

## Contents

Executive Summary ..... 7
1 Introduction ..... 9
1.1 Background to the Survey ..... 11
2 Research Methodology ..... 13
2.1 Sampling ..... 13
Sampling Frame ..... 13
2.2 RANSAM Sampling Method ..... 13
Multi-Stage Sampling ..... 13
Probability Proportional to Size ..... 14
Stratification ..... 14
2.3 Sample Design ..... 14
2.4 Implementing the sampling design ..... 16
2.5 Data Collection and Preparation ..... 17
Survey Methodology and CAPI ..... 17
Travel Diary and Paper Collection Method ..... 17
2.6 Data Cleaning ..... 19
2.7 Data Weighting ..... 19
3 National ..... 20
Key Findings ..... 20
Findings for the National Study ..... 20
Demographic overview ..... 22
Trips taken by days of the week ..... 24
Trips taken by mode of transport ..... 26
Trips taken by time of day ..... 27
Trips taken by duration ..... 28
Trips taken by demographics ..... 30
3.1 National Trip Rates ..... 30
3.2 National Summary ..... 34
4 Comparative Analysis ..... 35
Key Findings ..... 35
4.1 Finding for Comparative Analysis ..... 36
Trips taken by day of trip ..... 36
Trips taken by reason for the trip ..... 37
Trips taken by mode of transport ..... 38
Trips taken by time of day ..... 39
Trips taken by time taken ..... 41
Trips taken by distance travelled ..... 41
Demographics ..... 42
5 Rural Areas ..... 45
Key Findings ..... 45
5.1 Demographic overview ..... 46
5.2 Findings for Rural Areas ..... 47
Trips taken by days of the week ..... 48
Trips taken by reason for the trip ..... 49
Trips taken by mode of transport ..... 49
Trips taken by time of day ..... 50
Trips taken by duration ..... 51
Trips taken by distance ..... 53
Trips taken by demographics ..... 54
5.3 Rural Summary ..... 55
6 Dublin City ..... 56
Key Findings ..... 56
6.1 Findings for Dublin City Region ..... 57
Demographic overview ..... 58
Trips taken by days of the week ..... 60
Trips taken by purpose of trip ..... 61
Trips taken by mode of transport ..... 61
Trips taken by time of day ..... 62
Trips taken by duration ..... 64
Trips taken by distance ..... 65
Trips taken by demographics ..... 67
6.2 Dublin City Summary ..... 68
7 Greater Dublin Area ..... 69
Key Findings ..... 69
7.1 Findings for Greater Dublin Area ..... 70
Demographic overview ..... 72
Trips taken by days of the week ..... 74
Trips taken by reason for trip ..... 75
Trips taken by mode of transport ..... 76
Trips taken by time of day ..... 77
Trips taken by duration ..... 78
Trips taken by distance ..... 80
Trips take by demographics ..... 81
7.2 Greater Dublin Area Summary ..... 82
8 Regional Cities ..... 83
Key Findings ..... 83
8.1 Findings for Regional Cities ..... 84
Demographic overview ..... 86
Trips taken by days of the week ..... 87
Trips taken by reason for trip ..... 89
Trips taken by mode of transport ..... 89
Trips taken by time of day ..... 90
Trips taken by duration ..... 91
Trips taken by distance ..... 93
Trips take by demographics ..... 94
8.2 Regional Cities Summary ..... 95
9 Large Urban Towns ..... 96
Key Findings ..... 96
9.1 Findings for Large Urban Towns ..... 97
Demographic overview ..... 99
Trips taken by days of the week ..... 100
Trips taken by reason for trip ..... 101
Trips taken by mode of transport ..... 102
Trips taken by time of day ..... 103
Trips taken by duration ..... 104
Trips taken by distance ..... 105
Trips take by demographics ..... 107
9.2 Large Urban Towns Summary ..... 108
10 Other Urban Districts ..... 109
Key Findings ..... 109
10.1 Findings for Other Urban Districts ..... 110
Demographic overview ..... 112
Trips taken by days of the week ..... 113
Trips taken by reason for trip ..... 113
Trips taken by mode of transport ..... 115
Trips taken by time of day ..... 116
Trips taken by duration ..... 117
Trips taken by distance ..... 118
Trips taken by demographics ..... 119
10.2 Summary of Other Urban Areas ..... 120
11 Long Distance Trips ..... 121
Findings for Long Distance Trips ..... 121
Appendix A - Weighting ..... 125
Appendix B Household Questionnaire ..... 126
Appendix C Household Travel Diary ..... 129

## Executive Summary

The National Household Travel Survey is a nationally representative study of Ireland's travel habits. Data was gathered through two sources - a CAPI administered survey of each household and a 3-day travel diary of each person over 4 years old in that household. Through these two methods, a comprehensive sample of national travel habits was achieved. In total, 5,906 households were surveyed. From these households, 10,289 diaries were completed, giving us 1.75 diaries per household. At a national level, these diaries captured 62,307 trips and detailed distance travelled, duration of journey, mode of transport, reason for the journey, the day of travel, time of outward journey, in addition to the number of people taking the trip and their demographics profile.

The final sample was achieved utilising the ESRI's RANSAM system. The RANSAM program for selecting nationally representative probability samples from the GeoDirectory allowed estimates to be made of the precision of sample statistics. The RANSAM sample was a multi-stage sample, with clustering to increase fieldwork efficiency and implicit stratification by characteristics of the area (from the CSO Small Area Population Statistics).

For in-depth analysis and to allow for comparability, travel habits for 6 regions were examined as detailed below:

- Dublin City (Dún Laoghaire- Rathdown, Fingal, Dublin City and South Dublin;
- The Greater Dublin Area (All of Dublin in addition to Kildare, Meath and Wicklow);
- The Regional Cities (Cork City, Galway City, Limerick City and Waterford City);
- Urban Town (Towns with a population of over 10,000);
- Rural Areas (All areas with a population of less than 1,500 ); and
- Other Urban Areas (Towns with a population of between 1,500 and 10,000)

The national view of travel habits is one that is dominated by car usage. Irish people use the car for 7 in 10 of all trips they take. While the car is the primary mode of transport across all 6 regions there are some variances. These are most notable between Dublin City and Rural Areas, where car usage in Dublin City is half that of the Rural regions. Rural dwellers use the car for 8 in 10 of their trips, with Dublin City residents using it for only 4 in 10 trips. The differences in the availability of public transport and accessibility to amenities may have a significant impact on this mode of transport. In relation to individual trips, less available rail mode (DART/Train/LUAS) usage in the capital is still proportionally low relative to walking and use the bus.

Work/ business and education trips are the most dominant purpose across all trip types. It is evident that Dublin City is the main employment hub of the country. It has the highest proportion of work/ business related trips compared to the rest of the country. In Dublin City trips for social reasons account for a higher proportion of overall trips when compared to the rest of the country. These trips account for 1 in 4 trips taken by Dublin City dwellers the highest across all regions. This is further evidenced by the fact that the highest
proportion of weekend trip making occurs in Dublin City. One quarter of all trips undertaken in Dublin City occur over Saturday and Sunday. This proportion is higher than in all other regions.

Nationally, hourly travel volumes peak in the AM period, with a significant peak during 8 9 am. The remainder of the day is evenly spread out in terms of volumes with decreases from 9am until 2 pm across most regions. However, the role of Dublin City and the Greater Dublin Area as the main employment hub in Ireland is again evident. Both regions have two clear travel peaks at $8-9$ am and $5-6 \mathrm{pm}$ with roughly one quarter of trips occurring during these two hours combined; which is in line with the average working day.

A comparatively high number of trips in Rural Areas take $30-59$ minutes (1 in 5). Distances travelled however are comparable to the rest of the country, with 1 in 5 trips being 1020 km . The longer distance and duration of trips in Rural Areas are possibly reflective of the dispersed, low density population patterns. At a national level however, people rarely travel long distances nor do their average trips tend to take a long amount of time: i.e. more than 60 minutes. The highest proportion of trips undertaken can be considered 'short trips' i.e. are less than 5 km in distance. Similarly, trips do not generally take a large amount of time, with the highest proportion ( 4 in 10) of trips taking less than 15 minutes and roughly 2 in 10 taking less than 10 minutes to complete.

Higher population density within the capital possibly contributes to higher levels of walking, most notably for education. However, education trips are significantly less frequent in Dublin City when compared to the rest of the country. Within the Regional Cities of Cork, Galway, Limerick and Waterford education trips are proportionally more frequent. Whilst the car is still the most widely used mode of transport, the higher student population and population density within the Regional Cities could explain the increased propensity to walk. With one quarter of all trips taken being walk trips; which is higher than the national average and just slightly below Dublin City.

The survey found life stage is an influential factor in travel habits. Car usage decreases from 12 years of age possibly as a result of decreased dependency on adults for travel. Bus/ coach usage and walking increases between the ages of 13 and 24 as children become more independent in terms of their travel. The increase in car usage from 25 onwards could be reflective of changes in family composition and being in employment. Similarly, car usage decreases from 55 onwards, which could be again reflective of family composition as this cohort no longer tend to have children reliant on parents for their travel.

Overall, the NHTS 2017 found the car to be, by far the most used mode of transport in Ireland. While this is the case across all regions, car usage is significantly higher in Rural areas when compared to Dublin City. The AM peak period is the busiest time for travel across the whole country. Work/ business and education are the primary reasons people travel, not just during the peak periods, but across the whole week.

## 1 Introduction

This National Household Travel Survey (NHTS) captured robust data on the travel behaviour of the Irish public throughout the country on a typical weekday and at weekends. To achieve this, a questionnaire and a 3-day travel diary were used.

Four main types of information were captured which allow for the interpretation of the data across different demographics (age, gender etc.) and geographical regions. As well as the following:

- Number of trips being made;
- Mode of travel;
- Time of travel;
- Distance travelled;
- And purpose of journey.

The data captured also included information about the background of each household:

- Household size;
- Household structure (average household composition is $2.7^{1}$ );
- Vehicle ownership;
- Socio-economic group;
- Age
- And gender.

Information about each individual household member was also captured. This facilitated the cross referencing of the travel diaries and cross tabulation with the National Census and other CSO data.

In addition to the Survey Questionnaire, the Three-Day Travel Diary was supplied to and collected from all participants over 4 years of age per household. Weekdays and weekends were also recorded. All escorted trips for children under 4 were also recorded. Additional data about 'relatively infrequent trips' including: longer distance trips; trips by bicycle; and

[^0]rail trips was also captured. Data was also collected on the number of trips made by people during their working day and at the aggregate level.

### 1.1 Background to the Survey

The main aim of this study was to obtain accurate data describing the typical travel habits of a representative sample of the Irish population throughout the week, across all regions of the country and including the number of trips being made daily, the mode and time of travel, the distance travelled and the journey purpose.
"The purpose of the survey is to gather travel information for the Authority's ongoing transportation planning role and to provide travel data for the update of their regional transport models and for the development of additional transport modelling tools."

National Transport Authority.
The survey also gathers essential background information about each household - including household size and structure, vehicle ownership, and socio-economic grouping.

The NTA implements its strategic goals as described in the Statement of Strategy and the Transport Strategy for the Greater Dublin Area 2016-2035. The Authority supports decision making at the national, regional and local planning levels. Therefore a fully nationally representative set of data is required.


Figure 1: Graphic of the National, Regional and Local Transport Planning ${ }^{2}$
In addition to this, the data will provide insight into the travel habits of the Irish population and is highly relevant to the work of the CSO, Airport Authorities, RSA, public transport

[^1]operators and other state and semi-state organisations to better understand the needs of the Irish population and visiting tourists on a regional and a national level.

## 2 Research Methodology

### 2.1 Sampling

The following section details the sampling procedure followed for the National Household Travel Survey.

## Sampling Frame

The GeoDirectory is the best gazatterre of Irish addresses from which to derive a framework for face-to-face household surveys in Ireland. The dataset is managed jointly by An Post and Ordnance Survey Ireland and lists all addresses with an identifier for residential use. The GIS co-ordinates of each address are also available from the GeoDirectory.

One issue in using the GeoDirectory for household sampling is that, while it does identify a certain proportion of residential addresses as vacant, this percentage is lower than the latest available census data would suggest. In the GeoDirectory for 2016, 3.6\% of residential addresses are identified as vacant, compared to a figure of $14.4 \%$ from the Preliminary results of Census 2016. This means that after excluding the addresses identified as vacant in the GeoDirectory, we would expect the gross sample to include about $10.8 \%$ vacant (and therefore ineligible) addresses. This was considered in estimating the required gross sample size.

### 2.2 RANSAM Sampling Method

The RANSAM sampling method designed by the ESRI was used for the NHTS. There are three main features which differentiate samples selected by RANSAM ${ }^{3}$ from simple random sampling as detailed below:

1. Multi-stage sampling;
2. Selection with probability proportional to size; and
3. Stratification.

## Multi-Stage Sampling

The RANSAM sampling method first selects a set of primary sampling units (PSUs) and then selects a random sample of households within each of the PSUs. Further detail of on this process and its application to the NHTS is detailed in the sample design section.

[^2]Probability Proportional to Size
The RANSAM sampling design ensures that each element (elector) in the population has an equal probability of selection. The below examines how the sampling procedure operates.

## Stratification

Stratification means that the population is divided into sub-groups (or strata) and a simple random sample (SRS) is selected from each stratum this will result in an improvement in precision. Stratification is incorporated in RANSAM only at the first stage with all PSUs being stratified by geographical location.

### 2.3 Sample Design

The ESRI's RANSAM system is a program for selecting nationally representative probability samples from the GeoDirectory. Probability samples allow estimates to be made of the precision of sample statistics. RANSAM samples are multi-stage samples with clustering to increase fieldwork efficiency and implicit stratification by the characteristics of the area (derived from the CSO Small Area Population Statistics).

Careful consideration of the impact of sample design was an important element in designing the travel survey. Travel behaviour is likely to be similar among households within a geographic area - due to the availability of public transport, car ownership rates etc. This has the effect of reducing the efficiency of a clustered sample, compared to a simple random sample (SRS). This is relevant to the calculation of confidence intervals, because these calculations need to take account of the effective sample size (the SRS equivalent). The optimum sampling strategy maximises the number of clusters and minimises the number of completed questionnaires and diaries per cluster.

The impact of the number of clusters on the effective sample size is illustrated in Table 1. The design effect used (Deff-tot) is mainly influenced by the number of clusters (since disproportionate sampling is not being considered, so Deff-p =1.00). We assume an intracluster correlation coefficient of .03 (similar to the default value used for calculation in other major household surveys such as the European Social Survey). The design effect gives the factor by which each cluster sample has to be increased in order to have the same precision (e.g. width of confidence intervals) as a simple random sample. The effective sample size, shown in the last row of Table 1, shows the size of the simple random sample that would yield the same level of precision as the three cluster samples. A higher number of clusters yield a sample with a greater level of precision for approximately the same number of completed household surveys. The same number of cases in the completed sample will yield an effective sample size of 4,870 in the design with 680 clusters.

| Gross sample | 10,880 |
| :--- | ---: |
| N clusters | $\mathbf{6 8 0}$ |
| N per cluster | 16 |
| Ineligibility (vacant) | $\mathbf{1 0 . 8 \%}$ |
| Number eligible | $\mathbf{9 , 7 0 5}$ |
| Response rate | 6,017 |
| Completed | $\mathbf{8 . 8}$ |
| Completed per cluster | $\mathbf{0 . 0 3}$ |
| Rho (intra-cluster correlation) | $\mathbf{1 . 2 4}$ |
| Deff_c | $\mathbf{1 . 0 0}$ |
| Deff_p | $\mathbf{1 . 2 4}$ |
| Deff-tot (Design effect) | $\mathbf{4 , 8 7 0}$ |
| n_eff (effective sample size, SRS equivalent) |  |
| Table 1: Household Travel Survey Sample size calculations under different numbers of clusters |  |

Given the importance of expected within-cluster similarity in travel behaviour, a two-stage cluster sampling method was adopted with a large number of clusters as follows:

| Stage 1: |
| :--- | :--- | :--- |
| PSU |$\quad$| Selection of 680 PSUs (Primary Sampling Units, i.e. clusters of addresses) |
| :--- |
| from a national total of 2,725 clusters formed from the GeoDirectory. |
| Clusters are sorted geographically within eight strata (urban/rural; high/low |
| socioeconomic group; high/low number at work in household) ${ }^{4}$. Clusters are |
| selected using systematic sampling with a random start. The probability of |
| selection for the clusters is proportional to the estimated number of |
| occupied residential addresses in the cluster. The sort by cluster |
| characteristics ensures sample representativeness in terms of geography, |
| household composition and socio-economic characteristics. |

Figure 2: Sampling Stages

[^3]
### 2.4 Implementing the sampling design

Given the demanding nature of a household survey, there was the potential for the response rate to fall below what would be typical in a well-conducted survey of a nationally representative sample. Non-response may be a particular issue among groups such as young adults. For this reason, two strategies were adopted to ensure that the final sample and results based on the survey are representative of the national population:

Firstly, the response rate was monitored within the following cells, based on information available at the cluster level from the Census 2011 Small Area Population Statistics matched to the clusters:

- Urban /rural
- Planning region
- Household composition
- Socio-economic group
- Employment status

Secondly, the characteristics of the clusters on these dimensions were made available to Amárach by the ESRI so that the response rate by cluster characteristics could be monitored. In addition, a reserve sample of addresses was selected within each cluster for use only where efforts at contact or refusal conversion are not sufficient to achieve the required completed sample either in terms of numbers or profile.

Overall the approach adopted was robust and flexible; guaranteeing that the requirements of ensuring that the achieved sample of households is representative of the population were met in terms of:

- Geography
- Household composition
- Socio-economic groupings
- And employment characteristics


### 2.5 Data Collection and Preparation

## Survey Methodology and CAPI

A prior appointment was made with each of the sampled households at an agreed time to deliver the diaries. The interviewer called in person to each address (with an additional copy of the introductory letter). The interviewer then explained the purpose of the survey and endeavoured to obtain relevant household composition information, in order to then select the highest income earner.

If a selected individual was 15 and currently available the interviewer sought the consent of a parent or legal guardian and, assuming permission was granted, then sought informed consent from the minor. If the selected individual was 16 or older the interviewer explained the study and sought informed consent before completing the CAPI interview in a private setting right away.

In the event that there was nobody at home, a minimum of four call backs were made. If the selected respondent was not available, the interviewer ascertained from them the best time to return for completion of the interview. . Assignments were divided equally over a 7day period in each area. Therefore, over each day (Monday to Sunday) across sampling points.

## Travel Diary and Paper Collection Method

The diary was deployed using a paper self-complete questionnaire. Each diary was allocated a unique identification number which was linked to the individual household it was allocated to. This was also connected to their GPS coordinates. The interviewer left an appropriate number of diaries with the household at the time of survey. Interviewers were given a full set of instructions about how to complete the diaries. They explained the instructions to a nominated person in the household and went through prior examples of the diary. They made an appointment with the householder to collect the diaries at an agreed time. They called back to check the details of all the trips recorded in the diary with the person/persons to ensure that the households' trips were recorded correctly.

Given the importance of expected within-cluster similarity in travel behaviour, at the second stage (the household stage) all persons' aged 4 or over within the household complete the 3 -day travel diary. This is a commonly-adopted method for selecting individuals at random within households based on this criterion.

The travel diaries were completed on a 'next three days' basis following the household interview. This provided the basis for each travel diary to record both weekday (Monday to Friday) and weekend day (Saturday and/or Sunday) trips.

The 5,906 completed interviews and 10,289 diaries were then collected providing 1.74 diaries per household nationally.

### 2.6 Data Cleaning

Following completion of the travel diaries, Amárach undertook a rigorous data checking and cleaning process. The following checks were undertaken on the 3-day trip data recorded in diaries:

- Can the trip record be matched to a person and a household?
- Has a valid trip purpose, travel time, travel distance and means of travel been recorded (deemed to be the minimum data items required for a valid trip record)?
- Is the trip record unique (or is the trip information an exact duplicate of a trip already recorded in the same diary and on the same day)?
- Is the trip record part of a legal / logical sequence of trips on a given day (e.g. did the return leg of the trip occur later in time than the outbound leg on the same day)?

The final check above was required to ensure that the final dataset of 3-day trip records would represent an accurate sequence of trips made by persons in the course of their typical day.

### 2.7 Data Weighting

To ensure representativeness of the sample and accuracy with the current population, the data collected was weighted in line with the Quarterly National Household Survey (QNHS) $2017^{5}$. The purpose of the weights is to ensure representativeness by ensuring that the distributions in the sample of key variables (gender, age, household size, employment status, car ownership) match those in the population. The weights are not designed to reduce variance in the sample. To minimise as far as possible the impact of weights on the sample variances, the weights were truncated at approximately 0.2 times to 5 times the mean weight. A detailed table breakdown of the weighting applied is shown in the appendices.

[^4]
## 3 National

## Key Findings

- Most lived within a 15 -minute walk from a:
- Shop (76\%),
- Post office (63\%),
- Pub or restaurant (71\%),
- Doctor (59\%),
- Chemist (64\%)
- And a Bus Stop (71\%).
- The main reasons people travel are for work and education during the week and personal and social reasons during the weekend.
- $71 \%$ of all trips are taken by car, $18 \%$ of all trips by walking, $5 \%$ by bus, and $3 \%$ by cycling.
- Across all age categories, car usage is lowest amongst 13-24-year olds. For these groups, walking and bus/ coach usage is highest.


## Findings for the National Study

The National Transport Survey consisted of a nationally representative sample of 5,906 households spread across the country divided by electoral district in a random probability sample frame ${ }^{6}$. We collected 10,289 diaries and recorded 62,307 trips. For analysis purposes the travel habits were divided into six regions as per the following matrix:

| Region | Diaries | Households | Trips |
| :--- | ---: | ---: | ---: |
| Dublin City | 1,227 | 751 | 5,844 |
| Greater Dublin Area - Dublin City, Dún Laoghaire- <br> Rathdown, Fingal, South Dublin, Meath, Kildare and <br> Wicklow | 3,729 | 2,320 | 20,020 |
| Regional Cities (Cork, Galway, Waterford, Limerick) | 613 | 350 | 4,250 |
| Large urban towns - population greater than 10,000 | 2,108 | 1,146 | 14,994 |
| Other urban districts - population between 1,500 and <br> 10,000 | 585 | 366 | 3,676 |
| Rural - populations less than 1,500 | 4,142 | $\mathbf{2 , 3 0 7}$ | $\mathbf{2 5 , 4 0 4}$ |
| Total Sample | $\mathbf{1 0 , 2 8 9}$ | $\mathbf{5 , 9 0 6}$ | $\mathbf{6 2 , 3 0 7}$ |

The 6 regions are not mutually exclusive. Most notably, the Greater Dublin Area includes Dublin City and all of Meath, Kildare and Wicklow. Parts of these three counties are also included in other regions, depending on their size and population.

[^5]Where possible, comparisons were made with the NHTS 2012. However in some cases differences in methodology and reporting make exact comparison difficult. For example, the 2012 iteration was a 2 day diary, while this version captured travel data over 3 days. The following national data is representative of the trips travelled.

Demographic overview



Social Class
License Held



| Public Transport Tickets |  |
| :---: | :---: |
|  |  |
| Free travel |  |
| pass, $11 \%$ |  |$|$| LEAP card |
| :--- |
| (active with |
| credit), 10\% |

Number of Vehicles Per Household


Figure 3: National Demographics and Travel Habits - Overview

The population (as represented by number of trips) is roughly half male/female. Divided almost equally by socio-economic status and representing a broad range of ages - in line with the QNHS 2017 Q1-Q3 data.

Of those who responded, $11 \%$ have a free travel pass, and $10 \%$ have a LEAP card. $61 \%$ have their full licence longer than 2 years, with 3 in 10 not having a licence. Half of households have 2 cars, with one third having one car.


Figure 4: Proximity to amenities: National
Most of those surveyed lived within a 15-minute walk from a shop (76\%), post office (63\%), pub or restaurant (71\%), a doctor (59\%), chemist (64\%) and a bus stop (71\%).

The below tables detail the demographic breakdown of the achieved sample in comparison to the 2017 QNHS figures in terms of age, gender, socio-economic status and number of cars per household.

|  | $4-7$ | $8-12$ | $13-17$ | $18-24$ | $25-34$ | $35-44$ | $45-54$ | $55-64$ | $65+$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| QNHS 2017 | $6 \%$ | $7 \%$ | $7 \%$ | $9 \%$ | $15 \%$ | $17 \%$ | $14 \%$ | $11 \%$ | $14 \%$ |
| NTS 2018 | $6 \%$ | $8 \%$ | $6 \%$ | $8 \%$ | $14 \%$ | $19 \%$ | $16 \%$ | $12 \%$ | $12 \%$ |

Figure 5: Age of NHTS sample versus QHNS 2017 (Q1-Q3)

|  | Male | Female | ABC1F50+ | C2DEF50- |
| ---: | ---: | ---: | ---: | ---: |
| QNHS 2017 | $48.9 \%$ | $51.1 \%$ | $46.7 \%$ | $53.3 \%$ |
| NTS 2018 | $47 \%$ | $53 \%$ | $50 \%$ | $50 \%$ |

Figure 6: Gender and Socio-economic status of NHTS sample versus QHNS 2017 (Q1-Q3)

|  | No car | One car | Two+ cars |
| :--- | ---: | ---: | ---: |
| QNHS 2017 | $16 \%$ | $42 \%$ | $42 \%$ |
| NTS 2018 | $15 \%$ | $42 \%$ | $43 \%$ |

Figure 7: Number of cars per household NHTS sample versus QHNS 2017 (Q1-Q3)7

Trips taken by days of the week
Travel Days of the Week

() $=2012$

Figure 8: Trips by Days of the Week: National
Nationally, Tuesday and Wednesday are the most travelled days. Each day accounts for 1 in 5 of all trips taken. Travel frequency decreases after Wednesday, with less than 1 in 10 trips occurring on either Saturday or Sunday.

[^6]
## Reason for Trip



Reason for Trip excl. Return Home


Figure 9: Trip by Reason: National

Reason for Travel by Days of Week


Figure 10: Reason for Travel by Day of the Week: National
Overall, work and education are the main reason people travel Monday to Friday. Education is relatively low on Monday, rising steadily throughout the week before dropping off again on Friday. Shopping is balanced out throughout the week with Sunday being far lower. Travel for Social and Personal reasons are also relatively stable throughout the week with a peak on Sundays. Most respondents recorded taking 2 trips a day (52\%) with a small number (23\%) taking 4.

## Trips taken by mode of transport

The national picture is one of frequent car usage. 7 in 10 of all trips taken nationally are by car. Walking is the next most popular mode of transport, accounting for just under one fifth of trips.


Figure 11: Modes of Transport: National

| Mode of Transport | 2012 | 2018 |
| :--- | ---: | ---: |
| Walk | $20 \%$ | $18 \%$ |
| Cycle | $2 \%$ | $3 \%$ |
| Bus/ Coach | $4 \%$ | $5 \%$ |
| Train/ DART/ Luas | $1 \%$ | $0 \%$ |
| Car | $70 \%$ | $71 \%$ |
| Truck/ Van | $\mathrm{N} / \mathrm{a}$ | $2 \%$ |
| Other | $3 \%$ (includes vans) | $1 \%$ |
| Figure 12: National Mode of Transport Trends: 2012-2018 |  |  |

We can see that $71 \%$ of all trips are taken by car, $18 \%$ of all trips by walking, $5 \%$ by bus, and $3 \%$ by cycling.

## Trips taken by time of day

Nationally, there is a clear peak in travel during the 'morning rush', which happens between 8-9 am.


Figure 13: Transport by Time of Day: National
In the following hour, travel volumes decrease by 5\%. From 10am onwards, travel decreases slightly. It increases again at 14.00pm and remains at similar levels for 4 hours (2-6pm), this 4-hour period accounts for one third of trips nationally.

While the car is the primary mode of transport across all travel periods, there are slight variations between periods for walking and bus/ coach usage.


Figure 14: Mode of Transport by Time of Day: National

- The car accounts for the largest proportion of travel during all periods of the day highest during the AM Peak and Off-Peak periods.
- Walking represents the second largest volume as a mode of transport across all times, peaking during the AM Interpeak period at 24\%.
- The highest proportion of bus trips occur during the AM Peak, however it is still relatively low at 7\%.

| Period of Travel | 2012 | 2018 | Change 2012-2018 |
| :--- | ---: | ---: | ---: |
| AM Peak (07.00-10.00) | $26 \%$ | $25 \%$ | $-1 \%$ |
| AM Interpeak (10.00-13.00) | $17 \%$ | $18 \%$ | $+1 \%$ |
| PM Interpeak (13.00-16.00) | $14 \%$ | $23 \%$ | $+8 \%$ |
| PM Peak (16.00-19.00) | $21 \%$ | $22 \%$ | $+1 \%$ |
| Off Peak (19.00-07.00) | $21 \%$ | $11 \%$ | $-10 \%$ |

Figure 15: National Travel Period Trends: 2012-2018

## Trips taken by duration

Duration of Journeys


$$
\begin{aligned}
& =1-9 \mathrm{mins} \\
& =10-14 \mathrm{mins} \\
& =15-29 \mathrm{mins} \\
& =30-59 \mathrm{mins} \\
& =60+\mathrm{mins}
\end{aligned}
$$

Figure 16: Trips by duration: National
Over 3 in 10 trips nationally take between 15 and 29 minutes, just under a quarter take 10 to 14 minutes, and a further 1 in 5 trips take 30-59 minutes.


Figure 17: Duration of Travel by Mode of Transport: National
The chart shows that the average times for travel vary significantly between modes of transport.

- DART/ Train/ LUAS trips are most likely to be between 30-59 minutes.
- 3 in 10 car trips take between 15-29 minutes; similarly over 2 in 5 cycle trips take the same amount of time.
- Trips over 60 minutes are most likely to be by DART/ Train/ LUAS (22\%) or Truck/ Van (16\%).

Duration of Trip by Distance


This graph demonstrates that:

- Of the trips that take less than 10 minutes, just a quarter are less than 1 km and over half are between $1-3 \mathrm{~km}$.
- Of trips taking 10 to 14 minutes, under 1 in 10 are less than 1 km , under 4 in 10 are between 1-3km, over 2 in 10 are between $3-5 \mathrm{~km}$ and a quarter are between 5 10km.
- Of the trips taking between 15 and 29 minutes, just under a quarter are between 1$3 \mathrm{~km}, 15 \%$ between 3 and 5 km , just under a quarter are between 5 and 10 km and just under 3 in 10 are between $10-20 \mathrm{~km}$.
- Of those trips that take between 30 and 59 minutes the majority are over 5 km , with a quarter being between $10-20 \mathrm{~km}$, over 2 in 10 being between $20-30 \mathrm{~km}$ and just under a quarter are over 30 km .
- Three quarters of all trips taking more than 60 minutes are over 30 km .

Trips taken by demographics


Figure 19: Main Modes of Transport by Age: National

We also see that the mode of transport changes with age. Children under 12 seem to travel with their parents/guardians primarily by car. Whereas car usage amongst 13-24-year olds is the least across all age categories - for these groups, walking and bus/ coach usage is comparatively highest.

### 3.1 National Trip Rates

This section of the report details the national trips rates across the days of the week and across demographic characteristics. These characteristics include age, gender, social class, region and car ownership. The analysis of trip rates includes zero (no trip taken) when
calculating the mean score. This method includes all respondents and gives a more accurate reflection of the movements of those sampled on each day.

On average, females take more daily trips than males. They average 2.14 trips per day whilst males take slightly less than 2 trips per day at 1.95 - females taking 0.2 more trips daily. Similar differences are evident across socio-economic groups, with those in a higher socioeconomic group ( $\mathrm{ABC1F}+$ ) on average taking 2.18 trips per day compared to 1.92 for the C2DEF- cohort. The higher socio-economic group take on average 0.26 more trips daily.


Figure 20: National daily trip rates by gender and socio-economic status
Those aged between 35-44 and 45-54 make the most daily trips compared to all other age cohorts. On average these age groups take between 2.34-2.36 trips daily. This is 0.2 trips more than the next most travelled cohort - those aged between $8-12$. The oldest age group take the least number of daily trips at 1.56 trips per day. Followed by the $18-24$ age group who take 1.84 trips per day.

For adults aged 18+, the number of daily trips increases from 18 years old onwards and peaks at 2.36 daily trips between 45-54 years old. This falls to 2.08 daily trips between 55-64 years old and to 1.56 daily trips when people reach 65 - reflective, no doubt of changed in family composition and working structure.

Daily trip rates by age


Figure 21: National daily trip rates by age
Looking at daily trip rates at a regional level, variances in the travel habits are evident, with people in Dublin City and to a lesser degree the GDA, taking significantly fewer daily trips compared to the rest of the country.

Trip rates by region


Figure 22: National daily trip rates by region
Those living in the regional cities of Cork, Galway, Waterford and Limerick take the highest number of daily trips across Ireland at an average of 2.44 trips each day. Compared to Dublin City, regional city dwellers take nearly one additional trip each day at 0.88 more daily trips. People living in large urban towns are the next most travelled cohort, taking 2.26 trips daily.

Outside of urban areas, rural dwellers take an average of 2.12 trips each day. While this is less than most urban areas, it is significantly more when compared to Dublin city. With people living in rural areas taking 0.56 more trips each day. Rural dwellers also take 0.25 more daily trips compared to those in the GDA.

The number of daily trips taken by people increases with the presence of a car in the household, this rises further when a household has two or more vehicles. Households with two or more vehicles take the highest number of daily trips at 2.27 , while the households with once car/ van take an average of 1.89 trips daily. The presence of a car/ van in the household increases the average number of trips per day by 0.42 trips, with the presence of two or more cars/ vans increasing it by 0.8 trips. This is indicative of the impact that not having a car has on mobility and accessibility in Ireland and supports the finding of low usage of alternatives such as public transport and bicycles.

Trips rates by vehicle ownership


Figure 23: National daily trip rates by household vehicle ownership
Across the 7 day week, the highest numbers of trips occur on Tuesdays and Wednesdays. People take on average 2.19-2.20 trips on each of these days. Travel habits are somewhat similar across the remainder of the weekdays, with people taking between an average of 2.11-2.12 trips on Mondays, Thursdays and Fridays.

Trip rates by days of the week


Figure 24: National daily trip rates by days of the week
Travel movements across the weekend are also broadly similar. People take an average of 1.66 trips on Saturday and 1.63 on Sunday. The slowdown over the weekend is evident, as people take roughly 0.57 less trips on Saturdays and Sundays when compared to the most travelled days of the week, Tuesday and Wednesday.

### 3.2 National Summary

The national picture of travel habits is one dominated by car usage, with 7 in 10 of all trips being by car. Walking is the next most used mode of transport; however, it accounts for less than 2 in 10 trips. At a national level public transport does not play a major role in the travel habits of Irish people. Bus/ coach and DART/ Train/ LUAS usage are low nationally. This could be affected by accessibility, especially in rural locations. Nationally, travel volumes are highest in the AM, with significant peaks during 8-8.59am. Travel volumes are evenly spread throughout the rest of the day.

Work/ business and education trips account for most travel. This is to be expected given the standard 5 day working week. However, Irish people do engage in social trips often with 1 in 5 trips for this reason. In general, getting from A to B in Ireland does not take an excessive amount of time with the vast majority of trips being under 30 minutes. Life stage plays a role in the mode of transport used with car usage increasing from 25 years onwards and then falling back from age 64.

## 4 Comparative Analysis

## Key Findings

- People in Dublin City travel slightly less on Monday and Tuesday compared to the national average.
- Dublin City residents more likely to travel Friday to Saturday compared to the rest of the country.
- Compared with Dublin City, those in the Regional cities travel more Monday to Thursday and less Friday to Sunday.
- Travel patterns for weekday vs. weekend are very similar across all regions and compare to the total for the whole country, with the exception of Dublin City.
- Work/ business trips are more prevalent in Dublin City and the GDA.
- Education related trips are highest in Regional cites and urban towns, with urban towns having the highest proportion of education related trips.
- Education related trips in the Regional cities and urban towns are significantly higher when compared to Dublin City.
- The car is the primary source of travel across all 6 regions and the whole country.
- Car usage is significantly lower in Dublin City when compared to the whole country, whilst car usage in Rural areas is almost twice that of Dublin City.
- Car usage in Rural areas is comparatively higher when compared to the whole country.
- Walking is less prevalent in Rural areas and is highest in Dublin City and other urban areas
- Travel during the AM peak is slightly less in Dublin City and other urban areas when compared to the national average.
- The Rural morning peak is between 9-10am, while Dublin City has two morning peaks, 8 -9am and 11-12pm.
- The afternoon peaks for urban towns, other urban areas, Rural areas and the Regional Cities occurs between 2-3pm, earlier than Dublin City and the GDA.
- Across all regions, the highest proportion of trips take between 15-29 minutes.
- A higher proportion of trips in Dublin City take 15-29 minutes compared to the other 5 regions. 15-29 minute trips are $9 \%$ higher in Dublin City in comparison to the whole country and $11 \%$ higher than urban towns, where such trips are lowest.
- Country wise, the highest proportion of trips are between $1-3 \mathrm{~km}$.
- The Regional cities have higher proportions of $3-5 \mathrm{~km}$ trips.


### 4.1 Finding for Comparative Analysis

## Trips taken by day of trip

People in Dublin City travel slightly less on Monday and Tuesday compared to the national average, fewer than $2 \%$ and $6 \%$ of all trips for Monday and Tuesday respectfully. Those from Urban towns meanwhile travel slightly more on these days. Those in Dublin City are more likely to travel on Friday and Saturday when compared to the rest of the country. Dublin city travel is $6 \%$ greater on Fridays and Saturdays and $4 \%$ greater on Sundays when compared to the national average.

Travel days within the regional cities are in line with the country as a whole. Compared with Dublin City, those in the Regional cities travel more from Monday to Thursday and less from Friday to Sunday.


Figure 25: Travel days: Comparative analysis
Travel patterns for weekday vs. weekend are very similar across all regions and compare to the total for the whole country, with the exception of Dublin City. In Dublin City one quarter of travel occurs at the weekend. This is $10 \%$ greater than the national average country and double the level of weekend travel in the urban towns, where the least weekend travel occurs.

## Weekday vs. Weekend Travel



Figure 26: Weekday vs. weekend: Comparative analysis

## Trips taken by reason for the trip

There is little variance in trip purpose across the 6 regions. Work/ business trips are slightly more prevalent in Dublin City and the GDA. Education related trips are more common in Regional cities and urban towns.


Figure 27: Reason for trip: Comparative analysis
When return home trips are excluded, the variances in trip purposes are more distinct. Work/ business trips are more prevalent in Dublin City and the GDA compared to the rest of the country. Work/ business purposes account for 10\% more trips in Dublin City and 6\% more in the GDA compared to the total country. In the Regional cities, work/ business is significantly (16\%) less than in Dublin City and 6\% less than the national average.


Figure 28: Reason for trip (excl. return home): Comparative analysis
Education related trips are highest in the Regional cites and Urban towns. Urban towns have the highest proportion of education related trips relative to all other regions. Education related trips in the Regional cities and urban towns are $16 \%$ and $18 \%$ higher respectfully when compared to Dublin City. Trip purpose in rural locations is broadly in line with the national average, while those in other urban areas are slightly more likely to engage in shopping and social $-4 \%$ and $3 \%$ greater than the national average.

## Trips taken by mode of transport

The car is the primary mode of travel across all 6 regions and the whole country. Car usage is $29 \%$ lower in Dublin City when compared to the whole country. Car usage in rural areas is almost $40 \%$ greater than in Dublin City. Those living in the regional cities ( $-9 \%$ ) and the GDA $(-8 \%)$ are also less likely to use the car in comparison to the whole country. Bus usage and cycling are $11 \%$ and $6 \%$ greater respectfully in Dublin City compared to the national average.

Mode of Transport


Figure 29: Mode of transport: Comparative analysis
Car usage in rural areas is $10 \%$ greater than the national average. Walking is also less prevalent in rural areas - it is $7 \%$ lower when compared with the total country and $18 \%$ lower compared to Dublin City and other urban areas, where walking is highest at $28 \%$ in both regions.

## Trips taken by time of day

Travel during the AM peak is $4 \%$ less in both Dublin City and other urban areas than the national average. Conversely, during the AM interpeak, travel for both these periods is higher than the national average by $7 \%$ for Dublin and $4 \%$ for other urban areas. Travel across the other 4 regions is broadly in line during this period. Travel in Dublin City is comparatively lower during the PM interpeak, 5\% lower than the national average and $8 \%$ lower than the Regional cities, where PM interpeak travel is highest.


Figure 30: Time of trip: Comparative analysis

During the PM peak travel in Dublin City and the GDA is slightly higher (2\%) than the national average. Furthermore, it is 5\% higher compared the other urban areas, which have the lowest levels of PM peak travel. Dublin City, the GDA and the regional cities have proportionally less travel during the Off-peak period, with travel highest in other urban and rural areas (13\%) during this time.

Travel Times of the Day


Figure 31: Travel time of the day: Comparative Analysis

Between 6am and midnight, travel patterns within the 6 regions follow a broadly similar trend. There is a peak in travel between 8-9am and a fall off from 18:00 onwards. However, some differences in travel times are evident:

- The rural morning peak is between 9-10am and it has proportionally the highest amount of travel during this hour.
- Dublin City has two morning peaks; 8-9am and 11-12am.
- The afternoon peaks for urban towns, other urban areas, rural areas and the Regional cities occur earlier than Dublin City and the GDA - between 2-3pm.
- Dublin City and the GDA PM peaks occur between 5-6pm.


## Trips taken by time taken

Across all regions, the highest proportions of trips take between 15-29 minutes.


Figure 32: Duration of trip: Comparative analysis
A higher proportion of trips in other urban areas take 1-9 minutes. These shorter trips are $11 \%$ higher in other urban areas compared to the whole country and a further $19 \%$ higher compared to Dublin City, where 1-9 minute trips are most infrequent. Trips 10-14 minutes are also proportionally less likely to occur in these two regions, with the Regional cities having the highest number of trips taking this long, at $8 \%$ higher than the national average and $12 \%$ compared to Dublin City.

A higher proportion of trips in Dublin City take 15-29 minutes compared to the other 5 regions. 15-29 minutes trips are 9\% higher in Dublin City in comparison to the whole country and $11 \%$ higher than urban towns, where such trips are lowest. Further, 30-59 minutes trips are also proportionally higher for Dublin City ( $+6 \%$ ) and the GDA ( $+5 \%$ ) compared to the whole country. 30-59-minute trips are lowest in the Regional cities (12\%) and other urban areas (11\%). The proportion of trips taking over an hour is mostly similar across all regions.

## Trips taken by distance travelled

The highest proportion of trips nationally are between $1-3 \mathrm{~km}$.


Figure 33: Distance of trip: Comparative analysis
The regional cities and other urban areas are proportionally more likely to have shorter distance trips of under 1 km . These trips are $5 \%$ higher in the Regional cities and $7 \%$ higher in other urban areas compared to the whole country. These two regions have a higher proportion of $1-3 \mathrm{~km}$ also, with the regional cities $9 \%$ and other urban areas $18 \%$ greater than the national average. Further, $1-3 \mathrm{~km}$ trips in other urban areas are $26 \%$ higher than rural areas, where these trips are proportionally less frequent.

The cities have higher proportions of 3-5km trips generally. Compared to the whole country, Dublin City is $8 \%$ higher and the regional cities, $7 \%$ higher for trips of this distance, with other urban areas being the lowest at $9 \%$. Trips of between 5 -10km are broadly in line with the national average across regions with the exception of Dublin City and other urban areas where the proportion is $4 \%$ and $11 \%$ greater respectfully.

Rural areas have higher proportions of 10-20km trips compared to the rest of the country at $5 \%$ higher than the national average and $10 \%$ higher than the regional cities, where such trips occur least. Furthermore, the rural areas have a higher amount of $20-30 \mathrm{~km}$ trips, being $4 \%$ greater than the national average and $10 \%$ greater when compared to the regional cities. A similar pattern is evident for trips of over 30 km .

## Demographics

There was minimal variance across regions in terms of age - with only Dublin City standing out as a notable exception.


Figure 34: Age breakdown: Comparative analysis
Dublin City had a significantly higher proportion of 25-34 year olds, $11 \%$ higher than the national average and $12 \%$ higher than the regional cities. The proportion of the population in the 25-34 year old cohort in Dublin City is $14 \%$ higher than in rural areas, where this age group is the lowest. Conversely, Dublin City has the lowest proportion of 4 to 12 year olds. The GDA also under indexes on the youngest age groups, however, it has proportionally more 25 to 44 year olds at approximately $4 \%$ higher than the whole country.


Figure 35: Social class breakdown: Comparative analysis

Gender


Figure 36: Gender breakdown: Comparative analysis
The regional cities and other urban areas are most likely to have more C2DE inhabitants, with the GDA having a significantly higher proportion of ABC1. The gender split across all regions is very similar.

Bicycle ownership


No Public Transport Tickets


Figure 37: Bicycle ownership incidence of no public transport tickets: Comparative analysis
Bicycle ownership is highest within the GDA and Regional cities with 4 in 10 owning a working bike. Ownership is lowest in the other urban areas at 3 in 10 . Nationally, 7 in 10 do not have a public transport ticket. This proportion is highest in urban towns at $84 \%$. Those not having a public transport ticket is lowest in Dublin City at one third and the GDA at a half.

## 5 Rural Areas

## Key Findings

- Wednesday is the most travelled day within rural areas and accounts for one fifth of trips undertaken.
- Work/business and education trips peak on Tuesday and Wednesday at just under a quarter each.
- Wednesday is the most popular weekday for social and personal trips - Sunday being significantly the most popular day overall for these trips.
- Work/ business and education make up just over half (51\%) of all outward trips.
- Car usage is considerably higher compared to all other modes of transport.
- Incidence of walking is higher during the week compared to the weekend.
- Travel volumes peak twice during the day at 8-9am (11\%) and 3-4pm (10\%).
- One quarter of trips occur in the morning rush between 8-9am.
- The home time rush is spread out over the course of four hours - one third of travel occurs between 2-6pm.
- Trips are most likely to take between 15-29 minutes. 3 in 10 trips taken being of this duration.
- Short trips are most likely to occur during the AM peak and PM interpeak periods.
- Longer trips are most prevalent during the PM peak.
- Car is the dominant mode for all age groups but is most popular amongst the 35-44 year olds.
- Proportionally, those aged 13-17 are more likely to cycle and use a bus/ coach.
- Those aged $55+$, are most likely to travel during the AM interpeak period.
- Younger cohorts travel most frequently during the AM peak and PM interpeak periods.


### 5.1 Demographic overview



Figure 38: Rural Areas Demographics: Overview

The population of respondents who completed a diary in rural areas is roughly half male / female. $34 \%$ of the respondents were aged between 35 to and 54 and just over half were from $A B C 1$ with just under half from C2DEF1.

Of those who answered the question regarding licences, $40 \%$ of those between 18 and 24 have licences; this is substantially higher than in other areas. $30 \%$ of 18 to 24 -year olds do not have a licence. By the age of 25 to $34-84 \%$ have licenses. $91 \%$ of those aged between 35 and 64 have a licence. This drops off to $81 \%$ for those over 65 ; again, much higher than other areas of the country and indicative of the dominance of the car in rural transportation. This is further emphasised by the high number of households (53\%) who have a second car and only $4 \%$ having no vehicle.

In sharp contrast to the other areas, we see the number of those living within a 15-minute walk of amenities dropping sharply. Specifically, those who live within 15 minutes of a shop (54\%), post office (44\%), pub or restaurant (51\%), a doctor (36\%), chemist (38\%) and a bus stop (44\%). $40 \%$ do not live within 15 minutes of any of these amenities.

### 5.2 Findings for Rural Areas

Rural areas are all regions with a population of less than 1,500 . Within these regions, information from 2,307 household was gathered and 4,142 diaries were collected. In total 25,404 trips were recorded in these areas. The regional spread of Rural Areas surveyed is outlined below.

Regional Breakdown of Rural Area


Figure 39: Regional breakdown of rural areas

Trips taken by days of the week



Figure 40: Breakdown of travel days: Rural Areas
Similar to all other regions, Wednesday is the most popular day for travel within rural areas, accounting for one fifth of all trips. Tuesday and Thursday are the next most travelled days at $18 \%$ each. Monday is the least travelled weekday with $14 \%$ of trips occurring on this day and Saturday the least travelled day overall at $7 \%$.


Figure 41: Reason for travel by day of the week: Rural Areas
Work/business and education trips follow a similar pattern, peaking during Tuesday and Wednesday at just under a quarter, and decreasing until Sunday. Wednesday is the most popular weekday for social and personal trips. Sunday is the most popular day overall for these trips, with $19 \%$ of social trips and $20 \%$ of personal trips occurring on Sunday. Shopping trips are evenly spread across Monday to Saturday with no significant peak.

Trips taken by reason for the trip


Figure 42: Trip by Reason: Rural Areas

A return home is the most likely reason for all trips in rural areas, followed by work/ business trips (14\%). When return home trips are excluded, work/ business and education together make up just over half (51\%) of all outward trips, with social trips making up a further quarter.

## Trips taken by mode of transport



Figure 43: Modes of Transport: Rural Areas

Car usage is significantly higher in rural areas compared to all other modes of transport and in comparison to the other regions. Walking is higher during the week and is $3 \%$ greater than at the weekend.


Figure 44: Trip purpose by mode of transport: Rural Areas
Across all trip purposes within rural areas, the car is significantly the most widely used mode of transport. Walking accounts for a higher proportion of trips for personal purposes when compared to other purposes, accounting for one third. For education trips, bus/ coach accounts for $11 \%$, which is the highest incidence of this mode across all purposes.

Trips taken by time of day

## Trip by Time of Day



Figure 45: Trip times: Rural Areas

Travel time patterns in rural areas follow a similar pattern to all other regions, with two peak periods during the day at 8 - 9 am (11\%) and $3-4 p m(10 \%)$. One quarter of trips occur
in the morning rush between 8-9am. The home time rush is spread out over the course of four hours. One third of travel occurs between 2-6pm, travel drops off after this period.


Figure 46: Mode of transport by time of day: Rural Areas ${ }^{8}$
The car is the primary mode of transport across all travel time periods, accounting for upwards of $80 \%$ of all trips across each time period. Walking is proportionally highest during the AM interpeak period at $14 \%$ of trips taken during this time. Bus/ coach usage is highest during the AM peak (6\%) and the PM interpeak (5\%). However these are still relatively low in comparison to car usage.

## Trips taken by duration

Duration of Trips Taken


[^7]In rural areas trips are most likely to take between 15-29 minutes, with 3 in 10 of trips taken being of this duration. A similar proportion of trips take 1-9 minutes and 30-59 minutes, both accounting for one fifth.


Figure 48: Period of travel by duration of journey: Rural Areas
Short trips (taking between 1-9 minutes) are most likely to occur during the AM peak and PM interpeak periods, making up one quarter of trips during these periods. Longer trips are most prevalent during the PM peak with $26 \%$ taking 30-59 minutes and a further $10 \%$ taking $60+$ minutes. The PM peak also has the lowest incidence of short trips at $13 \%$.


Figure 49: Mode of transport by duration of journey: Rural Areas
3 in 10 car trips in Rural Areas take between 15-29 minutes with car journey durations very similar to those of walking. A significant proportion (6 in 10) train trips take over an hour.

Truck/ van and bus/ coach trips are also more likely to be of longer duration. Slightly under half (49\%) of truck/ van trips and over half (56\%) of bus/ coach trips are over 30 minutes.
Trips taken by distance
Trips in Rural Areas are most likely to be $1-3 \mathrm{~km}$ or $10-20 \mathrm{~km}$ in distance, both making up one fifth of all rural travel. There is a very low incidence of trips less than 1 km at only $6 \%$ off all trips taken.


Figure 50: Distance travelled: Rural Areas

Distance of Journey by Time Taken

| 90\% |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 80\% |  |  |  |  |  |
|  |  |  |  |  |  |
| 70\% |  |  |  |  |  |
| 60\% |  |  |  |  |  |
| 50\% |  |  |  |  |  |
| 40\% |  |  |  |  |  |
| 30\% |  |  |  |  |  |
| 20\% |  |  |  |  |  |
| 10\% |  |  |  |  |  |
| 0\% |  |  |  |  |  |
|  | 1-9 mins | 10-14 mins | 15-29 mins | 30-59 mins | 60+ mins |
| $=0-0.99 \mathrm{~km}$ | 19\% | 7\% | 1\% | 0 | 0 |
| -1-2.99km | 55\% | 26\% | 11\% | 5\% | 2\% |
| -3-4.99km | 18\% | 18\% | 7\% | 4\% | 3\% |
| -5-9.99km | 8\% | 36\% | 22\% | 5\% | 4\% |
| $=10-19.99 \mathrm{~km}$ | 0 | 13\% | 44\% | 22\% | 3\% |
| - 20-29.99km | 0 | 0 | 14\% | 32\% | 3\% |
| - $30 \mathrm{~km}+$ | 0 | 0 | 1\% | 32\% | 85\% |

[^8]Of the trips that take 1 to 9 minutes, the majority are 1 to 3 km , with just under 2 in 10 being 3.- 5 km . Just over a third of trips taking 10-14 minutes are between $5-10 \mathrm{~km}$. Trips taking 15 to 29 minutes are predominantly $10-20 \mathrm{~km}$. Just over one third of trips taking 30 and 59 minutes are 20-30 and $30+\mathrm{km}$ 's. Whilst $85 \%$ of all trips that take more than 60 minutes are over 30km.

Trips taken by demographics


Figure 52: Age by mode of transport: Rural Areas
The car is the most widely used mode of transport for all age groups. However, it is most popular amongst the 35-44 age cohort and accounts for $86 \%$ of their travel. Proportionally, those aged 13-17 are more likely to cycle and use a bus/ coach, these modes make up 6\% and $20 \%$ of their travel. 18-24 years olds are marginally more likely to walk than all other age groups, but at $15 \%$ of all travel it is still comparatively low.


Figure 53: Age by time of travel: Rural Areas
The older cohort (those aged $55+$ ) are most likely to travel during the AM interpeak period. They comprise $45 \%$ of all trips during this period. The youngest cohorts (aged 12 years and less) travel most frequently during the AM peak and PM interpeak periods.

### 5.3 Rural Summary

Rural locations, more so than the rest of the country, are heavily reliant on the car as a mode of transport. 8 in 10 of all trips involve a car and just over 1 in 10 on foot. Location and accessibility are key factors in this and this is further reflected in the comparatively low amount of people being within a 15 -minute walk of a range of amenities. Accessibility issues may also be evident in the comparatively higher number of trips (1 in 5) taking 30-59 minutes. Similarly, distances travelled also stand out with 1 in 5 trips being $10-20 \mathrm{~km}$. This is comparatively higher than the rest of the country and possibly reflective of the sparse nature of the Irish countryside.

Rural dwellers seem to use Sunday as their social and personal day. These types of trips are highest on Sundays and are significantly higher than any other reason on this day. Overall the familiar pattern of almost half of travel being work/ business and education related remains. Travel time patterns in rural areas don't have peaks as high as other areas, with the 'morning rush' being spread out over two hours.

## 6 Dublin City

## Key Findings

- One fifth of all trips in Dublin City occur on Fridays.
- A quarter of all trips take place at the weekend.
- Work/ business is the main reason for trips in Dublin City, making up 38\% of trips when return home trips are excluded.
- Social trips account for one quarter of all trips.
- 4 in 10 trips are by car, which is less than the other regions.
- Walking is the next most used form of transport and accounts for a further 3 in 10 of all trips.
- At $47 \%$ walking is the most prominent form of transport for education trips.
- Dublin City has three peak travel times throughout the day.
- The highest proportion of trips take between 15-29 minutes. Less than one quarter of trips takes between 30-44 minutes.
- 3 in 10 trips in Dublin City are between $1-3 \mathrm{~km}$. Trips between $3-5 \mathrm{~km}$ and 5 10 km account for a further fifth each of all trips taken.
- The majority of all trips taken by Dublin City residents are less than 5 km and $85 \%$ are less than 10 km .
- Mode of transport changes with age. A high proportion of children under 12 travel with their parents/guardians by car, this percentage drops off between 13 and 17 years old.
- Those aged 24-34 make up the highest amount of travel during the AM and PM Peak periods.


### 6.1 Findings for Dublin City Region

For the purpose of analysis, the Dublin City region was defined using local electoral area boundaries ${ }^{9}$. The map below shows the region which was designed to represent the whole of the City and a mix of neighbourhoods to the north, south and west of the Central Business District representative of the metropolitan area.


Information from 751 households was collected and 1,227 diaries were gathered from the Dublin City area in total, amounting to 5,844 trips. The following represents a breakdown of the key demographic characteristics and broad travel habits of the Dublin City Region.

[^9]Demographic overview



Social Class

$\square$ None
$\square 1$
$\square 2$
$\square 3$
$\square 4+$


License by Age


Figure 54: Demographics and Travel Habits- Dublin City

47\% of respondents who completed a diary in the Dublin City region were male and 53\% female. The majority of respondents were in the 25 to 34 age bracket. Just over half were from $A B C 1$ and just under half from C2DE.

Fewer than $45 \%$ of those between 18 and 24 have a drivers licence. $19 \%$ of 18 to 24 -year olds had their full licence longer than 2 years, $5 \%$ had their licence less than 2 years and $17 \%$ were on a provisional licence. In the age bracket 25 to $34,30 \%$ did not have a license, $56 \%$ had a licence for longer than two years. Few had licences for less than 2 years and $8 \%$ have a provisional licence. In the age bracket 35 to 44 nearly a quarter do not have a licence and most ( $73 \%$ ) people who have a licence have had it longer than two years. Of the 45 to 54 age group $17 \%$ do not have a licence and $78 \%$ have a licence over 2 years. In the age bracket 55 to $6483 \%$ have a licence whilst $15 \%$ do not. There is a sharp decline with age where $41 \%$ of all those over 65 do not have a licence.

Half of the respondents in Dublin City had a Leap Card. One third owns a bicycle but of these only $6 \%$ are members of a public bike scheme. A minority of households have 1 vehicle with just over a quarter having either none or 2 . A very small percentage of households have more than 2 cars. Just over a third park on the street (free), one fifth park on the street with a permit and $44 \%$ in a driveway.

The vast majority live within a 15 -minute walk of a shop (99\%), post office (94\%), Pub or restaurant (98\%), a doctor (91\%), chemist (98\%) and a bus stop (99\%).

Relatively few people are members of a bike scheme. The peak was among the 35 to 44 age group with $12 \%$ of them being part of a scheme.

Trips taken by days of the week


Figure 55: Breakdown of travel days: Dublin City
One fifth of all trips in Dublin City occur on Friday. Travel volumes on the remaining 4 weekdays range between $11 \%$ and $15 \%$. Over half ( $51 \%$ ) of trips in the region occur over 3 days and towards the end of the standard working week of Monday to Friday. A quarter of all trips take place at the weekend.

Reason for Travel by Days of Week


Figure 56: Reason for Travel by Day of the Week
Work or business constitutes the main reason people travel Monday to Friday. Education related travel is relatively low on Monday, rising steadily throughout the week to Friday. Shopping is balanced out through the week with Saturday being the most popular shopping day. There is a rise in social activity from Thursday peaking on Sunday. Travel for personal reasons is also relatively stable throughout the week with a peak on Thursdays and Sundays.

## Trips taken by purpose of trip

Work/ business is the main purpose for trips in Dublin City, making up 38\% of trips when return home trips are excluded. Social trips are the next most salient purpose, accounting for one quarter.

Purpose of Trip


Purpose of Trip Excl. Return Home


Figure 57: Trip by Purpose: Dublin City

Trips taken by mode of transport
Mode of Transport


Figure 58: Modes of Transport: Dublin City
Within Dublin City 4 in 10 trips are by car, which is significantly less than the other regions. Walking is the next most used mode of transport and accounts for a further 3 in 10 of trips. DART/ Train/ LUAS trip making is relatively low and makes up only $2 \%$ of the total.


Figure 59: Mode of transport by reason for travel: Dublin City

The most used mode of transport for education is walking at $47 \%$. Bus/ coach usage is highest for work/ business and education accounting for one fifth of travel for each of these purposes. DART/ Train/ LUAS usage is highest for social trips but still proportionally low at 4\%.

Trips taken by time of day


Dublin City has three peak travel times throughout the day. 8-9am, which accounts for $12 \%$, $11-12 \mathrm{am}$, which accounts for $12 \%$ and $17-18 \mathrm{pm}$ at $10 \%$. One third of travel within Dublin City is accounted for within these 3 hours.

Mode of Transport by Travel Period


Figure 61: Mode of Transport by Time of Day: Dublin City
During the AM Peak most people travel by car or by walking with a significant number taking the bus. There is some cycling and relatively few travel by DART, Train, or LUAS. In the AM Interpeak the distribution remains relatively similar with one exception: a larger percentage of trips are by walking. This AM Interpeak pattern is similar to the PM Interpeak however a slightly higher percentage of people use the Bus. We see a decline in the number of people walking in the PM Peak and a higher number of people taking the bus, cycling and also using the Dart/Train/Luas. Off Peak hours see a marked increase in the already dominant use of the car and slight decreases across all other modes of transport.

## Trips taken by duration

Duration of Trips Taken

$=1-9 \mathrm{mins}$
$=10-14 \mathrm{mins}$
$=15-29 \mathrm{mins}$
$=30-59 \mathrm{mins}$
$=60+\mathrm{mins}$

Figure 62: Duration of trips taken: Dublin City

Within Dublin City, 1 in 10 trips take under 10 minutes, just under 2 in 10 takes between 10 and 14 minutes, the highest proportion ( 4 in 10) of trips are between 15-29 minutes, and just over one quarter of trips are between 30 to 59 minutes.


Figure 63: Period of travel by duration of journey: Dublin City

During peak times (both AM and PM) there are a larger proportion of trips that take more than 9 minutes than at Interpeak times. Off peak times vary considerably, possibly representing the variety of trip types and purposes.

Duration by Mode of Transport


Figure 64: Mode of travel by duration of journey: Dublin City
The duration of car trips varies, with the highest proportion (37\%) taking between 15-29 minutes. Over half (52\%) of all DART/ Train/ LUAS trips take between 15-29 minutes, with a further $25 \%$ taking 30-44 minutes. Bus/ coach trips are most likely to take between 15-29 and 30-44 minutes. Walking trips take, for the most part, 15-29 minutes. Truck/ van trips are most likely to be mid to long duration with the majority taking between 15-29 (46\%) and 30-59 (22\%) minutes. Nearly half of all cycling trips take 15-29 minutes.

Trips taken by distance


Figure 65: Length of Journey by Mode of Transport: Dublin City
3 in 10 trips in Dublin City are between 1-3km. Trips between $3-5 \mathrm{~km}$ and $5-10 \mathrm{~km}$ account for a further 20\% each of all trips taken.

| $70 \%$ |  |  |  |
| ---: | :---: | :---: | :---: | :---: | :---: |

Figure 66: Time of Travel by distance Travelled: Greater Dublin Area
Of the trips that take 1 to 9 minutes, the majority are under 1 km , with a third being between $1-3 \mathrm{~km}$. Most trips taking 10 to 14 minutes are between $1-3 \mathrm{~km}$. Trips taking 15 to 29 minutes are spread between $1-3 \mathrm{~km}, 3-5 \mathrm{~km}$ and $5-10 \mathrm{~km}$. Just over one third of trips taking between 30 and 59 minutes are $5-10 \mathrm{~km}$. While over half of all trips that take more than 60 minutes are over 30 km . $16 \%$ of $5-10 \mathrm{~km}, 18 \%$ of $10-20 \mathrm{~km}$, and $11 \%$ of $20-30 \mathrm{~km}$ trips take this long.

Trips taken by demographics


Figure 67: Mode of Transport by Age: Dublin City
Mode of transport appears to change with age. Children under 12 seem to travel with their parents/guardians by car with the percentage dropping off between the ages of 13 and 17. Taking the bus increases among the 13 to 17 year olds possibly accounting for the decrease in the use of the car. Bus travel then decreases between 18 to 64 and rises again after 65 . The use of the DART/ Train/ LUAS is relatively low for residents of the city centre. There is, however, an upsurge in cycling from 18 through to 34 indicating that this is a more popular form of transport for this age group within the city centre.


Figure 68: Travel period by age: Dublin City
Those aged 25-34 make up the highest amount of travel during the AM and PM Peak periods. They account for 3 in 10 of all trips taken during each of these periods. The older cohorts aged, 55+ accounts for the highest proportion of travel during the AM Interpeak
period when compared to all other ages and in comparison to this groups travel habits during the whole day.

### 6.2 Dublin City Summary

Dublin City residents use the car less frequently than the rest of the country, with just over 4 in 10 trips being by this mode. Car usage in the capital is almost twice as much as in rural Areas. There is a high incidence of walking, most notably for education in the capital. Those living in Dublin City are more likely to travel for work/ business. However, the working life seems to be balanced out with more frequent social trips - which accounts for 1 in 4 trips. Education trips are less frequent amongst residents of Dublin City relative to the other regions Dublin City respondents reported more weekend trips with one quarter of all trips happening over Saturday and Sunday.

Bus/ coach usage is comparatively higher in the capital. However, DART/ Train/ LUAS usage is still low as a proportion of all trips. Dublin City also experiences two major surges in travel volumes in the AM, between the hours of 8-9am and 11-12am. One quarter of all Dublin City travel occurs within the home time 'rush hour' starting at 17:00.

## 7 Greater Dublin Area

## Key Findings

- $20 \%$ of all trips in the Greater Dublin Area occur on Wednesday, $17 \%$ on Thursday and $18 \%$ on Friday.
- Travel over the weekend accounts for just under one fifth of the total 7-day travel, split evenly between Saturday and Sunday.
- Work/ business reasons account for one third of trips with social trips and educational trips contributing one fifth each.
- Trips related to education are highest during Wednesday and Thursday. These two days account for almost half of all education related travel.
- The car is the most widely used mode of transport within the GDA, accounting for $63 \%$ of all trips. Meanwhile walking accounts for $20 \%$.
- Public Transport (Bus, DART, Train, Luas) contributes $11 \%$ of the total trips taken.
- There are surges in trip making between 8-9am and 17-18pm.
- The upsurge in departures is more prominent in the AM. The 8-9am peak increasing $9 \%$ from the previous hour.
- The car is the primary mode of transport across all travel periods of the day within the GDA.
- Walking is the second most widely used mode and is highest during the AM Interpeak.
- The highest proportion of trips is between 15-29 minutes in duration. This accounts for one third of trips.
- Peak time trips generally take between 15-29 minutes.
- Trips taking 1 hour or longer are highest during the PM Peak at 9\% of all trips taken.
- The highest proportion of trips taken in the GDA are between $1-3 \mathrm{~km}, 29 \%$ of the total amount.
- Car usage is highest for the 8-12 (76\%) and 45--54 (73\%) age groups.
- Walking is highest amongst 13-17-year olds, making up 35\% of all this age group's trips.


### 7.1 Findings for Greater Dublin Area

The Greater Dublin Area (GDA) as shown on the map below encompasses the Dublin and Mid-East Regions. The area represented by the four Dublin local authorities of Dublin City, Dun Laoghaire-Rathdown, Fingal and South Dublin, together with the three adjacent counties of Kildare, Meath and Wicklow in the Mid-East Region. The regional spread of areas surveyed in the GDA is outlined below.

In total information from 2,320 households was collected and 3,729 diaries were gathered from those in the Greater Dublin Area (GDA) covering 20,020 trips. The following represents a breakdown of the key demographic characteristics and broad travel habits of the Greater Dublin Area.

Regional Breakdown of GDA



Demographic overview


Gender


Public Transport Tickets


No. of Cars Per Household

None
1 car
2 cars
3 cars
4 cars
5 cars

Bicycle Ownership


Member of Public Bike Sharing Scheme



Figure 69: Greater Dublin Area Demographics and Travel Habits - Overview

The population of respondents who completed a diary in the GDA is roughly half male / female. The majority of respondents were in the 35 to 44 age brackets and just over half were from $A B C 1$ whilst just under half from C2DE.
$48 \%$ of those aged between 18 and 24 had no driver's licences. $21 \%$ of 18 to 24 -year olds had their full licence longer than 2 years, $7 \%$ having their licence less than 2 years and $16 \%$ were on their provisional licences. By the age of 25 to $34-21 \%$ still do not have licenses, $67 \%$ of people have their licence longer than two years. Few have licences less than 2 years and $5 \%$ have a provisional licence. By the ages of 35 to $44,9 \%$ do not have a licence; most ( $87 \%$ ) people who have a licence have had it longer than two years. The figures for those aged 45 to 54 are $8 \%$ do not have a licence and $85 \%$ have a licence for over 2 years. Between 55 and $649 \%$ do not have a licence and $84 \%$ do. We see a decline with age, although less sharp than Dublin City, with $20 \%$ of all those over 65 who do not have a licence and $76 \%$ having a full licence longer than 2 years.

One third have a Leap card and $12 \%$ have a free travel pass. $53 \%$ do not have any form of public travel pass. $40 \%$ own a bicycle and of those who own a bike only $3 \%$ are a member of a public bike scheme.
$11 \%$ of households do not have a vehicle, one third of households have 1 vehicle, with nearly half having two whilst $6 \%$ have more than 2 . Just over a third park on the street (free), one fifth park on the street with a permit, and $44 \%$ in a driveway.

The vast majority lived within 15 -minute walk from a shop (92\%), post office ( $82 \%$ ), pub or restaurant ( $88 \%$ ), a doctor ( $80 \%$ ), chemist ( $86 \%$ ) and a bus stop ( $94 \%$ ).

Trips taken by days of the week
One fifth of all trips in the GDA occur on Wednesday, 17\% on Thursday 18\% on Friday.

|  |  |  |
| :--- | :--- | :--- |



Figure 70: Breakdown of travel days: Greater Dublin Area
Over half (55\%) of trips in the region occur over 3 days and towards the end of the standard working week of Monday to Friday. During weekdays, Monday accounts for the least amount of travel at $11 \%$. Travel over the weekend accounts for just under one fifth of the total 7-day travel, split evenly between Saturday and Sunday.

Days of the Week by Reason for Travel


Figure 71: Reason for Travel by Day of the Week
Trips related to education are highest during Wednesday and Thursday, with these two days contributing to just under half (49\%) of all education related travel in the GDA. One quarter of work related travel occurs on Wednesday also.

Tuesday is the most popular weekday for shopping - this includes food and non-food. Over the weekend, Saturday is the most popular day for shopping, accounting for $18 \%$. Social activity increases from Thursday onwards, in line with the standard working week for most people. Most social trips occur on a Sunday, followed by Friday. Social trips are significantly higher on Sunday in comparison to the other 6 days and are $8 \%$ greater when compared to Saturday.

## Trips taken by reason for trip

Looking specifically at outward trips, work/ business reasons account for one third of trips with social trips and educational trips contributing one fifth each to total travel.

Reason for Trips


Reason for Trips excl Return Home


Trips taken by mode of transport
Modes of Transport


Figure 73: Modes of transport: Greater Dublin Area

The car is the most widely used mode of transport within the GDA, accounting for 63\% significantly higher than walking at 20\%. In total, modes of public transport (bus, DART, Train, Luas) contribute to $11 \%$ of the total trips taken overall.


Figure 74: Mode of transport by reason for travel: Greater Dublin Area

The car is the mode of transport for two thirds of all work/ business trips and the same proportion for all shopping trips in the Greater Dublin Area region. It is also widely used for education (62\%) and social trips (64\%). The only instance where the car is not the most
widely used mode of transport is for personal trips, where walking accounts for $48 \%$ of trips taken compared to $44 \%$ for the car.

Trips taken by time of day


Figure 75: Departure by time of day: Greater Dublin Area
There are observed surges in trip making between $8-9 \mathrm{am}$ and $5-6 \mathrm{pm}$, in line with the standard working day. One quarter of travel occurs during these two hours. The upsurge in departures is more prominent in the am. Trips taken during 8-9am increase by $9 \%$ from the previous hour ( $7-8 \mathrm{am}$ ) before decreasing by $7 \%$ in the following hour ( $9-10 \mathrm{am}$ ). Over half (53\%) of all departures are between 9 am and 5 pm . However this is spread evenly across these 8 hours with no significant increases evident. There is a clear decline in departures from 19:00 onwards, with significant increases not evident until the following morning at 8 am .

Mode of Transport by Peak/Interpeak/Off Peak


Figure 76: Mode of transport by time of day: Greater Dublin Area
The car is the primary mode of transport across all travel periods of the day within the GDA. Walking is the next most widely used mode, with incidence of walking highest during the AM Interpeak. Public transport such as DART/ Train/ LUAS accounts for between 1-3\% of trips, with bus and coach a more frequently used mode during the day. Cycling usage is highest during the PM peak making up 7\% of all trips taken at that time.

Trips taken by duration
Duration of Trips Taken


Within the GDA, the highest proportion of trips are between 15-29 minutes accounting for one third. One fifth of trips take between 10-14 minutes, with a further one quarter of trips taking between 30-59 minutes.


Figure 78: Period of travel by duration of journey: Greater Dublin Area
Peak time trips, both AM and PM, generally take between 15-29 minutes and this is the same for both Interpeak periods. During the Interpeak periods, there is a higher incidence of trips taking a shorter amount of time, with approximately one fifth of trips during these periods taking less than 10 minutes. Trips taking 1 hour or longer are also highest during the PM Peak at 9\% of all trips taken.


Figure 79: Mode of travel by duration of journey: Greater Dublin Area

Over half (53\%) of all DART, Train or LUAS trips take between 30-59 minutes, with a further $13 \%$ taking over 1 hour. Bus/ coach trips are most likely to take between 30-59 minutes also. Truck/ van trips are most likely to be mid to long duration with the majority taking between 15-29 minutes ( $39 \%$ ) and 30-59 (42\%) minutes. The duration of car trips varies, with the highest proportion (31\%) taking between 15-29 minutes.

Trips taken by distance


Figure 80: Trips taken by distance travelled: GDA

Distance of Journey by Time Taken


Figure 81: Time of Travel by distance Travelled: Greater Dublin Area

The highest proportion of trips taken in the GDA are between 1-3km, which makes up $29 \%$ of the total amount, with a further one fifth of trips being between $5-10 \mathrm{~km}$ in distance. Both the shortest (less than 1 km ) and furthest (greater than 30 km ) account for $8 \%$ each of all trips taken. Trips between $1-3 \mathrm{~km}$ are most likely to take anywhere between 1-9 or 10-14 minutes within the GDA.

Trips take by demographics


Figure 82: Mode of transport by age: Greater Dublin Area
Car is the dominant mode of transport across all ages. However car usage is significantly less for those aged 18-24 years compared to all other age cohorts. Car usage is highest for the 8$12(76 \%)$ and $45-54$ ( $73 \%$ ) age groups. Walking incidence is highest amongst $13-17$-year olds, making up $35 \%$ of all this age group's trips. Bus/ coach usage is highest amongst 18-24-year olds, with cycling as a mode of transport most prominent within the 18-24 age cohort. There is minimal variance across age groups in terms of DART, Train or LUAS usage, with the frequency between 1-4\% for all ages.


Figure 83: Age by Period of Travel: Greater Dublin Area

### 7.2 Greater Dublin Area Summary

As with all regions the dominant mode of transport used is the car. However, there is less of a reliance compared to the national level. Usage of the car is still very high for work/ business trips.

The morning and evening 'rush hours' are apparent within the GDA, with surges at the hours of 8:00 and 17:00. One quarter of all travel happens in these two hours.

## 8 Regional Cities

## Key Findings

- One fifth of all trips in Ireland's regional cities occur on Wednesday.
- Education related trips are most frequent across Tuesday and Wednesday, these two days making up over half (51\%) of all education trips.
- Work/ business trips are most frequent on Wednesday, which accounts for slightly under one quarter ( $23 \%$ ) of all work/ business trips.
- Social trips are most common on Saturday (19\%) and Sunday (18\%).
- Education related trips are highest overall, accounting for just over one quarter (26\%) of all outward trips.
- Car is the primary mode of transport - nearly two thirds of all trips.
- $5 \%$ of trips are by Bus or Coach but no train journeys were recorded during the survey.
- Travel in the regional cities is at its highest during the 8-9am period. $16 \%$ of all travel happens during this period.
- The pattern of travel is different to Dublin and the Greater Dublin Area. The second surge in travel occurs between 2-3pm as opposed to between 5-6pm.
- Walking is highest during the AM interpeak period at $36 \%$.
- Bus/ coach usage is $4-6 \%$ across all travel periods and is highest during the AM and PM peaks at 6\%.
- The PM interpeak period accounts for the highest proportion of car trips during the day.
- Two thirds of all trips take between 10-29 minutes and a further one fifth take less than 10 minutes.
- Trips taken during the AM peak are most likely to take between 15-29 minutes.
- The PM peak has the highest proportion of trips taking between 30-59 minutes.
- Short trips account for half of all trips taken. Trips between $1-3 \mathrm{~km}$ make up the majority of these at $38 \%$.
- Car the most popular mode for each age cohort except 18-24 years olds - walking is the most used mode for this group.


### 8.1 Findings for Regional Cities

The Regional Cities are Cork, Waterford, Galway and Limerick as shown on the map below.



Figure 84: Regional breakdown of Regional Cities
Information from 350 households was collected and 613 diaries were gathered from those in the Regional Cities, covering 4,250 trips. The following represents a breakdown of the key demographic characteristics and broad travel habits of the Regional Cities of Limerick, Galway, Cork and Waterford.

Demographic overview


Figure 85: Regional Cities demographics and Travel Habits- Overview

The population of respondents who completed a diary in the Regional Cities is roughly half male / female. Most respondents were in the 35 to 44 age bracket and just over 4 in 10 were from $A B C 1$ and just under 6 in 10 from C2DE.

Of those who answered the question regarding licences ${ }^{10}$ fewer than $57 \%$ of those aged between 18 and 24 do not have a drivers licence. $30 \%$ of 18 to 24 -year olds had their full licence longer than 2 years, $4 \%$ having their licence less than 2 years and $6 \%$ were on a provisional licence. By the age of 25 to 34 years, $31 \%$ still do not have licenses, $65 \%$ have their licence longer than two years with few having licences less than 2 years or having a provisional licence. By the ages of 35 to $44,15 \%$ do not have a licence whilst most ( $79 \%$ ) who have a licence have had it longer than two years. The figures for 45 to 54 are $9 \%$ do not have a licence and $89 \%$ have a licence over 2 years. For the ages between 55 and 64, $15 \%$ do not have a licence and $84 \%$ do. There a sharp decline with age, where $31 \%$ of all those over 65 do not have a licence.

4\% have a Leap Card and less than 1\% have a monthly ticket. 4 in 10 own a bicycle. $43 \%$ of households have 1 vehicle, whilst $42 \%$ have 2 cars.

The vast majority lived within 15 -minute walk from a shop ( $98 \%$ ), post office ( $86 \%$ ), Pub or restaurant (91\%), a doctor (81\%), chemist (94\%) and a bus stop (97\%).

Trips taken by days of the week

Travel Days of the Week


Travel Time of the Week


Figure 86: Travel by day of the week: Regional Cities

One fifth (20\%) of all trips in Ireland's regional cities occur on Wednesday, followed by Tuesday (19\%) and Thursday (18\%). These three days account for over half (57\%) of all trips

[^10]taken. Monday is the least travelled weekday at $13 \%$ of the total. Over the course of the 7 day week, the least number of trips happen on Sunday, at 7\% of the total.


Figure 87: Days of the week by reason for trip: Regional Cities

Education related trips are most frequent across Tuesday and Wednesday, these two days making up over half (51\%) of all education related trips. Just under one fifth (19\%) of shopping trips happen on Thursday, making it the most popular shopping day within the regional cities. However, shopping trips are very evenly spread across Tuesday to Saturday ranging from $15 \%-19 \%$ of the total, with Sunday being the least popular shopping day making up only 5\% of the total. Work/ business trips are most frequent on Wednesday, which accounts for slightly under one quarter (23\%) of all work/ business trips. Social trips are most common on Saturday (19\%) and Sunday (18\%). Most personal trips happen on Thursday (18\%) and Sunday (16\%).

Trips taken by reason for trip

Reason for Trip

■ Work/ business
■ Education
■ Shopping
■ Social
■ Return home
$\square$ Personal

- All others

Figure 88: Reason for trips: Regional Cities
A return home is the most common reason for trips across the regional cities and makes up $45 \%$ of all trips taken. When a return home is excluded, education related trips are most prevalent, accounting for over one quarter (26\%), followed by work/ business trips at 22\% with one fifth being social trips.

Trips taken by mode of transport
Modes of Transport- All Journeys

- Walk

- Cycle
- Car
- Bus/ Coach
- Truck or Van

Figure 89: Modes of transport: Regional Cities
The car is the primary mode of transport within regional cities, at nearly two thirds of all trips. No train (DART and LUAS not applicable to regional cities) journeys were recorded in this census, while the rate of trips by bus/ coach is $5 \%$.

Car usage is highest for work/ business trips with 7 in 10 being made by car. Walking accounts for roughly one third each of all shopping and social trips taken. Walking is highest for personal trips, making up a half.


Figure 90: Mode of Transport by Reason for Travel: Regional Cities

Trips taken by time of day


Figure 91: Transport by Time of Day: Regional Cities
Travel in the Regional cities is at its highest during the 8-9am period with $16 \%$ of all travel happening during this hour. The pattern of travel within the regional cities is somewhat different to Dublin and the Greater Dublin Area - having a second surge in travel between 23 pm as opposed to between $5-6 \mathrm{pm}$. One fifth of travel occurs during the $2-3 \mathrm{pm}$ period.


Figure 92: Mode of Transport by Time of Day: Regional Cities

The car is the primary mode of transport used across all travel periods in the regional cities. Car usage ranges from 55\% (AM interpeak) to 69\% (Off Peak) of total travel during these periods. The rate of walking is highest during the AM interpeak period at $36 \%$, while bus/ coach usage is between $4-6 \%$ across all travel periods - highest during the AM and PM peaks at 6\%. There is truck/ van usage during the AM and PM Peaks but this is minimal at $1 \%$ of each period.

Trips taken by duration

## Duration of Trips Taken



$$
\begin{aligned}
& =1 \text { to } 9 \mathrm{mins} \\
& =10-14 \mathrm{mins} \\
& =15-29 \mathrm{mins} \\
& =30-59 \mathrm{mins} \\
& =60+\mathrm{mins}
\end{aligned}
$$

Within the regional cities two thirds of all trips take between 10-29 minutes, with a further one fifth of trips taking less than 10 minutes.

Duration of Trip by Travel Period


Figure 94: Period of travel by duration of journey: Regional Cities
Trips taken during the AM peak are most likely to take between 15-29 minutes, while the PM peak has the highest proportion of trips taking between 30-59 minutes. Trips taking over an hour are marginally more prevalent during the Off-peak period at 5\%.

Duration by Mode of Transport


Figure 95: Time of Travel by Mode of Transport: Regional Cities
Over half (55\%) of all truck/ van trips take between 30-59 minutes and a further quarter take over an hour. Cycling and walking trips are likely to take a similar amount of time, with one third of each taking between 15-29 minutes.

## Trips taken by distance

Within the regional cities the highest proportion of trips taken can be considered to be short trips (under 3 km ).


Figure 96: Trips by distance Travelled: Regional Cities
Short trips account for half all trips taken, with trips between 1-3km making up the majority of this at $38 \%$. A further quarter of trips are between $3-5 \mathrm{~km}$ in distance. The incidence of longer trips (over 30 km ) is low at $3 \%$.

Distance of Journey by Time Taken

| 80\% |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 70\% |  |  |  |  |  |
| 60\% |  |  |  |  |  |
| 50\% |  |  |  |  |  |
| 40\% |  |  |  |  |  |
| 30\% |  |  |  |  |  |
| 20\% |  |  |  |  |  |
| 10\% |  |  |  |  |  |
| 0\% | 1 to 9 mins | 10 to 14 | 15 to 29 | 30 to 59 | $60+$ |
| - 0 to 0.99 km | 41\% | 12\% | 3\% | 1\% | 0 |
| - 1 to 2.99 km | 54\% | 48\% | 31\% | 14\% | 2\% |
| - 3 to 4.99 km | 4\% | 30\% | 26\% | 15\% | 6\% |
| - 5 to 9.99 km | 1\% | 9\% | 30\% | 35\% | 12\% |
| - 10 to 19.99 km | 0 | 0 | 9\% | 18\% | 12\% |
| - 20 to 29.99 km | 0 | 0 | 1\% | 9\% | 2\% |
| - $30 \mathrm{~km}+$ | 0 | 0 | 0 | 7\% | 67\% |

Figure 97: Distance of journey by duration

A trip of $0-3 \mathrm{~km}$ is most likely to take between 1-9 minutes within the regional cities. Whilst a trip of between $5-10 \mathrm{~km}$ is most likely to take between 30-59 minutes.

Trips take by demographics


Figure 98: Mode of travel by age: Regional Cities
The car is the most popular mode of transport for each age cohort except for 18-24 years olds - walking is the most used mode for this group, making up a half of all trips they take. Bus/ coach is also most widely used amongst the 18-24 age group compared to all others, with $17 \%$ of their trips using this mode. Cycling is highest amongst the 25-34 and 45-54 age groups; however, it is still relatively low at 9\% and 5\% for each. Overall, car usage increases significantly from 35-64 and then falls back slightly amongst those the over 65 age cohort.


Figure 99: Age by period of travel: Regional Cities

### 8.2 Regional Cities Summary

Travel in the Regional Cities is characterised by a high proportion of education related trips. Particularly in Cork, Galway and Limerick the presence of third level institutions is an influencing factor, with these cities both having large universities and institutes of technology. Tuesday and Wednesday are the core education travel days, with over half of trips happening across these two days. The 'morning rush' in the Regional Cities is more prevalent too than other areas, $16 \%$ of travel happening in the one hour ( $8-9 \mathrm{am}$ ), with homeward travel happening from 14:00 onwards as opposed to the 17:00 peak in Dublin City. The high incidence of education related trips could be an influencing factor in this.

The high incidence of education related trips does not significantly impact on car usage however, as cars still account for 6 in 10 all trips taken. The compact nature of the Regional Cities and high student populations could be a factor in the increased frequency of walking at over one quarter of all trips taken. This is higher than the national average and just slightly below Dublin City.

## 9 Large Urban Towns

## Key Findings

- The majority of respondents had a full drivers licence. A third of respondents did not have a licence. The majority had no form of public transport ticket; of the $13 \%$ who did, $8 \%$ held a free travel pass.
- Most travel in urban towns occurs during Tuesday (21\%) and Wednesday (22\%), both days accounting for over 4 in 10 of all trips taken.
- Travel volumes decline after Wednesday until Sunday,
- Work or business are the main reasons people travel from Monday to Tuesday. On Wednesday 'Education' is the main reason for travel.
- Examining this across all forms of transport the car is the dominant form of transport used for all trips.
- There are peaks across the time of day between 8 and $9 a m$ and 4 and 6 pm .
- Most trips taken are between 10 and 29 minutes in duration. This varies somewhat by mode of transport.
- A third of trips are between 1 and 3 km . A further third are between 5 and 10 km .


### 9.1 Findings for Large Urban Towns

The urban towns region is defined as a town with a population over 10,000 . Dublin, the Greater Dublin Area, Cork, Waterford, Galway and Limerick have been excluded. Specifically Towns in Carlow, Cavan, Clare, Cork County, Donegal, Kerry, Kildare, Kilkenny, Laois, Limerick County, Louth, Mayo, Meath, Offaly, Roscommon, Sligo, Tipperary South, Waterford County, Westmeath and Wexford have been included. The map below shows the location of urban towns in Ireland from which the sample has been drawn (based on the 2016 Census of population). The regional spread of urban towns is detailed below:

Urban Towns


Figure 100: Regional breakdown of Urban Towns
In total information from 1,146 households was collected and 2,108 diaries from those households were gathered. This represents a total of 14,994 trips. Below a breakdown of the key demographic characteristics and broad travel habits of the urban towns has been presented.


Demographic overview


Figure 101: Urban Towns Demographics and Travel Habits- Overview

The population of the larger urban towns is roughly half male / female and most respondents were in the 35-44 age brackets. Just over half were from ABC1 and just under half from C2DE.
$80 \%$ of all 25 to 34 -year olds have a drivers licence. This figure is $87 \%, 88 \%$, and $82 \%$ respectively for those 35 to 44,45 to 54 , and 55 to 64 . There is a drop off to $68 \%$ of over 65 's who hold a drivers licence; which is less of a fall than in previous areas.

The majority had a full licence, with a third not having a licence. The majority had no form of public transport ticket. Of the $13 \%$ who had a public transport ticket, $8 \%$ hold a free travel pass. The majority of public transport ticket holders also have a drivers licence. As distinct from Dublin City, the largest number of households have 2 vehicles (55\%) with just 3 in 10 having 1 vehicle. While practically none are members of a public bike scheme, nearly 7 in 10 owned a bicycle.

A majority of respondents lived within a 15 -minute walk from a shop (84\%), post office (60\%), Pub or restaurant (77\%), a doctor (64\%), chemist (67\%) and a bus stop (79\%).

Trips taken by days of the week
Travel Days of the Week


Travel Time of the Week


Figure 102: Travel days of the week: Urban Towns
Most trips from urban towns occur during Tuesday (21\%) and Wednesday (22\%), both days accounting for over 4 in 10 of all trips taken. Travel volumes decline after Wednesday until Sunday, while weekend travel makes up only $13 \%$ of the total.


Figure 103: Reason for Travel by Day of the Week
Education is the main reason people travel in urban towns and accounts for 2 in 5 of all trips taken, followed by work/ business which accounts for a further 1 in 4 . Both education and work/ business travel is proportionaly largest on Tuesdays and Wedensdays. Shopping is balanced throughout the week, slightly peaking on Tuesday at $18 \%$ and being lowest on Sundays at 8\%. Further, weekend travel habits are dominated by social and personal trips.

## Trips taken by reason for trip

Reason for Trip


Figure 104: Reason for Trip: Urban Towns
Education constitutes the main reason for travel within the urban towns and accounts for 3 in 10 of all trips taken, when a return home is excluded. Work/ business trips account for one quarter of travel follow by social trips at just under 1 in 5 .


Figure 105: Modes of Transport: Urban Towns
The car is the primary mode of transport within urban towns, accounting for three quarters of all trips undertaken. Walking is the second most used mode of transport with just under one fifth of travel being by foot.


Figure 106: Modes of Transport: Urban Towns
The car is dominant across all forms of transport for all trips walking is the next most dominant and highest for personal trips.

Trips taken by time of day


Figure 107: Transport by Time of Day: Urban Towns
We can see clear peaks in travel volumes at 8-9am with volumes falling by $6 \%$ in the next hour. Travel volumes begin to increase again at 2 pm - the PM surges happening over the course of 4 hours, with $2-3 p m$ being the highest and 1 in 10 of all trips happening during this hour.

Mode of Transport by Travel Period


Figure 108: Mode of transport by period of travel: Urban Towns
The car is the primary mode of transport across all travel periods, peaking at 8 in 10 of all trips during the AM Peak. Car usage is lowest during the AM Interpeak, but still accounts for $70 \%$ of trips taken. Walking is highest during this period, with one quarter of trips being by foot. Bus/ coach usage is relatively low across all time periods - highest at 4\% during the AM and PM Peaks.

Trips taken by duration
Duration of Trips Taken


Figure 109: Duration of journey: Urban Towns

The majority of trips taken are between 15-29 minutes, making up 3 in 10 of all trips from urban towns. Roughly a quarter of trips are less than 10 minutes.

Period by Journey by Time of Day


Figure 110: Period of journey by Time of Day: Urban Towns
PM Peak trips are most likely to take longer as one third of trips during this period take over 30 minutes to complete. Meanwhile trip duration during the other 4 periods are largely similar.


Figure 111: Mode of transport by duration of journey: Urban Towns
Trips taking over 60 minutes in urban towns are most likely to be by bus/ coach (22\%) or train (31\%). Car trips vary in time with similar proportions of 1-9, 10-14 and 15-29 minutes. 4 in 10 walking trips take 15-29 minutes with less than one fifth taking longer.

Trips taken by distance


Figure 112: Distance of Trips Taken: Urban Towns
The highest proportion (33\%) of all trips undertaken are between 1 and 3 km . The remaining distance bands account for similar proportions, with trips of between 5 and 20 km ranging from $12-15 \%$ of the total.


The above graph demonstrates that:

- Of the trips that take less than 10 minutes, less than 2 in 10 are below 1 km , with $61 \%$ between 1 and 3 km and $15 \%$ between 3 and 5 km .
- Of those taking 10 to 14 minutes, just under 4 in 10 are less than 1 km . Just over 2 in 10 are between 1 and 3 km . Just under a quarter are between 3 and 5 km and just over a quarter are between 5 and 10 km .
- Of the trips taking between 15 and 29 minutes, just over a quarter are between 1 and $3 \mathrm{~km}, 15 \%$ between 3 and 5 km , just under a quarter are between 5 and 10 km and a quarter are between 10 and 20 km .
- Of those trips that take between 30 and 59 minutes, the majority are over 5 km , with fewer than 1 in 10 being 1 to 3 or 3 to $5 \mathrm{~km} .10 \%$ are between 5 and 10 km , just over $20 \%$ are between 10 and 20 and 20 to 30 km whilst just under 3 in 10 are over 30 km .
- Three quarters of all trips that take more than 60 minutes to complete are over 30 km in distance.

Trips take by demographics


Figure 113: Mode of travel by age: Urban Towns
The number of people between 18 and 24 moving from walking to car may illustrate a connection between the two main forms of transport and how they change over time. It also reflects the fact that, outside a small number of bus trips, walking and car are by far the primary means of transportation in urban towns.


Figure 114: Age by period of travel: Urban Towns
The older age groups (55+) make up the largest proportion of travel during the AM interpeak period, accounting for 2 in 5 trips during this period. Travel for the younger cohorts, those aged 4-7 and 8-12, takes up a larger proportion of travel during the AM Peak and PM interpeak periods, compared to the rest of the day.

### 9.2 Large Urban Towns Summary

Similar to the regional cities, travel in urban towns is characterised by 3 in 10 trips being for education reasons and a further quarter being for work/ business. The primary mode of transport across all trip purposes is still the car. However walking is the most popular mode for personal trips. Walking trips are most likely to occur during the AM Interpeak period.

Similar to the regional cities but in contrast to Dublin City, the AM Peak in urban towns is more significant than the homeward journey, which is spread out over 4 hours. These trips are more likely to be short in distance, with 4 in 10 trips under 3 km possibly indicative of high levels of accessibility to amenities in urban towns.

## 10 Other Urban Districts

## Key Findings

- Tuesday is the most popular day for travel in other urban areas, with a fifth of trips happening on this day.
- Work/ business trips in other urban areas are most prevalent - accounting for one quarter, with a slightly lower number of trips for social reasons.
- Work or business constitutes the main reason people travel on Monday and Tuesday.
- There is a high proportion of people travelling on the weekend for social reasons.
- The vast majority of all trips are taken by car (two thirds) or walking (3 in 10).
- Daily travel times are somewhat constant throughout the day. The two peak times however are 8-9am and 2-3pm.
- Most trips take between 1 and 9 minutes and over $50 \%$ take less than 15 minutes across all times of day.
- The majority of all trips ( $61 \%$ ) were less than 3 km .
- The car is the main mode of transport for all age groups, apart from those aged 13 24 , who are more likely to walk.
- The younger age groups, 4-12 have a larger share of the travel during the AM Peak and the PM Interpeak period.


### 10.1 Findings for Other Urban Districts

Other urban areas are defined as all areas that have a population of between 1,500 to 10,000 . They are distributed across the country. The map below shows the spread of "Other Urban Districts" from which the sample was drawn. The regional spread of the other urban areas surveyed is detailed below.


Figure 115: Regional breakdown for Other Urban Areas
366 households were surveyed, with 585 diaries collected and 3,676 trips recorded for participants in these areas.


Demographic overview


Gender


Social Class


Public Transport Tickets


Licence by Age


No. of Car Per Household


Figure 116: Other Urban Districts Demographics and Travel Habits - Overview

The population is nearly equally balanced across gender. Many respondents are between 25 and 44. There is a disproportionate number of people being from C2DEF. There is a higher number of people who hold a free travel pass at over 2 in 10 . While nearly 6 in 10 have a full licence, almost 4 in 10 do not have a licence. $13 \%$ of 18 to 24 -year olds have their full licences jumping to $77 \%$ for 25 to 34 year olds. Nearly half of respondents have 1 car and a third of households have 2 cars.

## Trips taken by days of the week

Tuesday is the most popular day for trip making in other urban areas with a fifth of trips happening on a Tuesday. Similar proportions of trips occur on Wednesday and Thursday, with travel decreasing each day towards Sunday. Weekend travel accounts for only $15 \%$ of all trips.

Travel Days of the Week


Figure 117: Travel days of the week: Other Urban Areas

## Trips taken by reason for trip

When return home trips are excluded, trips for work/ business purposes in other urban areas are most popular - accounting for one quarter. A marginally less proportion of trips are for social reasons.


Figure 118: Trip by Reason: Other Urban Areas

Travel Days by Reason for Trip


Figure 119: Reason for travel by days of the week: Other Urban Areas
Work/ business constitute the main reason people travel on Monday and Tuesday. Tuesday, Thursday and Friday see the highest number of people travelling for Education.

Shopping is balanced out throughout the week with Tuesday, Wednesday and Thursday being the most popular days for shopping trips. There is a high proportion of trip making for social purposes on Saturday and Sunday. Travel for personal reasons is considerably highest on Wednesdays at nearly 3 in 10 trips.

Trips taken by mode of transport

## Mode of Transport



Figure 120: Modes of Transport: Other Urban Areas

In these areas, the vast majority of all trips are taken by car (64\%) or walking (29\%). As few as $2 \%$ of trips are taken by bus and this household survey captured no trips by train.


Figure 121: Mode of transport by reason for journey: Other Urban Areas

The above chart indicates that across all types of journey the car is the dominant mode of transport. 7 in 10 work trips are by car with a further one fifth walking to work.

Trips taken by time of day

## Transport by Time of Day



Figure 122: Transport by Time of Day: Other Urban Areas City

Daily travel times are somewhat constant throughout the day in other urban areas. The two peak times are 8-9am and 2-3pm. 10\% of trips occur during each of these peak hours. After 3 pm travel volumes decrease steadily until midnight.


Figure 123: Mode of transport by travel period: Other Urban Areas

The dominant mode of transport across all times of day is the car. Walking is slightly more prevalent in the AM Interpeak. Car usage is highest during the AM peak and Off Peak with 7
in 10 trips during each period by car. Bus usage is highest during the PM Interpeak however; this is still comparatively low at only $3 \%$ of all trips taken during the period.

Trips taken by duration
Duration of Trips Taken


- 1 to 9 mins
10-14 mins
- 15-29 mins
- 30-59 mins
- 60+ mins

Figure 124: Duration of trips: Other Urban Areas


Figure 125: Time of Travel by Peak/Interpeak/Off Peak: Other Urban Areas City

Most trips take between 1 and 9 minutes with over $50 \%$ taking less than 15 minutes across all times of day. Across all time periods less than 20\% of trips take over 30 minutes with the expectation being the PM peak where $25 \%$ trips are longer than 30 minutes.

Trips taken by distance
Distance of Journey


Figure 126: Distance of journey: Other Urban Areas

The majority of all trips (61\%) were less than 3 km . Across the remaining distances there is an even spread of trips taken. Trips over 30 km account for the lowest proportion of the total at 5\%.

| 90\% Distance of Journey by Time Taken |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 80\% |  |  |  |  |  |
| 70\% |  |  |  |  |  |
| 60\% |  |  |  |  |  |
| 50\% |  |  |  |  |  |
| 40\% |  |  |  |  |  |
| 30\% |  |  |  |  |  |
| 20\% |  |  |  |  |  |
| 10\% |  |  |  |  |  |
| 0\% | 1 to 9 mins | 10 to 14 | 15 to 29 | 30 to 59 | $60+$ |
| - 0 to 0.99 km | 32\% | 12\% | 3\% | 1\% | 0 |
| - 1 to 2.99 km | 60\% | 55\% | 50\% | 11\% | 1\% |
| - 3 to 4.99 km | 5\% | 14\% | 7\% | 14\% | 7\% |
| - 5 to 9.99 km | 2\% | 13\% | 9\% | 4\% | 4\% |
| - 10 to 19.99 km | 0 | 6\% | 22\% | 12\% | 1\% |
| - 20 to 29.99 km | 0 | 0 | 8\% | 24\% | 4\% |
| - 30km+ | 0 | 0 | 1\% | 35\% | 83\% |

Figure 127: Trips by Duration and Time: Other Urban Areas

This graph demonstrates that:

- Of the trips that take less than 10 minutes just over 3 in 10 are less than 1 km whilst 6 in 10 are between 1 and 3 km .
- Of those taking 10 to 14 minutes just over 1 in 10 are less than 1 km , just over 5 in 10 are between 1 and 3 km and between $14 \%$ and $13 \%$ are between $3-5$ and $5-10 \mathrm{~km}$.
- Of the trips taking between 15 and 29 minutes approximately half are between 1 and 3 km , less than 1 in 10 are between $3-5$ and $5-10 \mathrm{~km}$ and just over 2 in 10 are between 10 and 20 km .
- Of those trips that take between 30 and 59 minutes; the majority are over 5 km , a quarter are between 20 to 30 km and $35 \%$ are 30 km or greater.
- Over 8 in 10 of all trips taking more than 60 minutes are over 30 km .

Trips taken by demographics


Figure 128: Age by mode of transport: Other Urban Areas
The car is the main mode of transport for all age groups except the 13-24 year olds. For these cohorts walking is most popular and makes up over half of all their trips. Car usage is highest for 45-54 year olds with 8 in 10 of this cohorts trips being by car.

The younger age groups (4-12) have a larger share of the travel during the AM Peak and the PM Interpeak period. This constitutes one quarter of all travel during the AM Peak and one
fifth during the PM Interpeak. Older cohorts are more likely to travel during the AM Interpeak. 55 years and older account for just under half of all trips during this period.


### 10.2 Summary of Other Urban Areas

Those living in other urban areas are similar to Dublin City and the Regional Cities in their higher levels of walking. There is no dominant trip purpose within the regions. Work/ business and social trips are the most popular purposes at $25 \%$ each. The rates of shopping and education trips are roughly the same at one fifth each. This is in contrast to the dominant role of work/ business in Dublin City and the GDA and education in the Regional Cities and urban towns. Travel patterns in other urban areas however are much more varied.

This is reflected in the travel volumes across the time of the day, with no single hour standing out as a peak. Travel volumes do not appear confined to the standard 'working week'. This is more evidence of the varied travel patterns of in these regions.

## 11 Long Distance Trips

## Findings for Long Distance Trips

Details of 2,771 long distance trips were recorded during the household survey. These are defined as trips over 50 km in distance from a person's home location. The regional spread of long distance trips was as follows:


Figure 129: Regional breakdown of long distance trips
The age and working status breakdown of those who took trips over 50 km is detailed below:


Figure 130: Age and working status breakdown of long distance trips

One third of the long-distance trips were taken as a single trip and not repeated over the course of the three-day travel diary. A further $40 \%$ of long distance trips were undertaken
between 2 to 5 times overall. For 44\% of respondents the trip had only been taken once in the previous three months. An additional one fifth of people took the long distance trip twice, highlighting the infrequency of trips over 50 km .


Figure 131: No. of long-distance trips taken overall


Figure 132:No. of times long-distance trip taken in last 3 months

The primary reason for long-distance trips was social. Social purposes account for 6 in 10 of the long distance trips undertaken. The car is the most widely used mode - accounting for three quarters of long-distance trips. Most long-distance trips are made by one person with a further one third of trips involving two people.


Figure 133: Reason for long-distance journey and mode of transport

Long-distance trips are most likely to be between $50-75 \mathrm{~km}$. One quarter of long distance trips are between $50-75 \mathrm{~km}$. A further 2 in 5 trips range between $75-150 \mathrm{~km}$ and one quarter are between $150-250 \mathrm{~km}$. There is a low incidence ( $10 \%$ ) of long distance trips above 250 km .


Figure 134: Distance travelled on long-distance trips

The vast majority of long-distance trips take over an hour, only 1 in 10 take less than an hour. The car is the most widely used mode for long-distance trips and accounts for three quarters of all trips taken. At 8\%, bus is the next most used mode for long distance trips.


Figure 135: Duration of journey and mode of transport for long-distance trips

Appendix A - Weighting

|  |  | Population data (QNHS, 2017, Q1 to Q3) |  | Unweighted Survery Data National Travel Survey completed Sample |  |  | Weighted Survey Data |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Using 'gross' |  |  |
|  |  | A. N cases | B. Pct |  |  |  | C. $N$ cases | D. Pct | E. Diff (D-B) | F. N (grossed) | G. Pct | H. Diff (G-B) |
| Male | 4-8 | 183202 | 4\% | 204 | 2\% | -2\% | 180913 | 4\% | 0\% |
|  | 9-15 | 233748 | 5\% | 304 | 3\% | -2\% | 225831 | 5\% | 0\% |
|  | 16-19 | 126722 | 3\% | 218 | 2\% | -1\% | 125080 | 3\% | 0\% |
|  | 20-24 | 140961 | 3\% | 233 | 2\% | -1\% | 139229 | 3\% | 0\% |
|  | 25-34 | 310686 | 7\% | 597 | 6\% | -1\% | 317093 | 7\% | 0\% |
|  | 35-44 | 372710 | 8\% | 864 | 8\% | 0\% | 368010 | 8\% | 0\% |
|  | 45-54 | 316144 | 7\% | 715 | 7\% | 0\% | 308602 | 7\% | 0\% |
|  | 55-59 | 135977 | 3\% | 334 | 3\% | 0\% | 134794 | 3\% | 0\% |
|  | 60-64 | 120315 | 3\% | 293 | 3\% | 0\% | 120427 | 3\% | 0\% |
|  | 65-74 | 187948 | 4\% | 723 | 7\% | 3\% | 196154 | 4\% | 0\% |
|  | 75+ | 116043 | 3\% | 393 | 4\% | 1\% | 128600 | 3\% | 0\% |
| Female | 4-8 | 176745 | 4\% | 220 | 2\% | -2\% | 169420 | 4\% | 0\% |
|  | 9-15 | 221053 | 5\% | 315 | 3\% | -2\% | 211902 | 5\% | 0\% |
|  | 16-19 | 122511 | 3\% | 195 | 2\% | -1\% | 119839 | 3\% | 0\% |
|  | 20-24 | 136070 | 3\% | 250 | 2\% | -1\% | 134661 | 3\% | 0\% |
|  | 25-34 | 330005 | 7\% | 753 | 7\% | 0\% | 333376 | 7\% | 0\% |
|  | 35-44 | 384965 | 8\% | 996 | 10\% | 1\% | 379349 | 8\% | 0\% |
|  | 45-54 | 319836 | 7\% | 758 | 7\% | 0\% | 311571 | 7\% | 0\% |
|  | 55-59 | 138007 | 3\% | 355 | 3\% | 0\% | 137918 | 3\% | 0\% |
|  | 60-64 | 121785 | 3\% | 357 | 3\% | 1\% | 120975 | 3\% | 0\% |
|  | 65-74 | 192725 | 4\% | 774 | 8\% | 3\% | 204453 | 5\% | 0\% |
|  | 75+ | 154228 | 3\% | 438 | 4\% | 1\% | 174190 | 4\% | 0\% |
| Male | At work | 1140689 | 31\% | 2588 | 28\% | -3\% | 1112866 | 30\% | -1\% |
|  | Unemp | 124321 | 3\% | 222 | 2\% | -1\% | 135063 | 4\% | 0\% |
|  | Student | 173147 | 5\% | 282 | 3\% | -2\% | 171514 | 5\% | 0\% |
|  | Retired | 279203 | 7\% | 1097 | 12\% | 4\% | 298973 | 8\% | 0\% |
|  | Other/home duties | 110146 | 3\% | 181 | 2\% | -1\% | 119572 | 3\% | 0\% |
| Female | At work | 957907 | 26\% | 2151 | 23\% | -2\% | 939436 | 25\% | -1\% |
|  | Unemp | 76458 | 2\% | 206 | 2\% | 0\% | 83344 | 2\% | 0\% |
|  | Student | 175551 | 5\% | 299 | 3\% | -1\% | 171839 | 5\% | 0\% |
|  | Retired | 226297 | 6\% | 1066 | 12\% | 5\% | 245801 | 7\% | 0\% |
|  | Home duties | 383071 | 10\% | 1041 | 11\% | 1\% | 388974 | 10\% | 0\% |
|  | Other | 80848 | 2\% | 113 | 1\% | -1\% | 86938 | 2\% | 0\% |
| All | BMW | 1279838 | 28\% | 3243 | 32\% | 3\% | 1279358 | 28\% | 0\% |
|  | Dublin | 1210611 | 27\% | 2841 | 28\% | 1\% | 1241175 | 27\% | 1\% |
|  | REST | 2051937 | 45\% | 4205 | 41\% | -4\% | 2021852 | 45\% | -1\% |
| All | 1 person over 16 | 578021 | 13\% | 2897 | 28\% | 15\% | 637148 | 14\% | 1\% |
|  | 2 persons over 16 | 2381935 | 52\% | 5410 | 53\% | 0\% | 2383106 | 52\% | 0\% |
|  | 3 persons over 16 | 878596 | 19\% | 1286 | 12\% | -7\% | 859293 | 19\% | 0\% |
|  | 4 persons over 16 | 479983 | 11\% | 480 | 5\% | -6\% | 459882 | 10\% | 0\% |
|  | 5+ persons over 16 | 223851 | 5\% | 216 | 2\% | -3\% | 202958 | 4\% | 0\% |
| Cars in H | None | 265439 | 16\% | 1520.6321 | 15\% | -1\% | 546893.2682 | 15\% | -1\% |
|  | One | 717978 | 42\% | 5177.4776 | 50\% | 8\% | 1504226.962 | 42\% | -1\% |
|  | Two+ | 714248 | 42\% | 3590.8903 | 35\% | -7\% | 1562784.378 | 43\% | 1\% |

## Appendix B Household Questionnaire



Good morning/afternoon/evening. I am $\qquad$ from Amárach Research. We are carrying out a survey on behalf of the National Transport Authority, about travel and transport in Ireland, which will help with future transport planning. I would be grateful for your help in answering some questions and for each member of your household to complete a three-day travel diary. Everyone taking part will be entered in a series of prize draws. The initial survey now should take no longer than 10 to 15 minutes.

## RECRUITMENT

Q. 1 Record Gender (do not ask)

Q. 2 Are you Aged 16 or over (Only ask if in doubt of age of respondent - record as yes/no. Exact age not required)

INTERVIEWER: If not over 16 ask for someone in the household who is $\mathbf{1 6}$ or over

| Yes | 1 |
| :--- | :---: |
| No | 2 |

Q. 3 How many people, including yourself and any children, are living in this household? (Count everyone who uses the household as their primary residence)

Q. 4 How many people in each of these age groups are living in this household including yourself? (Interviewer check that the total matches the response to Q3) If NONE recode as " 0 ".

|  | Record exact <br> number |
| :--- | :---: |
| 3 and under |  |
| Between 4-10 years |  |
| Between 11-15 years |  |
| Between 16-20 years |  |
| Between 21-25 years |  |
| Between 26-30 years |  |
| Between $31-35$ years |  |
| Between $36-40$ years |  |
| Between $41-45$ years |  |
| Between $46-50$ years |  |
| Between $51-55$ years |  |
| Between $56-60$ years |  |
| Between 61-65 years |  |
| Between 66-70 years |  |
| 71 years and over |  |

D2 How long have you lived at this address?
INTERVIEWER: record number of years if less than a year enter as 0 If refused code as 99 $\square$
D3 What type of house do you have? (SINGLE CODE)

## USE SHOW CARD D3

INTERVIEWER: Note, 'house' includes bungalows

| Detached house | 1 |
| :--- | :---: |
| Semi-detached house | 2 |
| Terraced house (one or more floors) | 3 |
| Detached bungalow | 4 |
| Semi-detached bungalow | 5 |
| Apartment/flat | 6 |
| Other (Please specify: | 7 |

D4a Do you or anyone in your household have access to the internet in your household, any device e.g. mobile phone, desktop, laptop, palmtop? (SINGLE CODE)

| Yes | 1 |
| :--- | :--- |
| Not in household, but have internet access at work/education/other | 2 |
| No internet access | 3 |

IF D4a code 1
D4b What types of internet connections are used at home? (MULTI CODE)

| Fixed broadband connections e.g. cable, fibre optic | 1 |
| :--- | :--- |
| Mobile broadband connects via mobile phone network that is at least <br> 3G | 2 |
| Other, narrowband connections (less than 3G, GPRS, dial-up access <br> over older type telephone, other connection | 3 |

D5
Are you the chief income eamer in this household?

| Yes, chief income eamer | 1 |
| :--- | :--- |
| No, not chief income earner | 2 |

ASK ALL
D6a1 What is the occupation of the chief income earner (/your occupation - if Respondent is the Chief income earner)?
INTERVIEWER: If manager/self-employed state no. of employees.
Specify: qualifications/training if farmer, state no. Of acres
$\square$

As part of our quality control procedures to ensure that this research has been carried out in the correct manner, can I take your address please?


Can I also have your telephone number? If refused code as 99


D10 Are you willing to be re-interviewed on a similar three-day survey in the future?

| Yes | 1 |
| :--- | :--- |
| No | 2 |

D11 Can I also take your name? $\square$

## INTERVIEWER READ OUT:

Thank you for taking part in this survey. We have now given you: $\qquad$ (from Q4 insert number of people aged 4 or older who live in the household up to a maximum number of 6) diaries to be completed by you and the other members of this household as discussed.

Everyone in the household age 4 or over is required to complete the three-day travel diary; those aged between 4 and 15 (inclusive) are to be assisted by their parent or guardian in completing it. I'm going to take you through how to complete this three-day travel diary now.

I will call back to collect the diary/diaries on a day to be agreed with you within the next 7 days from today.
QA6 Record the age and gender for each member of the household who will complete a diary.
INTERVIEWER: please number the dairies on the top right corner as per table below.
GENDER: 1 FOR MALE, 2 FOR FEMALE.
EXACT AGE. Make sure age is typed in correctly. For Refusal use code 99.

| DIARY NUMBER | GENDER | EXACT AGE |
| :--- | :--- | :--- |
| 01 年 |  |  |
| 02 |  |  |
| 03 |  |  |
| 04 |  |  |
| 05 |  |  |
| 06 |  |  |

THANK YOU FOR YOUR TIME. GOODBYE.
A1 Enter Interviewer number
\& Interviewer name

| NAME | NUMBER |
| :---: | :---: |
|  |  |

## DATE OF COMPLETED SURVEY



## Appendix C Household Travel Diary



Udarás
Náisiúnta lompair
Natonal Transport Authority

Survey Being Conducted by:
Amárach Research
11 Kingswood Business Centre, 11 Kingswood Business Centre,
Kingswood Road,
Citywest Business Campus,
Dublin 24.

## Dublin 24.

## amárach research


A trip is defined as a one-way journey of 50 metres or more made for a specific purpose, It has an origin and destination and excludes children playing outdoors on bicycle or on foot.

Include all trips by different types of transport mode (e.g. walking, cycling. scheduled bus, school bus,
DART/train, Luas, car/van, taxihackney, motorbike/scooter/moped.)
A new trip starts when the journey purpose changes. It starts from where the last trip finished.
All trips made by household members aged four or over should be recorded for the same three days.
A long trip is a joumey of over 50 km from your home location in ONE direction and does not include the
round/lretum trip.
People who drive for a living, e.g. bus drivers, taxi drivers, delivery drivers, couriers etc. should ONLY connection with their job do not need to be recorded individually, just the total distance travelled each day.

The TRAVEL DAYS are those indicated by your interviewer and the day starts at 4am until 3.59am. For example, if you were on night shift, your journey Home from Work in the morning would be the first trip of the day.

Where children aged four or over are not able to complete their diaries themselves, aduits should complete
by someone eise in the household. We do not require a travel diary for children under four years old.

| DIARIES COMPLETED BY CHILDREN: |
| :--- |
| Consent for completion by 4-15 year olds |
| Name of Parent/Guardian $\quad \square$ |
| Signature of Parent/Guardion $\quad$ |

$=1$.

National Household Travel Survey
...CKC... JND .... JRK..... ON

| Q4. Do you have any of the following types of public transport ticket for any form of transport? (Circle all that apply) |  |
| :---: | :---: |
| Weekly ticket | 1 |
| Monthly ticket | 2 |
| Annual ticket | 3 |
| LEAP card (active with credit) | 4 |
| LEAP card (inactive with no credit) | 5 |
| Free travel pass | 6 |
| Other type of ticket | 7 |
| Do not use public transport | 8 |
| None of these | 9 |
| Q5. Do you own a (working) bicycle? |  |
| Yes | 1 |
| No | 2 |
| Q6. If yes, where do you store your blcycle at home: |  |
| Garden shed | 1 |
| Internal room | 2 |
| Locked/unlocked in garden | 3 |
| Other (Please provide details)......... | 98 |
| Q7. Are you part of a public/shared bike scheme (for example the Dublin Bikes scheme)? |  |
| Yes | 1 |
| No | 2 |


| Q1. Which of these best reflects your present status? (Circle one) |
| :--- |
| Working for payment or profit 1 <br> Working Part-Time for payment or profit 2 <br> a. Days worked per week: please enter number of days.......  <br> b. Hours worked per day: please enter number of hours......  <br> Looking for first regular job 3 <br> Unemployed 4 <br> Primary school student 5 <br> Secondary school student 6 <br> University/College student full-time 7 <br> University/College student part-time 8 <br> Looking after home/family 9 <br> Retired from employment 10 <br> Unable to work due to permanent sickness or disability 11 <br> Other (Please provide details) ........ 98 <br> Q2. Do you hold a driving licence which allows you to drive a car in Ireland? (Circle one)  <br> Yes (Full Licence - longer than 2 years) 1 <br> Yes (Full Licence - less than 2 years: Newly Qualified) 2 <br> Yes (Provisional Licence) 3 <br> No 4Q3. Are you a member of a car-sharing scheme? (Circle all that apply) <br> Lift-sharing schemes, operated online or through work or local <br> community <br> Car club, with registered members, giving you access to car club vehicles 2 <br> Other (please provide details) ............ 98 <br> No 99 |

National Household Travel Survey

National Household Travel Survey

Instructions - Please read caretully

| Time Spent Travelling - Minutes (H) |
| :--- |
| Please give time spent travelling, on a "bus", "in a car" etc. Do NOT include time spent <br> waiting for buses, trains etc. |
| Number in Party (1) |
| Including yourself, please record the number of people travelling together on each trip. <br> and distinguish between: |
| - Those from your household aged 4 or over including yourself (the same trip should be |
| in their diary) |
| - Those from your household aged under 4 (who will have no diary) |
| - Others from another household, e.g, grandparents /childminder taking children to |
| school. (Do not count the bus driver or other passengers!) |

$\quad$ If Car/ /Van (J/K)
For journeys by CAR, VAN, or other mechanised mode (NOT public transport) please
record (by ticking the box)
a: whether you were the driver or a passenger and
b: if the vehicle was parked at the destination, was it free or paid. (if you just stopped
without parking, e.g. pickup or drop off, leave blank)
c. where you parked if you transferred from car to public transport (e.g. name of rail/Luas
station/stop)

| Availability of Car (L) |
| :--- |
| If you did not use a CAR, VAN OR MOTORBIKE for your trip please record if there was |
| one available that you could have used. |

Please think of round trips like this as TWO trips - the outwand part - the destination is
Please think of round trips like this as TWO trips - the outward part - the destination is
the point furthest from home, and the return part has the dessination and purpase 'HOME'

DIARY FOR DAY 1

PAGK: OK L.A. I

DIARY FOR DAY 2
PAGE 2 OF 4

MK: NKL...
PAGE 4 OF 4

DIARY FOR DAY 3
PAGE 2 OF 4

National Household Travel Survey
-17-
PAGE 4 OF 4 PAGES

Q8 How often have you used the following modes for the longest part of long distance trips in the last three months?
Please include the number of trips for all that apply for each purpose: A) Business and/or B) Leisure. If not relevant, please enter zero.

| Mode of Travel | Q8a) Purpose - Business | Q8b) Purpose - Leisure |
| :--- | :--- | :--- |
| Bicycle |  |  |
| Bus or coach |  |  |
| Train (including DART |  |  |
| Luas |  |  |
| Car/Van |  |  |
| Motorbike |  |  |
| Taxi/Hackney |  |  |
| Aeroplane |  |  |
| Ferry |  |  |
| Other (Please specify) ..................................................... |  |  |

E/A...AJJ..ANE.

E. PAGE 4 OF 4

National Household Travel Survey


[^0]:    ${ }^{1}$ http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/saveselections.asp

[^1]:    ${ }^{2}$ https://www.nationaltransport.ie/planning-policy/greater-dublin-areatransport-strategy-2016-2035/ :

[^2]:    ${ }^{3}$ Detailed description of RANSAM see Whelan (1979) RANSAM: A Random Sample Design for Ireland here and
    Whelan and Savva (2013) Design and Methodology of The Irish Longitudinal Study on Ageing here

[^3]:    ${ }^{4}$ Characteristics of the clusters in terms of urban-rural location, age structure and socio-economic characteristics are derived by matching the CSO Census Small Area Population Statistics details to the clusters.

[^4]:    ${ }^{5}$ QNHS Data from Q1 to Q3 was used.

[^5]:    ${ }^{6}$ For details see the Methodology Section.

[^6]:    ${ }^{7}$ Note: because controls for 'cars' for the QNHS is calculated at Household level and the figures for the weighted survey data are at individual level - match will not be exact.

[^7]:    ${ }^{8}$ The travel periods mentioned will be classified as the following throughout the whole report: AM Peak (79.59 am ), AM Interpeak (10-12.59am), PM Interpeak (13-15.59pm), PM Peak (16.00pm-18.59pm) and Off Peak (19.00pm-6.59am)

[^8]:    Figure 51: Distance travelled by duration of journey: Rural Areas

[^9]:    ${ }^{9}$ North Inner City, Clontarf, Beaumont-Donaghmeded, Ballymun, Cabra-Finglas, Ballyfermot-Drimnagh, Crumlin-Kimmage, Rathgar-Rathmines \& Pembroke South Dock.

[^10]:    ${ }^{10}$ On average 4\% did not answer.

