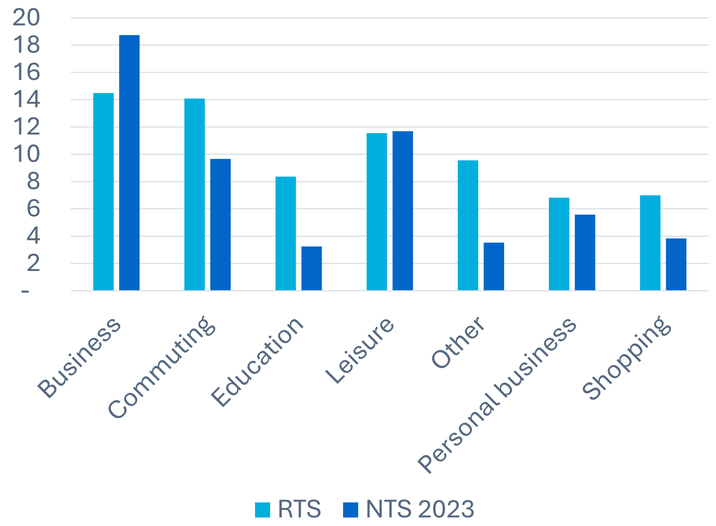
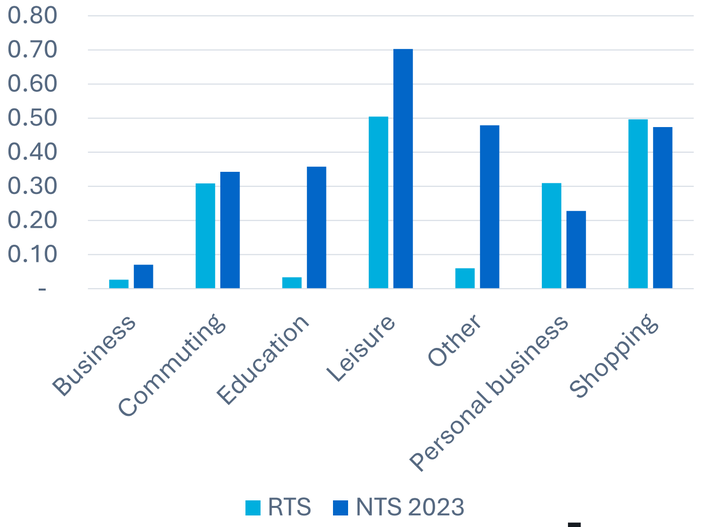


Figure 2.6: RTS vs the NTS 2023 – frequency & purpose



2.4 Conclusion of the comparison of the RTS to the NTS

Conclusion

The comparisons of key indicators by mode used (Figures 2.1 to 2.3) and trip purpose (Figures 2.4 to 2.6) between the NTS and RTS do not flag any concerning data discrepancies.

It should however be noted that the two datasets were not expected to yield identical results and statistics. Indeed, differences should be expected given that the NTS has:

- Comparatively **smaller sample sizes** at the regional and local level.
- A **different geographic coverage** than RTS – covering a wider South East area (including Buckinghamshire and Oxfordshire) than the TfSE area.
- **Different underlying composition** of **socio-demographic and economic characteristics**. This is given the differences between the NTS definition of the South East and the RTS sample which is comprised of responses from each LTA area.

The fact, therefore, that there is broad alignment in terms of the level of activity between the two datasets **provides confidence that the RTS can be relied on to provide greater local insight**.

Since the RTS has the larger underlying sample size (n=6,427) its usage is recommend to deliver local insights at the LTA and TfSE area level.

However, the RTS data should be used recognising the acknowledged limitations that are cited in this report. In particular: differences in the survey methodology between the NTS and RTS, and risks around using the RTS for very specific use cases where the sample size may be insufficiently small.

3. Survey Insights

3.1 Introduction

This sections presents some key findings from the survey analysis, using the ‘weighted*’ and ‘validated’ data.

A (PowerBI) Dashboard with additional analysis along with data filtering capabilities accompanies this report.

Overview

The data analysis focusses on understanding the travel behaviour across the different Local Transport Authorities (LTAs) in the TfSE region. A comparison of how travel behaviour varies based on demographic and socio-economic characteristics such as age, income, household size, employment status, education level, social group is also presented.

An analysis of why people choose different modes is presented that will help better understand their travel needs and support future network development.

The time and distance of trips made are analysed to support the planning of future transport services.

Origin and destination data has been analysed to understand the potential routes taken for different trips made by different modes such as cycling.

Approach

The results of the survey analysis for the following characteristics are presented for each LTA across the TfSE region. The analysis has been further disaggregated by socio-demographic characteristics of the respondents.

1. Travel patterns

Commute frequency; and changes in trip frequency post pandemic (more/same/less)

2. Car ownership

Car ownership rate; type of cars owned; and EV charging methods

3. Mode share

Mode share for all trips; mode share by trip purposes, time of travel e.g. rush hour and journey length; and reasons for choosing a mode

4. Trip rate and trip length distributions

Average trips per person per day by mode and purpose; and average miles travelled per person per day by mode and purpose.

5. Origin and destinations

Trip density and origins/destinations hotspots by mode

*Note that each chart shows the unweighted underlying sample size for completeness.

3.2 Travel patterns

Commute frequency*

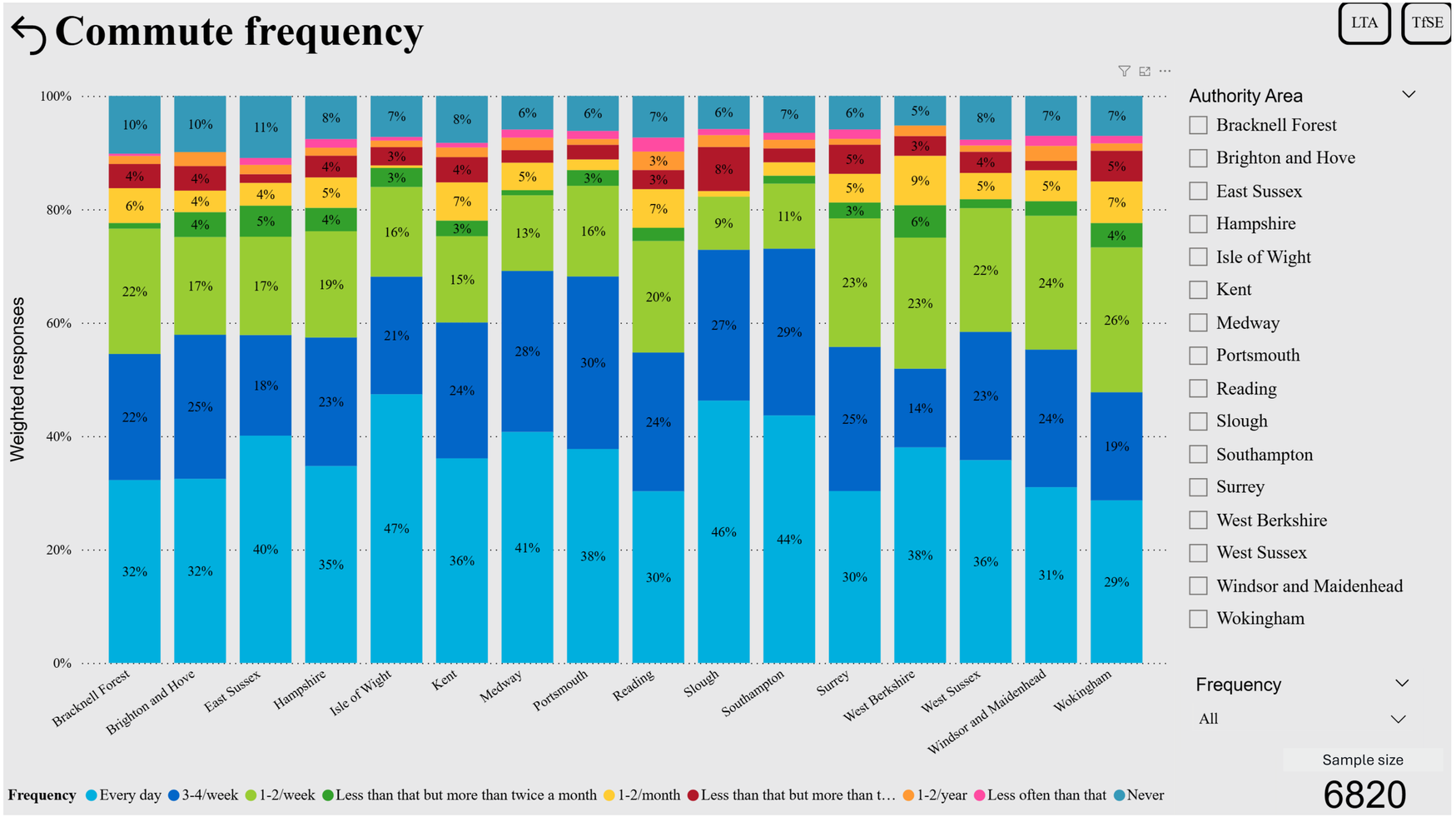
Figure 3.11 shows the frequency of commuting by LTA in terms of number of days per week, month or year.

- Across all LTAs, over 50% of respondents said they commute more than 3-4 times per week.
- Another 15-25% respondents commute 1-2 times per week.
- About 6-10% reported never commuting.
- The commute frequency varies across LTAs, with Isle of Wight having the greatest share of respondents who reported commuting daily (47%), and Wokingham the lowest (29%).

*this analysis is based on all responses, including people who are not-working/retired/students.

Figure 3.1: Commute frequency

How often, if at all, do you commute to your usual place of work instead of working from home?



3.2 Travel patterns

Changes in trip frequency after pandemic*

As shown in Figure 3.2,

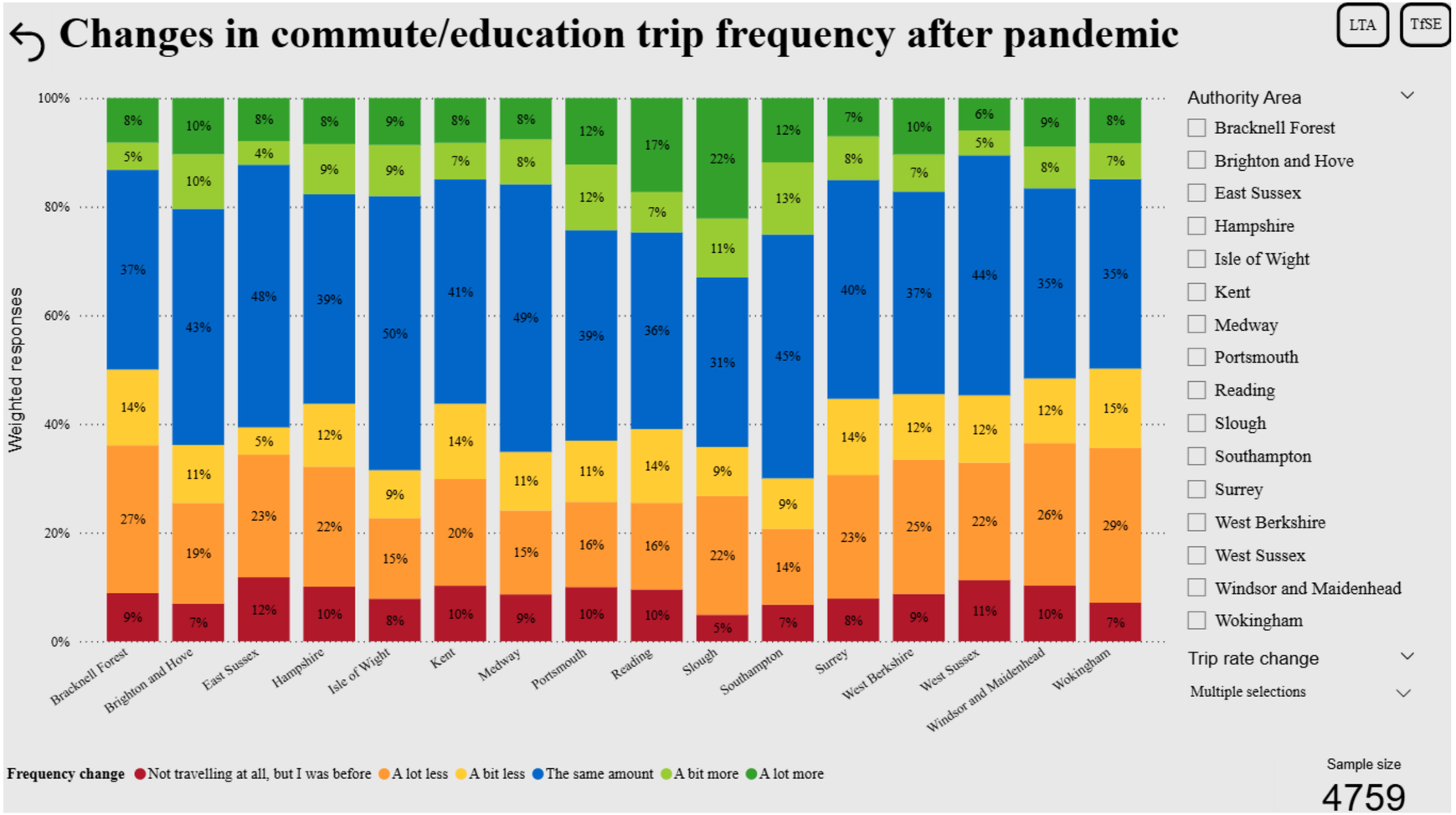
- About 40% of the respondents said they commute about the same as before the pandemic.
- About 17% reported they commute more or lot more after the pandemic.
- Remaining 40% have stopped travelling or are travelling less

This profile varies across the different LTAs and across trip purposes.

Changes in trip frequency after pandemic for different trip purposes are available in the Dashboard.

Figure 3.2: Trip frequency after pandemic

Comparing your travel now with that before the COVID-19 pandemic in 2020, please tell us whether you are travelling more, less or about the same for each of the following purposes: Commute/Education.



*this analysis is based on all responses, including people who are not-working/retired/students.

3.3 Car ownership

Car ownership

As shown in Figure 3.3,

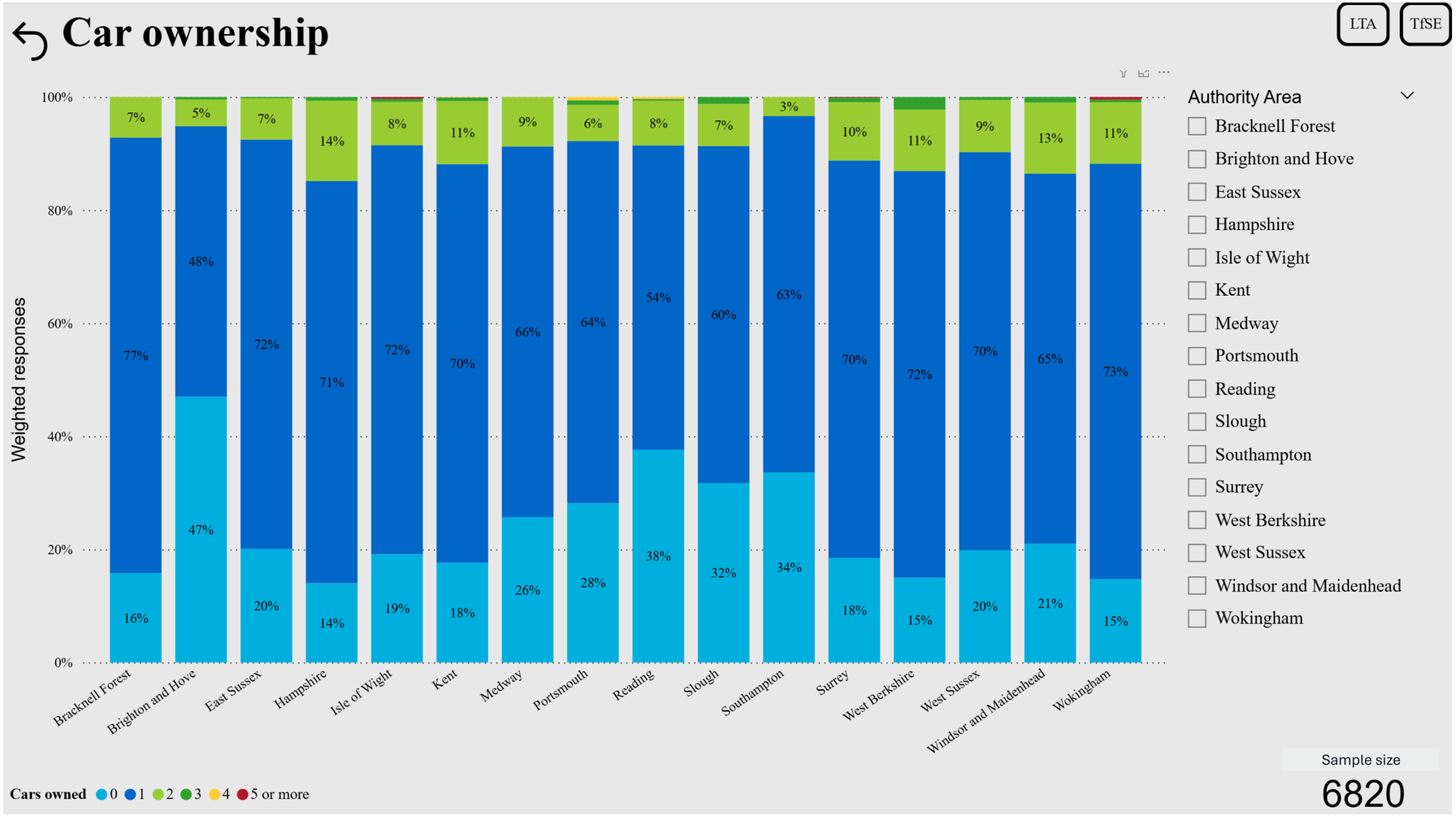
- Across all LTAs, about one-fifth of the population do not own a car either individually or jointly.
- Car ownership is lowest in Brighton and Hove, Southampton, Reading, and Slough* where >30% respondents don't own a car.

Car ownership levels by demographic and socio-economic characteristics such as age, income, gender and social grade are available in the dashboard.

*To note, Slough has relatively low sample size of c.132.

Figure 3.3: Car ownership

How many cars/ vans, if any, do you personally own, either individually or jointly?



3.3 Car ownership

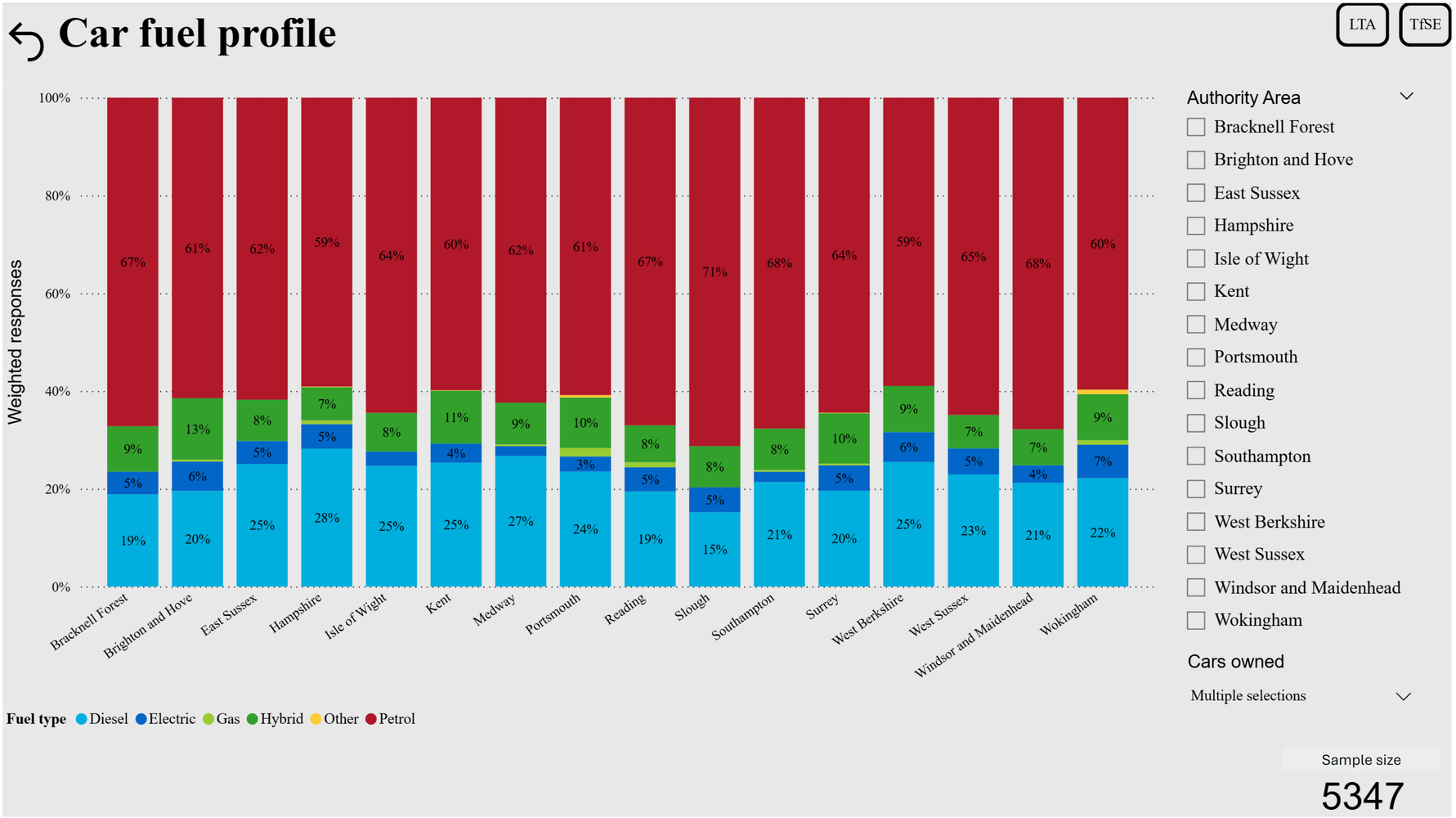
Car fuel profile

As shown in Figure 3.4,

- Across all LTAs, EV accounts for on average 5% of cars owned by respondents, and about another 9-10% are hybrids.
- Diesel and petrol cars account for the majority of vehicles owned at circa 25% and 60% respectively.
- EV and hybrid car ownership is highest in Brighton and Hove, followed by Wokingham, West Berkshire, Surrey and Kent.

Figure 3.4: Car fuel profile

What type of engine is in the vehicle(s) you own, either solely or jointly with someone else?



3.3 Car ownership

EV Charging location

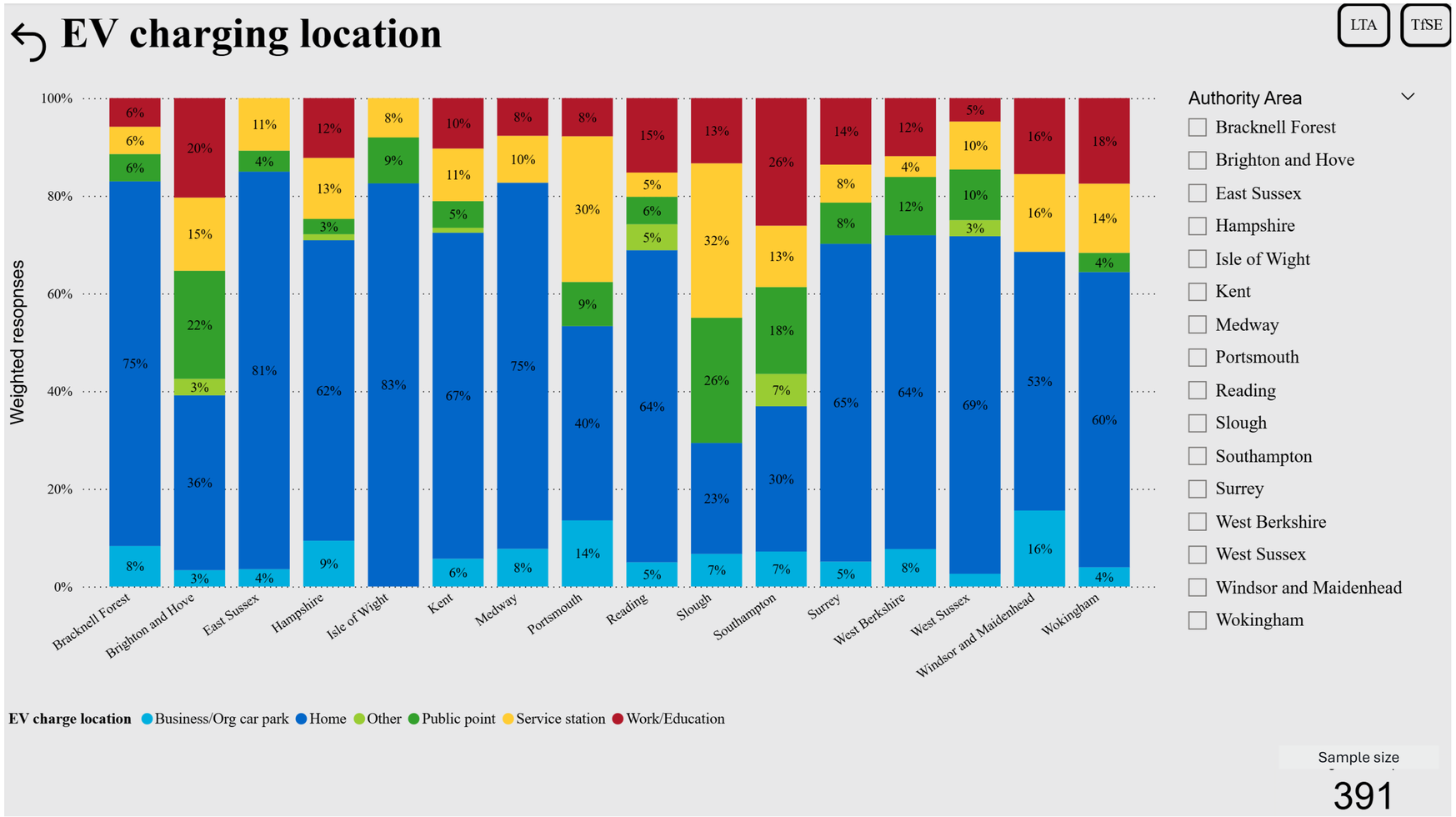
As shown in Figure 3.5,

- Home and/or a business/organisation car park is the most common location where EV owners and/or users choose to charge their vehicles the majority of the time
- However, in LTAs such as Brighton and Hove (B&H), and Slough over 20% of the respondents charge at public locations. These LTAs also have the highest EV penetration, despite potentially lower access to off-street parking.

To note, the sample size for this chart at LTA level is very low, and therefore the findings should be treated with caution.

Figure 3.5: EV charging locations

Which of these statements best describes how your household mainly charges your electric vehicle/s or plug-in hybrid/s?



3.4 Mode share

Mode share

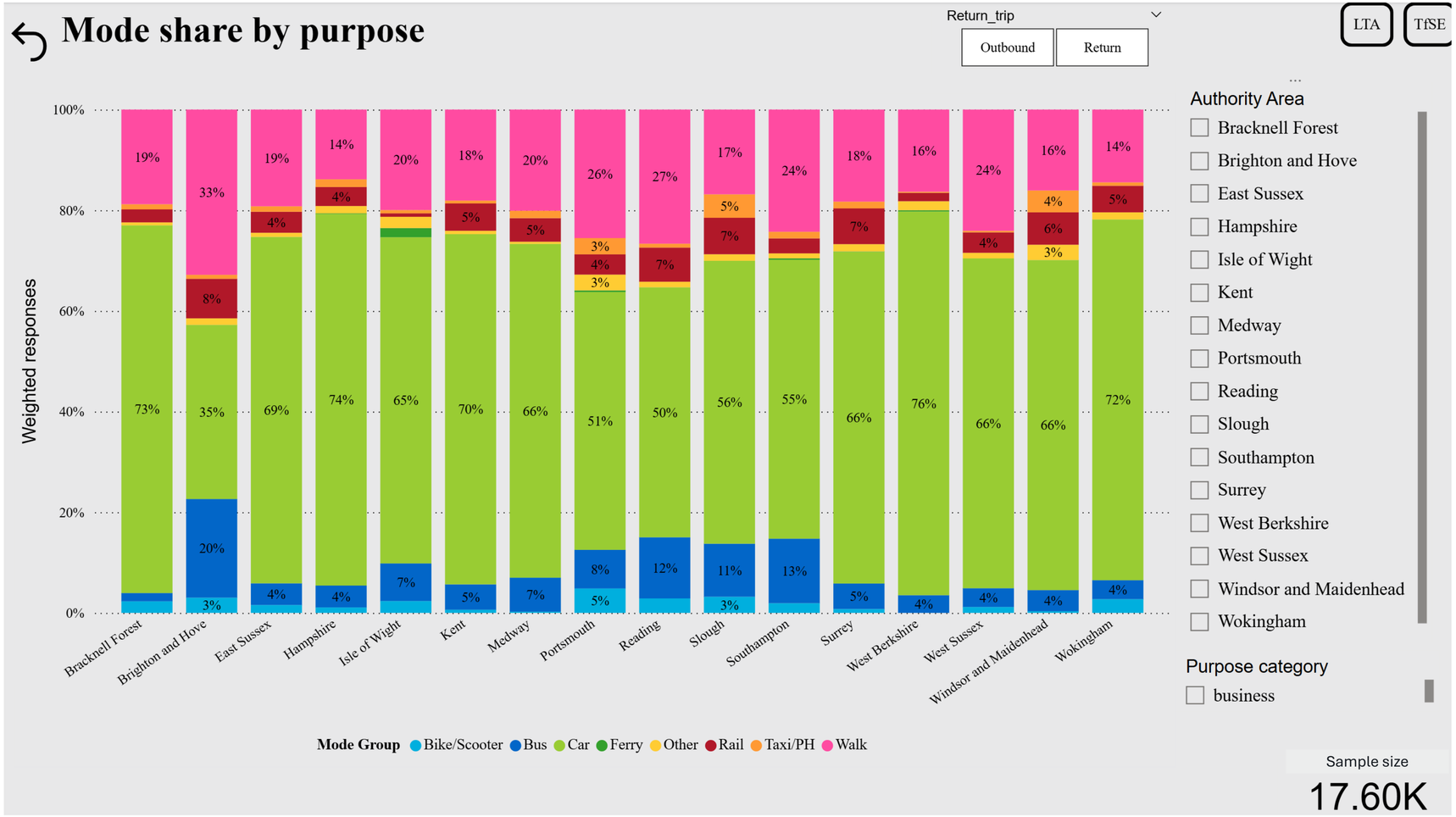
As shown in Figure 3.6,

- Across all trip purposes and including return trips, car is the most common mode of travel across all LTAs at about 66%.
- Car mode share varies across LTAs, ranging from only 35% in Brighton and Hove to 76% of trips in West Berkshire. This is aligned with corresponding car ownership rates across the LTAs as shown in Figure 3.3.
- Walking is the second most common mode accounting for about 20% of trips made across all LTAs.

Mode share by different trip purposes such as business, commute, leisure etc. can be viewed in the dashboard.

Figure 3.6: Mode share by purpose

What was the main method of travel you took for each trip? This means the method you used for the longest distance.
What was the main reason for making this trip?



3.4 Mode share

Multi-modal trips

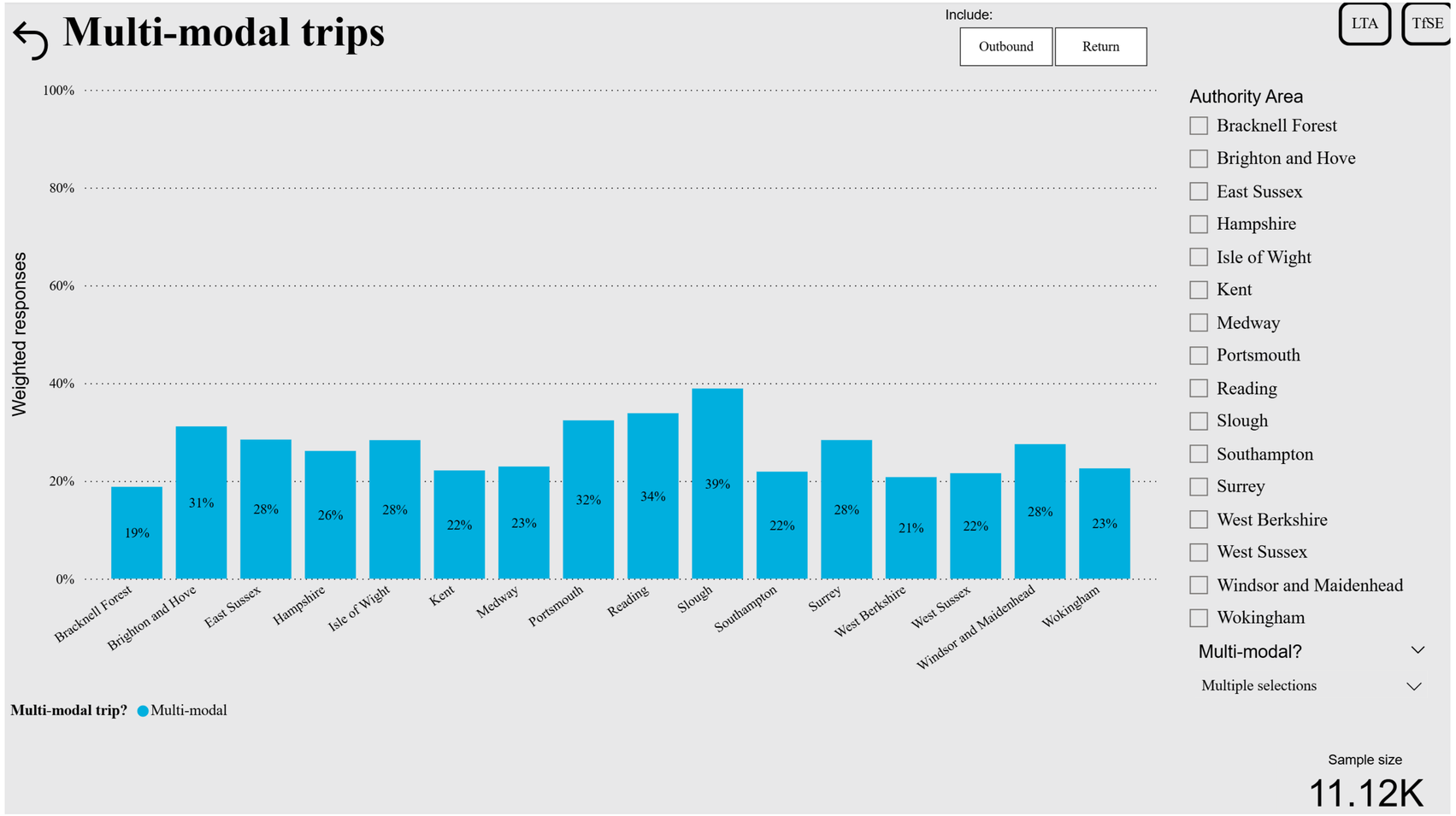
Figure 3.7 shows the proportion of trips that were multi-modal. A multi-modal trip in this context is a single trip that has a specific purpose and is made using more than one mode.

For example, you may drop children off at school before carrying on to your place of work. If you would drop children off at school regardless of it being on your commute, these are two separate trips. Whereas if you stop to get a coffee on your way to work but would not stop to buy coffee if it wasn't on the way, this is a single trip ending at your place of work.

A significant proportion of trips were multi-modal across all LTAs ranging from 19% to up to 39% (including return trips).

Figure 3.7: Multi-modal trips

Still thinking about <chosen date of travel>, but only thinking about <trip x>, where you said your main method of transport was <selected mode>. Which, if any, other methods of travel did you use for this trip?



3.4 Mode share

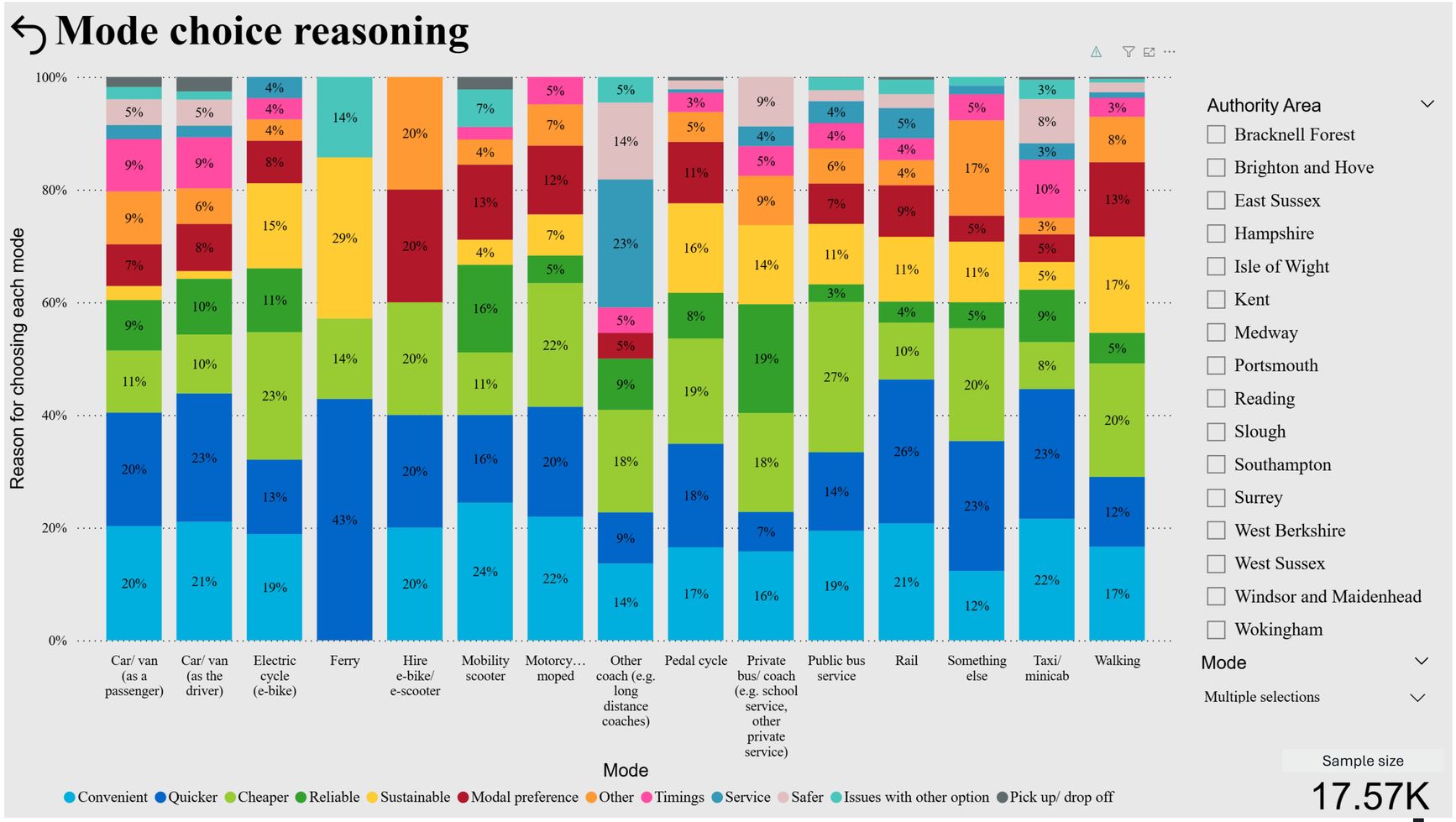
Reasons for choosing a mode

As shown in Figure 3.8 convenience, duration of travel and cost of travel are the top three reasons for choosing the main mode of travel.

- **Car, rail, taxi/minicab and motorcycle/moped** choice is dominated by **convenience and speed** (circa 40% in all cases).
- **Cycling, walking and bus** modes have a strong perception of offering **value for money** (cheap) with **sustainability** also a driver of choice.
- **Ferry** usage has a good **sustainability** perception (29%) but is otherwise dominated by **speed** (43%). 14% also reported having issues with other alternatives.
- **Safety** as a driver of choice was greatest for those using other coaches (14%), 9% on private buses/coaches and 8% taxi and minicabs.
- Underlying **modal preferences** (at circa 5-10% aside from micromobility at 20%) was reported to affect choice for most modes.

Figure 3.8: Reason for mode choice

You said you could have used another method of transport as your main method of travel but did not. Why did you use <selected mode> as your main method instead?



3.4 Mode share

Top reasons for choosing a mode

Key themes that emerged from the qualitative responses on reasons for the selection of preferred mode of travel are presented here.

Walking and Cycling

- **Health and Fitness:** The overwhelming reason for walking was for exercise and the associated health benefits, with many mentioning it helps them "keep fit" or "get steps in."
- **Short Distances:** Walking was the logical choice for short journeys where using a vehicle was deemed unnecessary.
- **Avoiding Inconvenience:** Some walkers cited a desire to avoid parking difficulties or noted that their destination was close by.
- **Exercise:** The primary motivation for cycling was to incorporate physical activity and exercise into their journey.

Rail

- **Efficiency and Convenience:** Respondents favoured the train for its speed compared to other public transport and for the convenience of station locations.
- **Avoiding Driving Hassles:** The train was chosen to bypass traffic congestion and eliminate the need to find parking, especially in busy urban areas.
- **Leisure and Social Travel:** Using the train allowed passengers the freedom to have alcoholic drinks without concerns about driving.

Public bus service

- **Cost Savings:** A significant number of users chose the bus due to having a free bus pass or to avoid the expense of parking.
- **Alternative to Driving:** The bus was a key alternative for those who couldn't drive, particularly after consuming alcohol.
- **Poor Weather:** The bus provided a reliable way to travel while sheltering from rain and cold.

Car/ van (as the driver or passenger)

- **Practicality for Errands:** The most common reason for driving was the need to carry heavy or bulky items, such as weekly shopping, tools, or other equipment.
- **Health and Mobility:** Many respondents cited health issues, disabilities, or mobility problems that make walking or using public transport difficult.
- **Convenience and Social Factors:** Many chose this mode because they were offered a lift by a friend, partner, or family member, making it the most convenient option.
- **Avoiding Bad Weather:** Car is preferred to stay dry and warm during poor weather conditions (noting the initial survey was undertaken during the month of November).

3.5 Trip rate and Trip Length Distributions

Average trip rate

Figure 3.9 shows the average number of trips made per person per day for different trip purposes. For a particular LTA the average represents the weighted sample rate of trips (across all LTA respondents) in the underlying data.

Leisure and shopping are the two most frequent trip purposes across all LTAs.

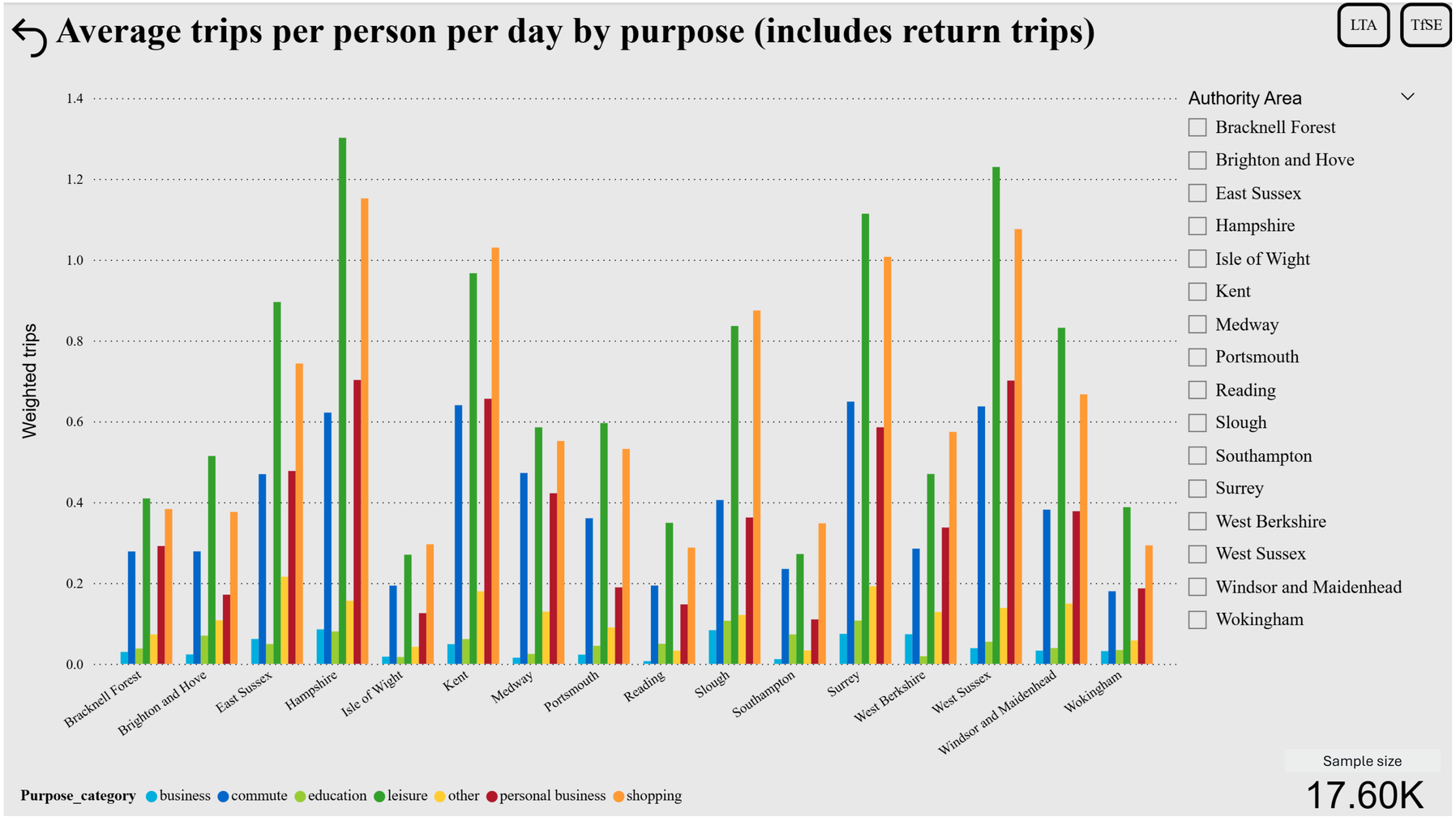
The next most frequently made trip is commuting with commuting rates highest in Kent, Surrey, West Sussex and Hampshire.

There are some marked differences by LTA with there being three main comparator groups.

- **High trip rates:** Hampshire, Kent, Slough, Surrey, West Sussex, Windsor and Maidenhead
- **Medium trip rates**: Bracknell Forest, Brighton and Hove, East Sussex, Medway, Portsmouth, West Berkshire
- **Low trip rates:** Isle of Wight, Reading, Southampton, Wokingham

Figure 3.9: Average trips per person per day by trip purpose (includes return trips)

Calculated based on reported number of trips (in a day) for all trip purposes and divided by total sample size



3.5 Trip rate and Trip Length Distributions

Average distance

Figure 3.10 presents the average distance travelled by trip purpose. Please note the sample size for business, education and other purposes for all LTAs are small.

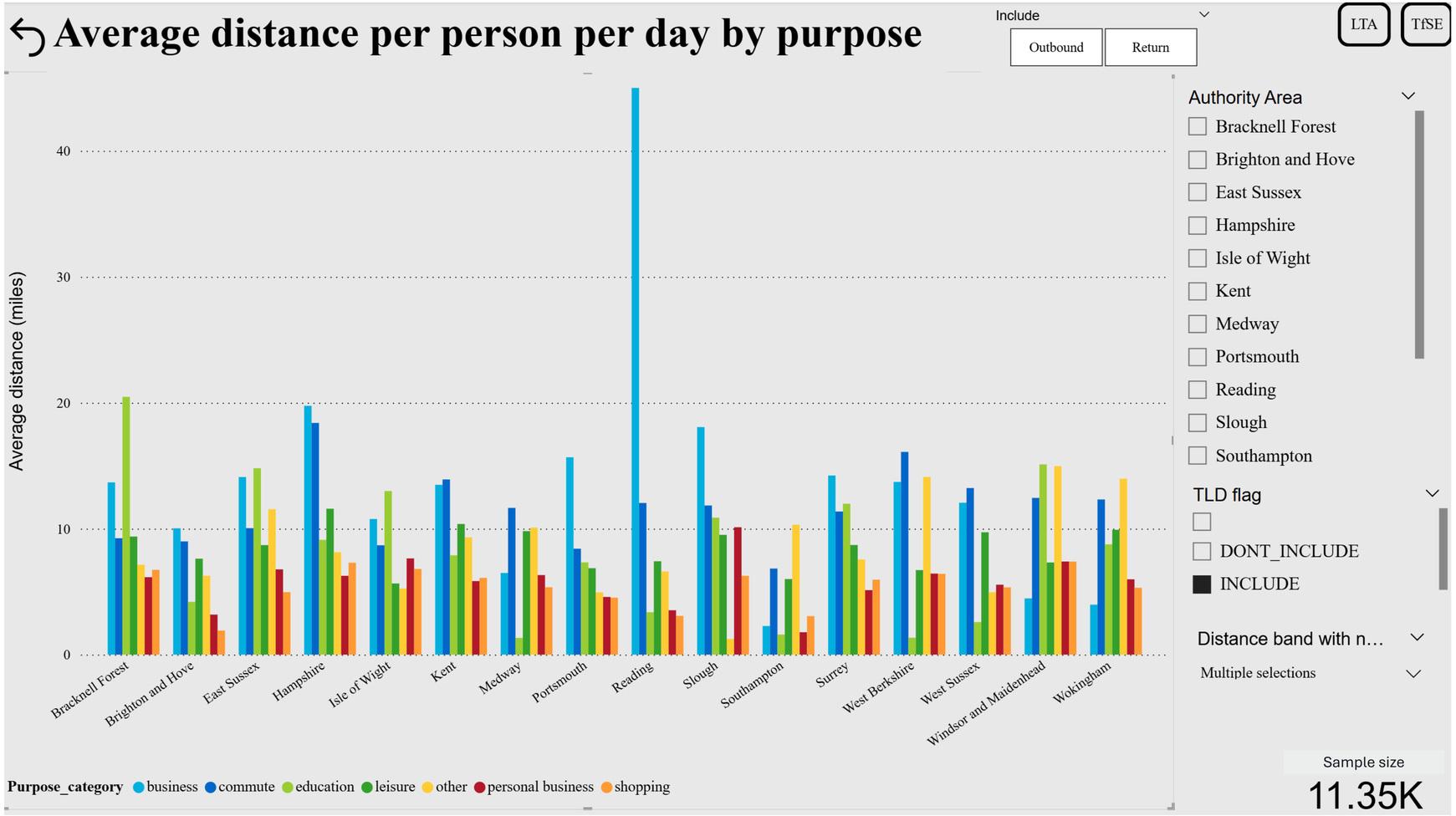
As shown, respondents travel the farthest for business, commute and education purposes. On average, across all LTAs, this is in the range of 10-20 miles, excepting in Reading where respondents reported travelling more than 45miles for business purposes, however this is based on a small sample size.

Brighton and Hove reported the shortest trip distance across all purposes, which could be because of its urban nature. Also, there are differences in trip lengths across neighbouring LTAs such as Wokingham which is more urban and Bracknell Forest which is a mix of rural and urban.

The majority of shopping, leisure and personal business trips are less than 10 miles across all LTAs. This, combined with the trip rate data (see Figure 3.9 on page 29) suggests that the majority of trips in the TfSE area are less than 10 miles.

Figure 3.10: Average distance travelled per person per day by trip purpose

Calculated based on calculated distance for reported trip origin and destinations data (in a day) for all trip purposes and divided by total sample size



3.6 Origins and destinations

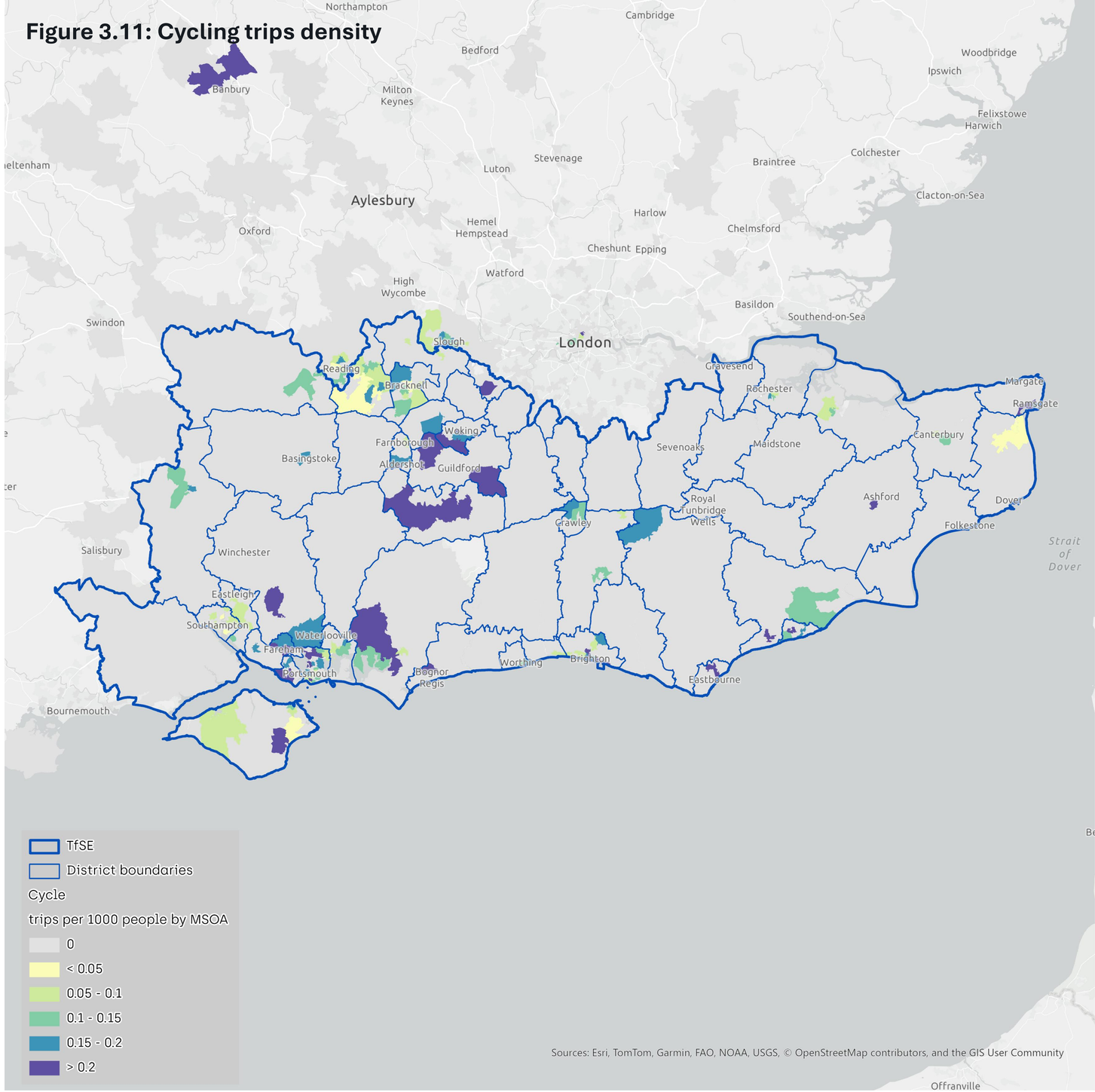
Cycling trips density

Figure 3.11 presents a sample based heat-map for cycling trips per 1000 population made across the region, using the weighted survey responses. The chart has been created using the trip origin and destinations data.

The darkest blue areas in the map have reported the highest density of cycling trips, while no trips were reported in the grey areas.

A similar analysis across all modes can be undertaken using the data and further disintegration at LTA level can be achieved. This map can be used to plan for cycling infrastructure and safety measures in the area.

Figure 3.11: Cycling trips density



3.6 Origins and destinations

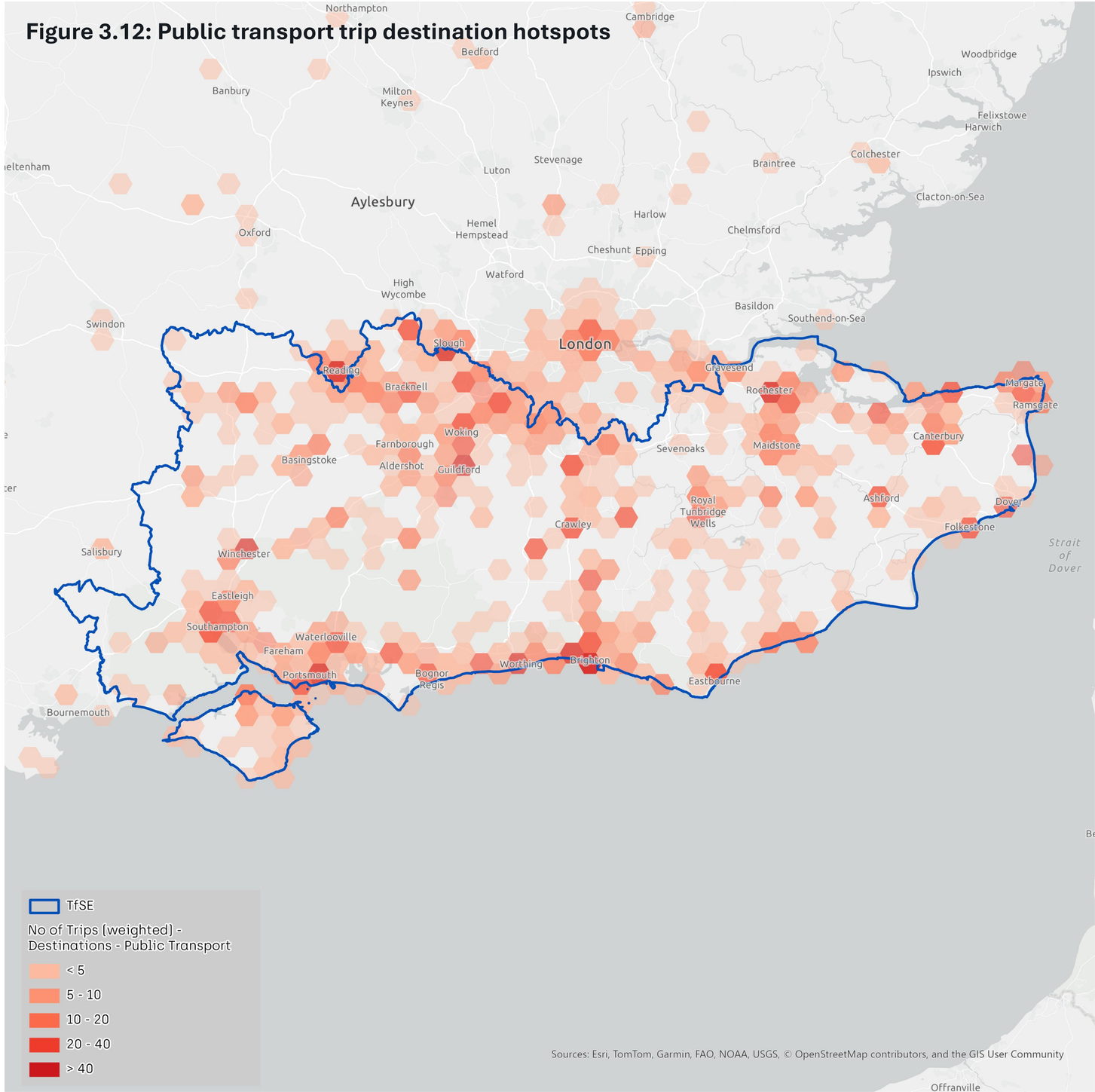
Public transport trip destination hotspots

Figure 3.12 presents another example of how the survey data (weighted) can be used to understand hotspots for trip origins or destinations for different modes.

The darkest orange/red hex cells are the most popular destinations for public transport trips across the region.

This data can help plan for future service improvements, and/or expansion.

Figure 3.12: Public transport trip destination hotspots



4. Conclusions

4.1 Conclusion

The Regional Travel Survey has collected over 6,800 responses from residents across the TfSE area.

The data collected includes socio-economic and demographic data together with trip diary information for a single day including both weekend and weekdays.

These data provide a valuable source of insight that can enrich insights generated from the National Travel Survey. For comparison, in 2023 the NTS sampled circa 7,600 households across England. The implication being that the underlying sample of those residing in the TfSE area is far lower than the RTS sample of individuals (n=6,820) achieved.

Despite certain acknowledge data limitations, the RTS provides a step change in the quality and scope of information available for the TfSE area. Specifically:

- The RTS gathered a **larger sample** in the TfSE area than the NTS.
- The RTS sampling frame ensured that **all TfSE LTAs are represented** with a minimum response rate. Non TfSE areas (Greater London, Oxford, Buckinghamshire) are excluded.
- It is possible to **identify the changes in travel behaviour** that have occurred following the pandemic.
- The data includes **attitudinal insights** around choice of mode used.

Suggested data use cases

The underlying data is being made available alongside a Power BI dashboard. This allows the data to be used at both a granular level as well as to generate rapid regional insights such as understand travel patterns and drivers of mode choice at the local level.

In particular the data can be used:

1. To understand travel demand, particularly for developing local plans.
2. To validate other (non NTS) data sources, such as from mobile phone or Location Based Service (LBS) data which might be used in updates to transport models.
3. To understand travel catchments or functional travel areas in the context of devolution.
4. In the re-basing of transport models that use pre-pandemic data.
5. To gain an initial understanding of where particular transport policies might gain most traction. E.g. micro mobility or EV charging facilities.
6. To understand variations across the TfSE area and ways in which LTAs might exhibit similarities or differences in propensity to use and/or attitudes to different transport modes.
7. To support the move to creating a bespoke TfSE travel market synthesiser and forecasting suite from TfN's Common Analytical Framework. The travel market synthesizer will allow for the development of synthetic travel demand matrices.

Next steps

The data generated by the RTS can provide value to both TfSE and its LTA members. It is recommended the following activities as part of the development of a Common Analytical Framework, to share knowledge and exploit the data to its maximum potential are undertaken.

- Socialise the data and Power BI dashboard with key TfSE LTA personnel. Where necessary provide training to users of the data to empower usage. Noting that a Webinar has been organised to enable this.
- Acknowledge gaps and limitations in the data and where necessary undertake supplementary research. For example, where a particular demographic or geographic group might be considered too small to draw strong conclusions, and/or where a sub-population exhibits a particular behaviour that warrants a deeper dive.
- Consider data sharing or publishing of findings. Note that in the development of this research, TfSE area universities were interested in comparing the findings with their own travel surveys. Such collaboration could generate reciprocal data sharing arrangements.
- Use the data, in combination with other data sources to create or validate transport user personas for the region. The RTS could be blended with geo-demographic sources to deliver richer insights around behaviour.

Thank you

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