Cycling in Northern Ireland 2016/17

**Findings from the Northern Ireland
Continuous Household Survey 2016/17**

Department for
Infrastructure
An Roinn
Bonneagair
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Contents

NISRA
Northern Ireland
Statistics and Research Agency
Gníomhaireacht Thuaisceart Éireann
um Staitisticí agus Taighde

Key Points

32% of respondents had access to a bicycle,

with 30% of those having cycled in the last 4 weeks.

63% of those who had cycled were male, and 37% were female.

The most popular reasons stated by respondents for cycling were for exercise (80%) and for enjoyment (80%).

Four types of cyclist:

3%
14%
19%
64%

■ The Strong and the Fearless   ■ The Enthused and the Confident   ■ The Interested but Concerned
■ No Way No How

Other reasons given were that it's cheap, it's convenient, it's environmentally friendly, and it saves time. Some people said they cycle to ensure their children are safe, some because they have no car, and others because either they don't like public transport, or there is none where they live.
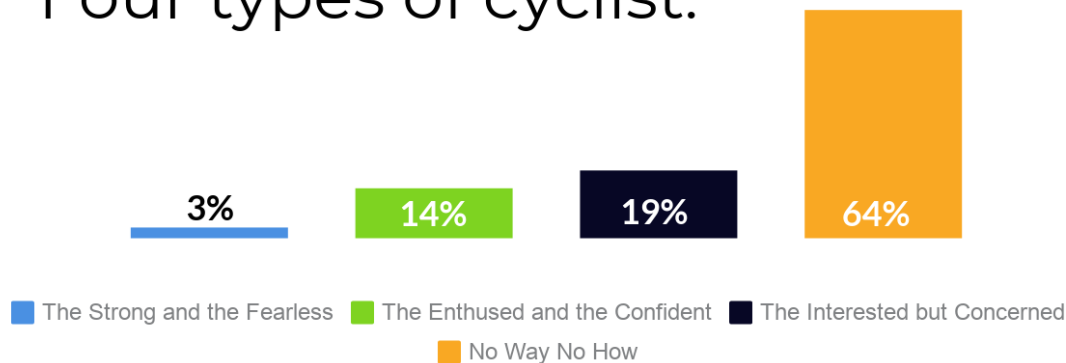
Introduction

The Department for Infrastructure's (DfI) Walking and Cycling Unit, which was established in November 2013, provides a focus and co-ordination role for cycling issues and cycling related activities. The Unit will work towards making cycling an integral part of network planning and development and ensure that cycling provision is a key element in both strategy and delivery. It will also promote active travel.

The Unit has a key role in delivering the Vision for Cycling set out in the Bicycle Strategy for Northern Ireland (August 2015): 'To establish a cycling culture in Northern Ireland, to give people the freedom and confidence to travel by bicycle, and where all road users can safely share space with mutual respect.'

DfI commissioned questions in the Northern Ireland Continuous Household Survey in 2016/17 to ascertain the extent of and attitudes to cycling in Northern Ireland. The findings are reported in this publication.

Whilst this set of questions on cycling in Northern Ireland was included in the May 2015 Northern Ireland Omnibus Survey, 2016/17 was the first year that the question set was included in the Continuous Household Survey (CHS). Whilst both surveys are representative of the Northern Ireland population, due to differing methodologies the surveys are not directly comparable, however some 2015 Omnibus results have been included for illustrative purposes (Appendix A).

Statistics are presented on the proportion of people aged 16 and over in Northern Ireland who own or have access to a bicycle, who have cycled in the last four weeks (and how much they have cycled in the last four weeks), why they cycle, and their attitudes towards cycling.

1. Access to a bicycle

3,259 respondents were asked if they had access to a bicycle.

- 27% of respondents own a bicycle.
- One in fifty (2%) respondents have use of a bicycle owned by someone else in the household whilst a further 2 percent have use of a bicycle owned by someone else outside the household.
- Just under seven tenths (68%) of respondents said that they have no use of a bicycle.

Figure 1: Access to a bicycle

27% own a bicycle

2% have use of a bicycle owned by someone else in the household

2% have use of a bicycle owned by someone else outside the household

68% have no use of a bicycle
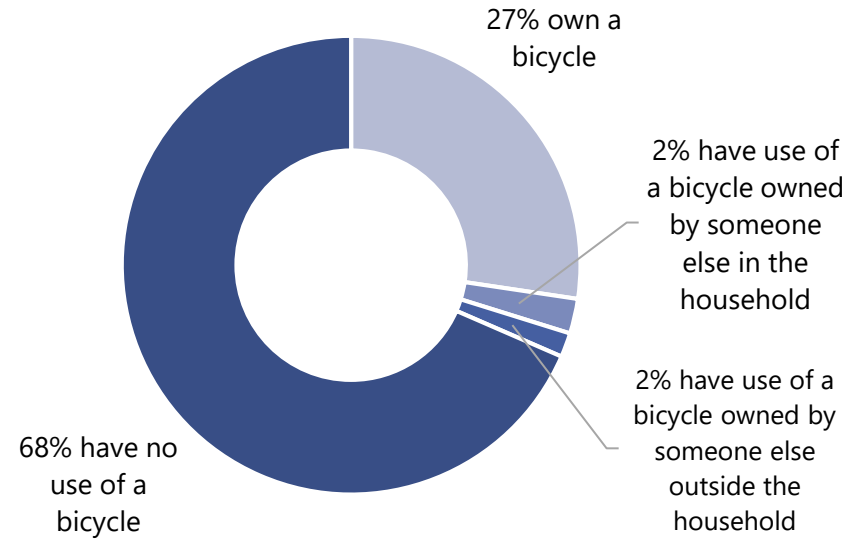
Bicycle Ownership

By age group

- Respondents aged 45-54, and 16-24 were most likely to own a bicycle (38% and 37% respectively), followed by those aged 35-44 (34%).

- Just under a quarter of respondents in both the age bands 25-34, and 55-64 owned a bicycle (both 23%), with just over one in ten (11%) of those aged 65 or over.

By gender
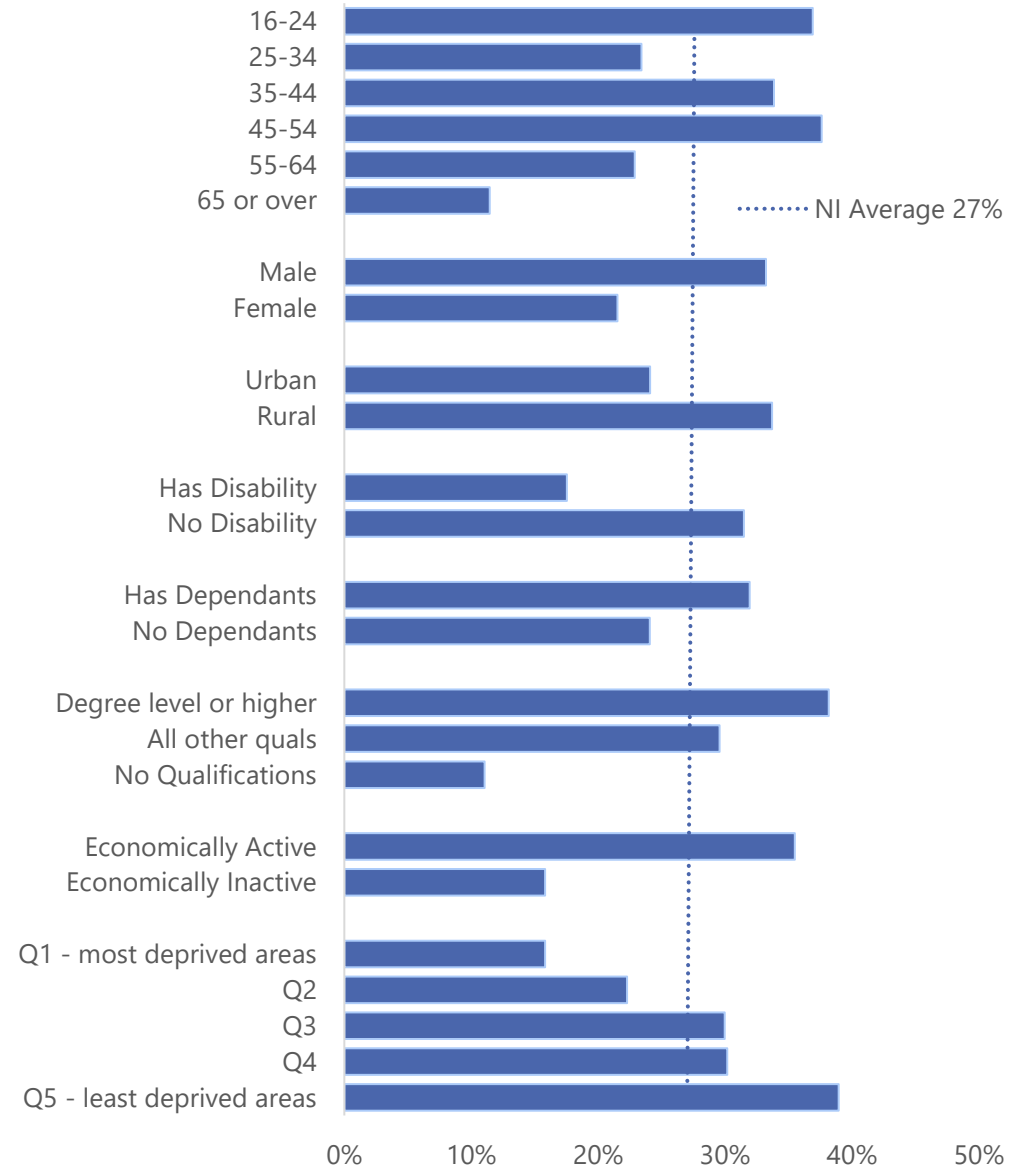
- Male respondents (33%) were more likely to own a bicycle than female respondents (22%).

By urban/rural

- Respondents from a rural area (34%) were more likely than those from an urban area (24%) to own a bicycle.

- It was more likely that respondents from an urban area (72%) have no use of a bicycle compared to those from a rural area (62%).

Figure 2: Percentage who own a bicycle

By disability status

- 18% of respondents with a disability reported owning a bicycle, compared to 31% of those with no disability.

By dependent status

- 32% of respondents with dependants reported owning a bicycle, compared to 24% of those with no dependants.

By economic activity

- 35% of respondents who were economically active reported owning a bicycle, compared to 16% of those who were economically inactive.

By qualification level

- Respondents with a degree level or higher qualification were most likely to own a bicycle (38%), and those with no qualifications were least likely to own a bicycle (11%). 30% of those respondents with all other qualifications owned a bicycle.

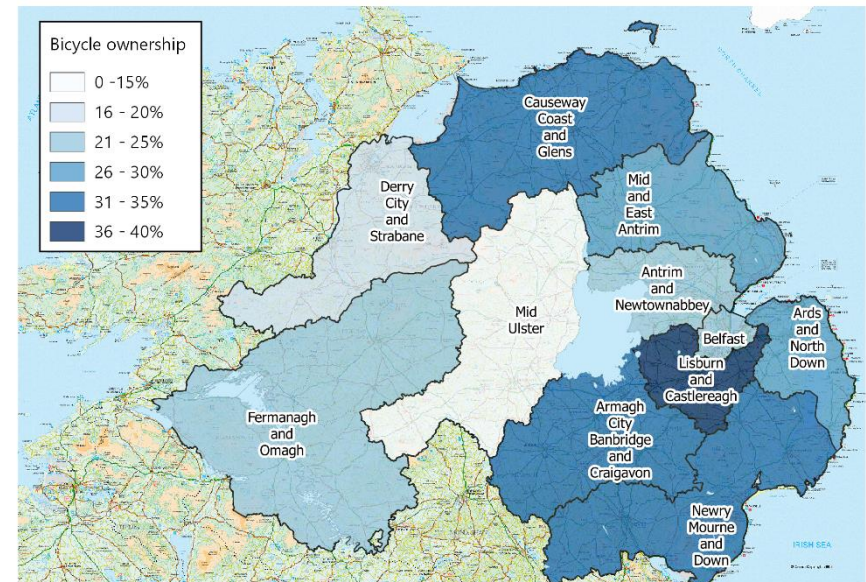**By deprivation (NIMDM 2010)**

- Those in the 20% most deprived areas are least likely to own a bicycle (16%), and those in the 20% least deprived areas are most likely to own a bicycle (39%).

By Local Government District

- Bicycle ownership was highest in Lisburn & Castlereagh District Council (36%) and lowest in Mid Ulster District Council (14%).

Figure 3: Percentage who own a bicycle

2. Whether cycled in the last 4 weeks

The 932 respondents who owned or had access to a bicycle were asked if they had cycled in the last 4 weeks.

- 30% of respondents had cycled in the last four weeks.

- Male respondents (36%) were more likely than female respondents (22%) to have cycled in the last four weeks.

- Those in urban areas (33%) were more likely than those in rural areas (26%) to have cycled in the last 4 weeks.

- Those with no disability (32%) were more likely to have cycled in the last 4 weeks than those with a disability (23%).

Figure 4: Percentage who have cycled in the last 4 weeks

30

70

■ Yes

■ No
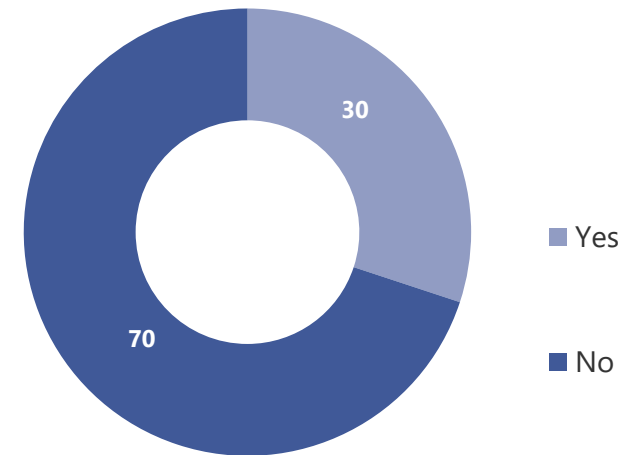
- Cyclists are predominantly male, with only 35% of those who had cycled in the last 4 weeks being female, despite females accounting for 51% of the NI population (aged 16 or over)[11].

More than half of cyclists (53%) were between the ages of 35-54, whilst this age groups accounts for 34% of the general population (aged 16 or over)[1].

FIGURE 5: WHETHER CYCLED IN THE LAST 4 WEEKS, BY GENDER (%)

	Female	Male
CYCLED IN LAST 4 WEEKS	37	63
NI POPULATION	51	49

FIGURE 6: WHETHER CYCLED IN THE LAST 4 WEEKS, BY AGE (%)

	16-24	25-34	35-44	45-54	55-64	65+
CYCLED IN LAST 4 WEEKS	9	15	26	27	13	10
NI POPULATION	15	17	16	18	14	20
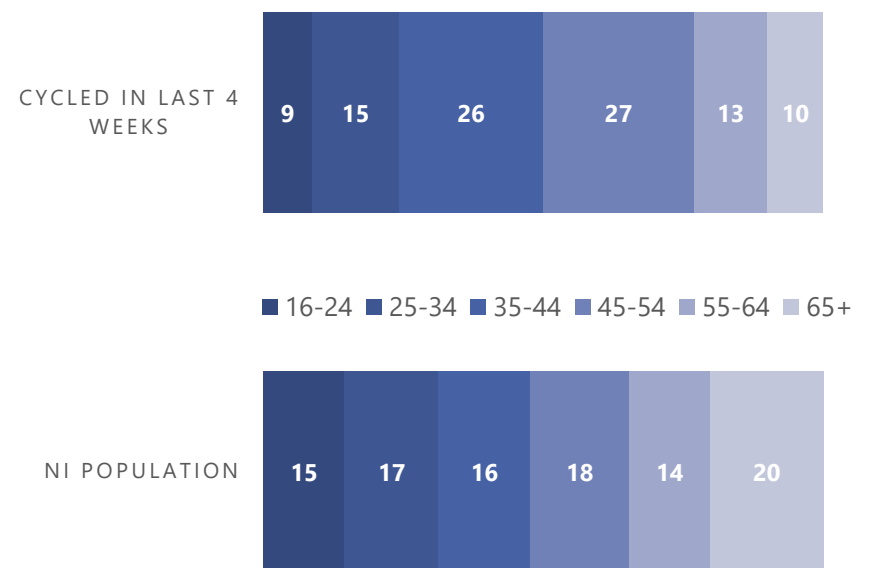
[1] Source: NISRA 2016 Mid-year population estimates

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3. Frequency of cycling in the last 4 weeks

The 271 respondents who had cycled in the last 4 weeks were asked how often they cycled.

- 31% cycled at least once a fortnight, 30% cycled at least once a week, 17% cycled once every 4 weeks, 17% cycled 2-4 days a week and 6% cycled 5-7 days a week.

The number of respondents who had cycled in the last 4 weeks is too small to allow for any further breakdown/analysis.

Figure 7: Frequency of cycling (%)

5 7 days a week, 6

2 4 days a week, 17

At least once a week, 30

At least once every fortnight, 31

Once every 4 weeks, 17

4. Reasons for cycling

The 271 respondents who cycled in the last 4 weeks were asked why they cycled. Respondents were able to choose more than one reason.

- The most popular reasons stated by respondents for cycling were for exercise (80%) and for enjoyment (80%).

- Just over a quarter (26%) stated that 'it is a cheap way to travel (there are no costs for fuel, car parking or bus/ train fares)', over a fifth (22%) said 'I find it convenient (I live close to work, education, shops)', 17% stated they cycle 'for environmental reasons', 17% said 'it saves time (e.g. to avoid traffic jams)', and 13% said 'I have no car'.

- Further reasons given included, 'I cycle with my children to ensure they are safe' (12%), 'I cannot drive' (10%), 'I don't like using public transport' (6%), 'there is no suitable public transport where I live' (2%), and less than half a percent of respondents gave other reasons.

Figure 8: Reasons for cycling (%)
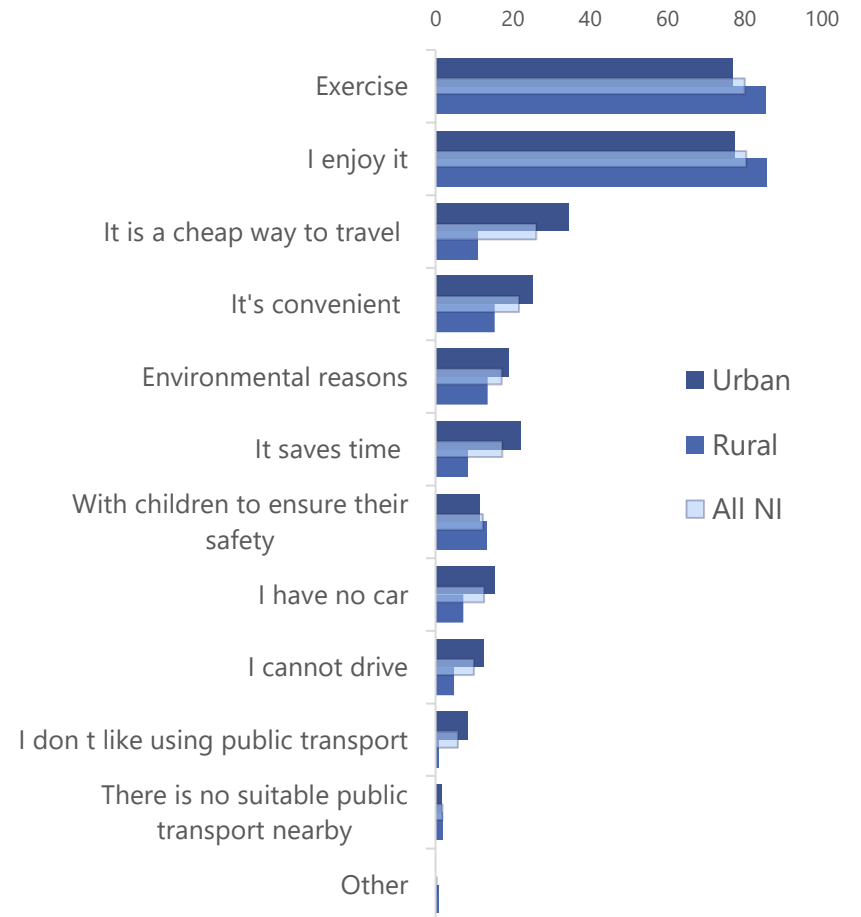
5. Attitudes to cycling

All respondents were shown four statements, and asked which best describes their attitude to cycling. These statements are detailed below. Each of the statements can be associated to a general category of cyclists taken from the 'Four Types of Cyclists' typology developed by the Portland Office of Transportation. For conciseness, subsequent results will be reported using the four general categories: 'The Strong and the Fearless', 'The Enthused and the Confident', 'The Interested but Concerned' and 'No Way No How'.

'The Strong and the Fearless'

I will ride my bicycle regardless of roadway conditions. I am a cyclist; cycling is a strong part of my identity and I am generally undeterred by road conditions.

'The Interested but Concerned'

I would like to use my bicycle more but I am afraid to cycle. I don't like the cars travelling at speed and I get nervous thinking about what would happen to me on a bicycle when a car passes too closely and/or too fast. I would cycle if I felt safer on the roads - if cars were slower and less frequent and if there were more quiet streets with few cars and paths without any cars at all.

Four Types of Cyclist
(Portland, Oregon Office of Transportation)

'The Enthused and the Confident'

I am comfortable riding my bicycle and sharing the roadway with other vehicles. I could be attracted to more regular cycling if the barriers on shorter trip distances continued to be addressed such as better bicycle facilities (more cycle lanes, cycle paths, cycle priority at junctions) and better end-of-trip facilities (such as showers at work, safe bicycle storage etc).

'No Way No How'

I am not interested in cycling at all, as I am not able, or simply have no interest.

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Further information is available at:
https://www.portlandoregon.gov/transportation/article/158497

- Almost two thirds (64%) of all respondents were in the 'No Way No How' group. Just under a fifth (19%) were in 'The Interested but Concerned' group, 14% in 'The Enthused and the Confident' group and 3% in 'The Strong and the Fearless' group.

Figure 9: Four types of cyclist (%)

'The Strong and the Fearless', 3

'The Enthused and the Confident', 14

'The Interested but Concerned', 19

'No Way, No How', 64

By age group

- Respondents aged 16-24 (5%) and 45-54 (4%) were more likely to be in 'The Strong and the Fearless' group than those aged 65 and over (less than 1%).

- Respondents aged 16-24 (18%) and 35-44 (18%) were more likely to be in 'The Enthused and the Confident' group than those aged 55-64 (10%) and 65 and over (4%).

- Respondents aged 16-24 (20%), 25-34 (20%), 35-44 (22%), and 45-54 (23%) were more likely to be in 'The Interested but Concerned' group than those aged 65 and over (13%).

- Respondents aged 65 and over (82%) were more likely to be in the 'No Way No How' group than all other age groups.

By gender

- Male respondents were more likely to be in 'The Strong and the Fearless' (5%) and 'The Enthused and the Confident' (19%) groups than female respondents (1% and 8% respectively).

- Female respondents (69%) were more likely to be in the 'No Way No How' group than male respondents (59%).

Figure 10: No Way, No How
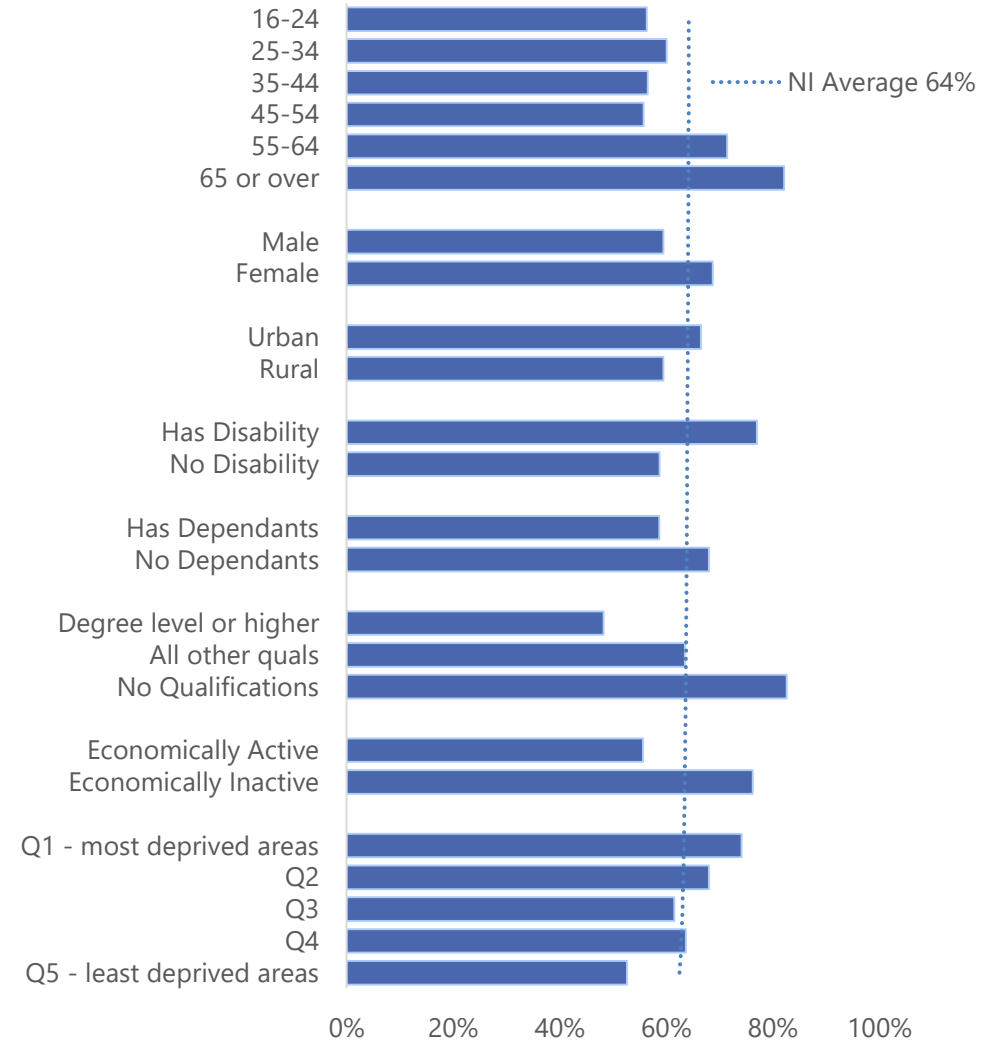
By urban/rural

- The same proportion of respondents from urban and rural areas were in 'The Strong and the Fearless' group (both 3%). Those in urban areas were less likely than those in rural areas to be in 'The Interested but Concerned' group (17% and 22% respectively).

- Respondents in urban areas were more likely than those in rural areas to be in the 'No Way No How' group (66% and 59% respectively).

By disability status

- Respondents without a disability were more likely to be in 'The Enthused and the Confident' (17%) and 'The Interested but Concerned' (21%) groups than those with a disability (6% and 15% respectively).

- Respondents with a disability (77%) were more likely to be in the 'No Way No How' group than those without a disability (59%).

By dependent status

- Respondents who have dependants (22%) were more likely to be in 'The Interested but Concerned' group than those who have no dependants (17%). They were also more likely to be in 'The Enthused but Confident' group (16% and 12%).

- Respondents who have no dependants (68%) were more likely to be in the 'No Way No How' group than those who have dependants (59%).

By qualification level

- Respondents whose highest qualification is at degree level or higher (20%) were more likely to be in 'The Enthused and the Confident' group than those with no qualifications (6%) or those with all other qualifications (15%).

- Respondents whose highest qualification is at degree level or higher were more likely to be in 'The Interested but Concerned' group (28%) than those with no qualifications (9%) or those with all other qualifications (19%).

- Respondents with no qualifications (83%) were more likely than those whose highest qualification is at degree level or higher (48%) and those with all other qualifications (63%) to be in the 'No Way No How' group.

By economic activity

- Respondents who are economically active were more likely to be in 'The Strong and the Fearless' (4%), 'The Enthused and the Confident' (19%), and 'The Interested but Concerned' (22%) groups than those who are economically inactive (2%, 7% and 15% respectively).
- Respondents who are economically inactive (76%) were more likely to be in the 'No Way No How' group than those who are economically active (56%).

By Local Government District

- Respondents in Derry City and Strabane, and Mid Ulster District Councils had the highest proportions of respondents in the 'No Way, No How' group (both 71%).

Figure 11: Attitude to Cycling
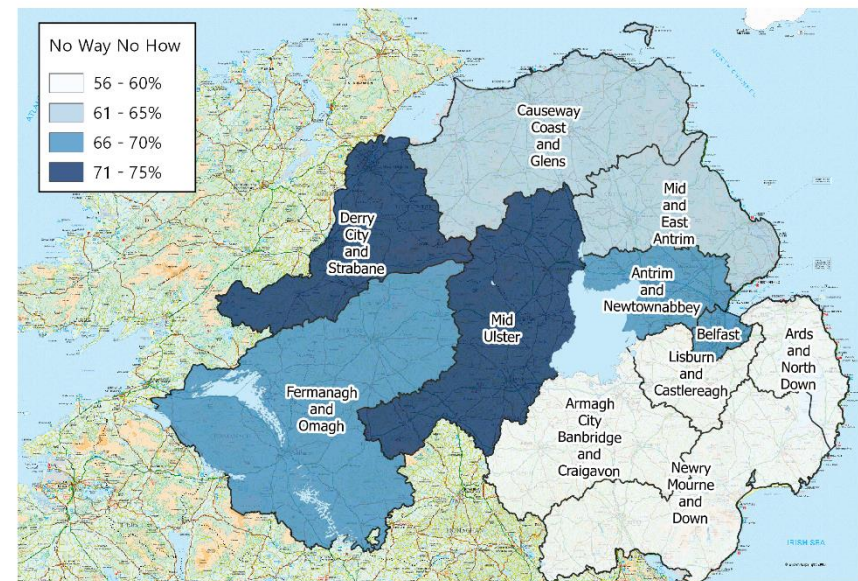
Appendix A: Comparisons to 2015 Omnibus Report

Whilst both the 2016/17 Continuous Household Survey and the 2015 Omnibus survey are representative of the Northern Ireland population, differing methodologies mean the survey results are not comparable, however some 2015 Omnibus results are presented here for illustrative purposes.

• In the 2015 Northern Ireland Omnibus survey, 41% of respondents had use of a bicycle, either through ownership

Figure 12: Access to a bicycle (%)

or through use of someone else's bicycle.
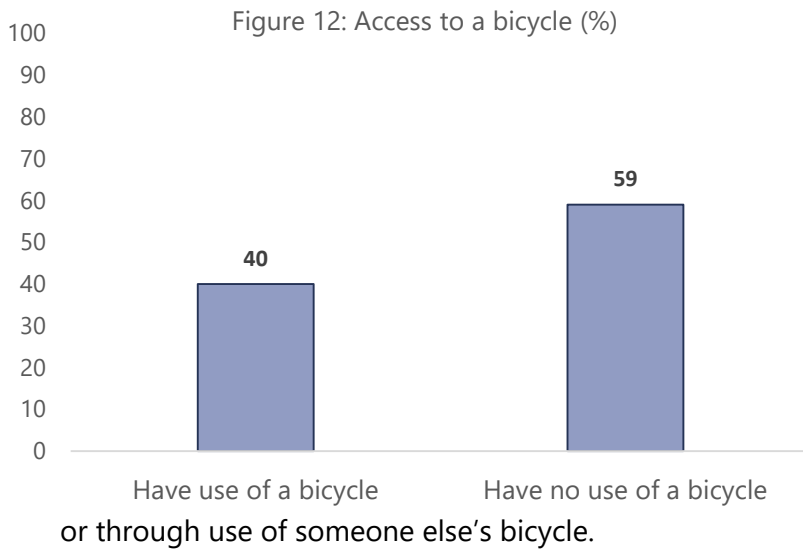
• 27% of respondents with use of a bicycle from the 2015 NI Omnibus survey had cycled in the last four weeks.

Figure 13: Frequency of cycling (%)
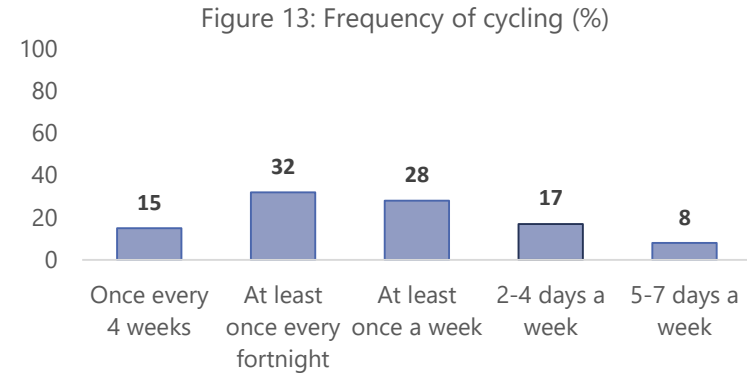
• In 2015, half (54%) of all respondents were in the 'No Way No How' group, quarter (25%) were in 'The Interested but Concerned' group, almost a fifth (18%) in 'The Enthused and the Confident' group and 4% in 'The Strong and the Fearless' group.

Figure 14: 4 types of cyclist (%)
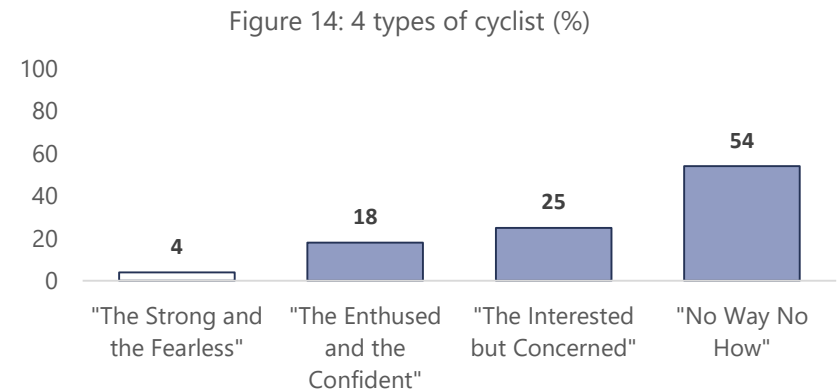
Appendix B: Technical Notes
The Northern Ireland Continuous Household Survey
Data Collection

The information presented in this publication derives from the Northern Ireland Continuous Household Survey (CHS), a Northern Ireland wide household survey administered by Central Survey Unit (CSU), Northern Ireland Statistics and Research Agency (NISRA).

It is based on a sample of the general population resident in private households and has been running since 1983. The survey is designed to provide a regular source of information on a wide range of social and economic issues relevant to Northern Ireland. The nature and aims of CHS are similar to those of the General Household Survey (GHS), which is carried out by the Office for National Statistics (ONS) in Great Britain. The Cycling in Northern Ireland 2017 questions which were commissioned by DfI are included in Appendix D of this report.

Data Quality

Data were collected by CSU and various validation checks were carried out as part of the processing. CSU is the leading social survey research organisation in Northern Ireland and is one of the main business areas of NISRA, an Agency within the Department of Finance. CSU has a long track record and a wealth of experience in the design, management and analysis of behavioural and attitude surveys in the context of a wide range of social policy issues. CSU procedures are consistent with the Official Statistics Code of Practice[2].

The CHS sample was assessed and considered to be a representative sample of the Northern Ireland population at household level.

Whilst data quality is considered to be very good, note that all survey estimates are subject to a degree of error and this must be taken account of when considering results. This error will be reasonably

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[2] http://www.statisticsauthority.gov.uk/assessment/code-of-practice/code-of-practice-for-official-statistics.pdf

small for the majority of Northern Ireland level results but care should be taken when looking at results based on smaller breakdowns.

Weighting

Analysis of the Cycling in Northern Ireland module of the CHS has been weighted for non-response. A chi square goodness-of-fit test showed that the CHS sample was not representative of the population by age and sex when compared with the Population and Migration Estimates Northern Ireland 2015 (NISRA). As a result, three separate weights were produced for age, sex and age and sex combined.

Non-response weighting sometimes increases standard errors, although the impact tends to be fairly small, i.e. the adjustment may be less or greater than 1, but will generally be reasonably close to 1. In the case of the Cycling in NI module of the CHS, the values of the adjustment for all three weighting systems are so close to one, it is not necessary to take account of this in the calculation of standard error and confidence intervals.

While weighting for non-response (also called post-stratification) should reduce bias, it must be acknowledged that it will not eliminate bias. The reasons individuals choose to take part in surveys are complex and depend on lots of factors specific to the individual. As a result, the non-response biases in surveys are likely to be complex. Post-stratification works on the assumption that, by aligning the survey to the population along a small number of dimensions such as age and gender, many of these complex biases will reduce. However, it would be misleading to suggest that they will be eliminated.

Confidence Intervals

No sample is likely to reflect precisely the characteristics of the population it is drawn from because of both sampling and non-sampling errors. An estimate of the amount of error due to the sampling process can be calculated. For a simple random sample design, in which every member of the sampled population has an equal and independent chance of inclusion in the sample, the sampling error of any percentage, p, can be calculated by the formula:

s.e. (p) = √(p*(100 − p)/n

where n is the number of respondents on which the percentage is based. The sample for the Continuous Household Survey is drawn as a random sample, and thus this formula can be used to calculate the sampling error of any percentage estimate from the survey.

Multiple response questions

Multiple response questions are those for which respondents can give more than one response if they wish. For example, respondents who had cycled in the last 4 weeks, were asked 'Why do you cycle?' and they were able to list, from a showcard, one or more reasons. In such questions, when individual percentages are summed they may add to more than 100%.

Rounding Conventions

Percentages have been rounded to whole numbers and as a consequence some percentages may not sum to 100. 0% may reflect rounding down of values under 0.5.

Significant difference

Any statements in this report regarding differences between groups such as males and females, different age groups, religion, etc., are statistically significant at the 95% confidence level. This means that we can be 95% confident that the differences between groups are actual differences and have not just arisen by chance. Both the base numbers and the sizes of the percentages have an effect on statistical significance. Therefore on occasion, a difference between two groups may be statistically significant while the same difference in percentage points between two other groups may not be statistically significant. The reason for this is because the larger the base numbers or the closer the percentages are to 0 or 100, the smaller the standard errors. This leads to increased precision of the estimates which increases the likelihood that the difference between the proportions is actually significant and did not just arise by chance.

Respondent groups

The following respondent groups were considered:

Age group

The age of the respondent is grouped into the following age bands; 16-24, 25-34, 35-44, 45-54, 55-64, 65 and over.

Gender

Gender of respondent is defined as whether the respondent is male or female.

Disability status

Disability status is defined as whether the respondent has a disability or not. The definition of disability is those answering yes to both of the following questions:

'Do you have any physical or mental health conditions or illnesses lasting or expected to last for 12 months or more' - **Yes/No**

'Does your condition or illness/ (do any of your conditions or illnesses) reduce your ability to carry out day-to-day activities?' - **Yes, a lot/ Yes, a little/ Not at all**

District Council (LGD14)

Northern Ireland is divided into 11 district councils.

Urban and rural areas

Urban and rural areas have been classified using the statistical classification of settlements defined by the Inter-Departmental Urban-Rural Definition Group.

- Bands A to E are classified as Urban. This includes Belfast Metropolitan Urban Area (Band A), Derry Urban Area (Band B) and large, medium and small towns (Bands C-E) with populations greater than or equal to 5,000 people.

- Bands F to H are classified as rural. This includes intermediate settlements (Band F), villages (Band G) and small villages, hamlets and open countryside (Band H) with populations of less than 5,000 people and including open countryside.

Dependant status

Dependant status is defined as whether the respondent has dependants or not.

Economic Activity

Economic activity is defined as whether the respondent is currently economically active or not. This is automatically computed from other answers given. Those individuals who are temporarily away from work and those who are on a government training scheme are included as being economically active. Full-time students are excluded from these figures.

Qualification level of respondent

The qualification of the respondent is grouped into the following categories:

Degree level or higher

All other qualifications

No qualifications

Question 5: Attitudes to cycling

For conciseness, results were reported using the four general categories outlined in the 'Four Types of Cyclists' report https://www.portlandoregon.gov/transportation/article/158497; 'The Strong and the Fearless', 'The Enthused and the Confident', 'The Interested but Concerned' and 'No Way No How'.

'Four Types of Cyclists'

This report by Roger Geller, Bicycle Coordinator in Portland Office of Transportation describes how Portlanders can be placed into one of four groups based on their relationship to bicycle transportation: 'The Strong and the Fearless', 'The Enthused and the Confident', 'The Interested but Concerned'. The fourth group are non-riders, called the 'No Way No How' group. This 'Four Types' categorization was first developed in 2005 and addresses only willingness to use a bicycle as a main means of transportation.

The report concludes that the typology was developed using professional knowledge and experience in a field where data is woefully inadequate and vetted with many professionals in the field, representing hundreds of years of bicycle planning, policy and operational experience. Since then, survey polling data continues to support the description of the categories. They are fundamental to understanding both the market for increasing bicycle transportation and what needs to be undertaken to cater to them. In the absence of evidence to the contrary, it is likely that continued survey and study will continue to support this typology.

Appendix C: Confidence Intervals

A confidence interval represents the range of values in which the true population value is likely to lie. It is based on the sample estimate and the confidence level.

As the percentages are calculated from a representative sample of the Northern Ireland population (aged 16 and over), a confidence interval can be calculated to estimate the level of uncertainty in the sample estimate.

95% confidence intervals were calculated for the headline figures. Table C1 summarizes the confidence intervals for cycling in Northern Ireland.

Table C1: Confidence Intervals for Cycling in Northern Ireland

	Estimate	95% Confidence Range +/-	Confidence Interval
Proportion of respondents who own or have access to a bicycle.	32	2	30 – 34
Proportion of respondents who cycled in the last four weeks.	31	3	28 – 34
Proportion of respondents who said they cycle for exercise.	80	4	76 – 84
Proportion of respondents who said they are not interested in cycling at all.	64	2	62 - 66

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- The 95% confidence interval for respondents who own or have access to a bicycle is 32% +/- 2%. This means that there is a 95% probability that the proportion of the Northern Ireland adult population who own or have access to a bicycle lies between 30% and 34%.

- The 95% confidence interval for respondents who had cycled in the last 4 weeks is 31% +/- 3%. This means that there is a 95% probability that the proportion of the Northern Ireland adult population who cycled in the last 4 weeks lies between 28% and 34%.

- The 95% confidence interval for respondents who said they cycle for exercise is 80% +/- 4%. This means that there is a 95% probability that the proportion of the Northern Ireland adult population who cycle for exercise lies between 76% and 84%.

- The 95% confidence interval for respondents who said they are not interested in cycling at all is 64% +/- 2%. This means that there is a 95% probability that the proportion of the Northern Ireland adult population who are not interested in cycling lies between 62% and 66%.

Appendix D: Cycling in Northern Ireland Questionnaire

ATTITUDES TO CYCLING

[**BIKE1**] And now I have a few questions about your attitude to cycling. Excluding exercise bikes, do you . . .
RUNNING PROMPT
1. own a bicycle yourself -> [BIKE2]
2. have use of a bicycle owned by someone else in the household -> [BIKE2]
3. have use of a bicycle owned by someone else outside the household -> [BIKE2]
4. or have no use of a bicycle?

[**BIKE2**] In the last 4 weeks, that is since ******* have you done any cycling?
1. Yes -> [BIKE3]
2. No

[**BIKE3**] On how many days in the last 4 weeks have you cycled? 1..28

[**BIKE4**] SHOWCARD (Cycle reason)
Could you look at SHOWCARD ** and tell me the reasons why you cycle?
CODE ALL THAT APPLY
1. I find it convenient (I live close to work/education/shops etc)
2. It is a cheap way to travel (there are no costs for fuel/car parking/bus or train fares)
3. I enjoy it
4. Environmental reasons
5. Exercise
6. It saves time (for example to avoid traffic jams)

7. I have no car
8. I cannot drive
9. I don't like using public transport
10. There is no suitable public transport where I live
11. I cycle with my children to ensure they are safe
12. Other -> [BIKER4oth]
[**BIKE4oth**] Please specify the other reason for cycling

[**BIKE5**] SHOWCARD (Cycling attitude)
Could you look at the statements on SHOWCARD ** and tell me which statement best describes your attitude to cycling?
1. I will ride my bicycle regardless of road conditions. I am a cyclist; cycling is a strong part of my identity
2. I am comfortable riding my bicycle and sharing the roadway with other vehicles. I could be attracted to more regular cycling if the barriers on shorter trip distances continued to be addressed, for example, better bicycle facilities (more cycle lanes, cycle paths, cycle priority at junctions) and better end of trip facilities (showers at work, safe bike storage etc.)
3. I would like to use my bicycle more but I am afraid to cycle. I don't like the cars travelling at speed and I get nervous thinking about what would happen to me on a bicycle when a car passes too closely and/or too fast. I would cycle if I felt safer on the roads - if cars were slower and less frequent and if there were more quiet streets with few cars and paths without any cars at all
4. I am not interested in cycling at all as I am not or simply have no interest