

Monitor of Engagement with the Natural Environment

The national survey on people and the natural environment



Technical Report to the 2009 - 2018 surveys

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Natural England Joint Report RP2920
ISBN 978-1-78354-507-0
Published 10th September 2018



Foreword

Natural England produces a range of reports providing evidence and advice to assist us in delivering our duties.

Background

In 2009 Natural England commissioned Kantar TNS to undertake the Monitor of Engagement with the Natural Environment (MENE) survey for the first time.

The data enables Natural England, its partners and data users to:

- Understand how people use, enjoy and are motivated to protect the natural environment.
- Monitor changes in use of the natural environment over time, at a range of different spatial scales and for key groups within the population.
- Inform on-the-ground initiatives to help them link more closely to people's needs.
- Evaluate the impact and effectiveness of related policy and initiatives.
- Measure the impact of and inform policy relating to the natural environment.

The MENE technical report

This report provides full details of the survey methodology, sampling, weighting and estimates of confidence intervals for the period up to and including the ninth year of MENE (i.e. fieldwork from March 2009 to February 2018). It also includes:

- The full questionnaire for year nine
- Guidance on the overall strengths and limitations of the data.
- Details of changes to the survey questions implemented in 2016 and a related data calibration exercise.

Published alongside this report are:

- A headline report presenting the headline results from year nine (March 2017 February 2018) data and analysis of nine years of MENE fieldwork.
- SPSS, CSV and Excel data files that allow detailed analysis of the MENE dataset.
- A Weighting and Variable Guidance note.

Please see GOV.UK for further outputs from the survey:

<https://www.gov.uk/government/collections/monitor-of-engagement-with-the-natural-environment-survey-purpose-and-results>

National Statistics

The UK Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Statistics and its key principles of:

- **value**- statistics that support society's needs for information.
- **quality** - data and methods that produce assured statistics.
- **trust** - users of statistics and citizens have confidence in the people and organisations that produce statistics and data.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

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Keywords: engagement, natural environment, participation, motivations, barriers, activities and expenditure

This report can be downloaded from the Natural England website:

<https://www.gov.uk/government/statistics/monitor-of-engagement-with-the-natural-environment-2017-to-2018>.

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ISBN 978-1-78354-507-0

Publication number: RP2920

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1 Introduction

- 1.1 This report outlines the methods and technical details of the Monitor of Engagement with the Natural Environment (MENE) survey. The survey collects detailed information on people's use and enjoyment of the natural environment, focusing on visits to the natural environment. This report relates to the nine years of surveying from March 2009 to February 2018.
- 1.2 The survey was undertaken by Kantar TNS on behalf of Natural England and the Department for Environment, Food and Rural Affairs (Defra).

Background

- 1.3 Natural England commissioned Kantar TNS to undertake the MENE survey. This survey provides the most comprehensive dataset yet available on people's use and enjoyment of the natural environment. It includes information on visits to the natural environment (including short, close to home visits) as well as other ways of using and enjoying the natural environment. In addition, MENE is the first time a survey of this type has been conducted over consecutive years, allowing for greater confidence when tracking trends over time.

Survey aims and objectives

- 1.4 This survey aims to provide information about the relationship between people and the natural environment. Whilst the main focus of the survey is on visits, it also seeks to capture other ways of using or enjoying the natural environment such as time spent in the garden and watching nature programmes on television.
- 1.5 The objectives of the survey are to:
 - provide estimates of the number of visits to the natural environment by the English adult population (16 years and over);
 - measure the extent of participation in visits to the natural environment and find out the barriers and drivers that shape participation;
 - provide robust information on the characteristics of visitors and visits to the natural environment;
 - measure other ways of using and enjoying the natural environment; and
 - identify patterns in use and participation for key groups within the population and at a range of spatial scales.

Survey scope

- 1.6 The survey relates to engagement with *the natural environment*. By natural environment we mean all green open spaces in and around towns and cities as well as the wider countryside and coastline.
- 1.7 The main focus of the survey is on *visits to the natural environment*. By visits to the natural environment we mean time spent outdoors in the natural environment, *away from home and private gardens*.
- 1.8 The survey also includes a smaller section of questions regarding engagement with the natural environment other than that experienced during visits. This includes activities such as time spent in private gardens, watching nature programmes on television and undertaking pro-environmental activities such as recycling.

Structure of the report

- 1.9 This technical report provides details of the methods used for MENE and the levels of accuracy of the survey outputs. These appear under the following section headings:

Section 2: Data collection – covering the rationale for the survey approach, a description of the Kantar TNS in-home omnibus, sampling, questionnaire (including changes made over the nine years) and interviewer training.

Section 3: Data analysis – covering data checking and coding, geocoding and the weighting and grossing of survey data.

Section 4: Levels of accuracy – the results of an analysis of the Complex Standard Errors associated with the MENE data.

Appendices:

Appendix 1: MENE Questionnaire – including details of base, timing and additional notes

Appendix 2: Standard classification questions included in the Kantar TNS Omnibus

Appendix 3: Weighting targets

Appendix 4: Review of demographics used in weighting of results

Appendix 5: 2016/17 and 2017/18 (year 8 and 9) data calibration approach

2 Data collection

- 2.1 This section of the report describes the approach to data collection. Areas covered include survey scoping and piloting, sampling approach, achieved sample size, questionnaire design (including changes made over the nine years of surveying) and interviewer briefing.

Scoping stages and piloting

- 2.2 The methods used in MENE were developed through a scoping study undertaken in 2007. The aim of the study was to identify the most appropriate survey methods to measure participation in visits to the natural environment amongst the English adult population.
- 2.3 It involved:
- Consultations with the organisations likely to be end users of a study of this type, to ensure that their information needs were taken into account.
 - Qualitative research with members of the public to test their understanding of potential questionnaire wording options.
 - Pilot surveys using online, telephone and face-to-face survey approaches, allowing a direct comparison of the results obtained using each method.
- 2.4 The study concluded that an in-home interview method was the most appropriate and that the inclusion of a series of questions on a weekly basis in a consumer omnibus survey would represent the most cost effective approach for a future study.
- 2.5 Undertaking interviewing using a face to face approach was recommended for a study of this type, as it would provide the best quality of data, with interviewers able to clarify points to respondents. This approach also facilitated the use of show prompts, such as lists of answer options.
- 2.6 Including the questions on every wave of a weekly omnibus survey meant that respondents could be asked about any visit they had taken during the last seven days. Also, the nationally representative sample obtained in every week of the survey allowed for the questionnaire to be split into modules with certain questions asked every week, some asked once a month and others asked less often or on a one off, 'ad hoc' basis.
- 2.7 Following the recommendations of the scoping study, data collection for the first year of MENE commenced with a pilot wave of fieldwork in February 2009, prior to the launch of the main survey period.
- 2.8 This pilot survey involved 1,763 interviews undertaken between 13th February 2009 and 17th February 2009 and allowed for final testing of the questionnaire. The purpose of this phase was to verify certain key elements of the survey approach including:
- Refining the definitions used in the survey including 'a visit', 'the outdoors' and 'the natural environment'. This included agreeing the best ways to communicate these definitions to survey respondents and finalising the relevant introductory wording in the questionnaire.
 - Refining other parts of the questionnaire including decisions on which questions should be asked on a weekly, monthly or quarterly basis.

Summary of approach

- 2.9 The main survey data collection commenced on 6th March 2009. The survey involves weekly waves of interviewing on the Kantar TNS in-home Omnibus Survey with respondents asked

about visits taken in the seven days preceding the interview. In each wave, interviews are undertaken with a representative sample of the English adult population (aged 16 and over) with a sample of at least 800 achieved across at least 100 sample points.

- 2.10 While the majority of survey questions are included in every weekly wave of the survey, some are asked on a monthly basis while a series of questions regarding other forms of engagement with the natural environment, such as watching nature programmes on television and engagement in pro-environmental activities such as recycling, are asked on a quarterly basis.
- 2.11 Each wave of fieldwork is conducted over five days of the week (Friday to Tuesday inclusive). Using a seven day recall period also makes it necessary to undertake interviewing in every week of the year. The Kantar TNS Omnibus survey operates over 51 weeks of the year, with no fieldwork for one week during the Christmas period. However, recognising that visits taken during the holiday week could vary somewhat from other times of year, an additional module of questions has been included in the survey wave undertaken in the following week to collect data on this 'gap' period (see later for further details on the Christmas Gap).

Kantar TNS in-home omnibus survey

- 2.12 The MENE questions are included in every week of the Kantar TNS in-home omnibus which operates from Friday to Tuesday inclusive. Questions are asked of respondents in England only (at least 80 per cent of the total sample) and of around half the sample in each sampling point. Therefore, at least 800 respondents are asked the MENE questions each week.
- 2.13 The MENE question set is consistently included in the first position of the omnibus questionnaire and always asked within the first minute of the interview.

GDPR, information security and quality compliance

- 2.12 The new General Data Protection Regulation (GDPR) came into force in May 2018. MENE is conducted in full compliance to GDPR and all of the standards and regulations set out below.
- 2.13 In advance of May 2018, the Kantar group launched a GDPR readiness programme, which included:
 - The launch of a WPP GDPR Toolkit,
 - Appointment of the Kantar GDPR Steering Committee and Accountability Leads within each Kantar brand and internal function
 - Kantar GDPR implementation plan and milestones for compliance
 - Kantar GDPR Policy and Guidance documents
 - Kantar internal GDPR intranet site dedicated to GDPR
 - Reporting and audit measures
 - Face-to-face training and workshops
 - Online training and discussion
- 2.14 This programme provided advice and assistance to all Kantar companies in respect of GDPR, so that a risk based approach to privacy could be adopted to ensure compliance with the legislation. Kantar TNS also reviewed its data flows and data usage, and its consent mechanisms and worked with Natural England to ensure compliance for MENE.
- 2.15 Related, Kantar TNS also adhere with the following information security, legal and quality requirements:
 - MRS and ESOMAR professional codes of conduct

- ISO 20252: international market research quality standard
- ISO 9001: international standard for quality management systems
- ISO 27001: international standard for data security (within the scope of our accreditation)
- The UK Data Protection Act 1998.

Sampling approach

- 2.16 The Kantar TNS in-home Omnibus Survey uses a computerised sampling system which integrates the Post Office Address (PAF) file with the 2001 Census small area data at output area level. This enables replicated waves of multi-stage stratified samples to be drawn with accurate and up to date address selection using PPS methods (probability proportional to size). This is explained in greater detail below.
- 2.17 The Kantar TNS in-home Omnibus Survey has Random Location Sampling as its sampling basis and a unique sampling system has been developed for this purpose. Utilising 2001 UK Census small area statistics and the Post Office Address File (PAF), Great Britain - south of the Caledonian Canal has been divided into 600 areas of equal population. From these 600 areas, a master sampling frame of 300 sample points has been selected to reflect the country's geographical and socio-economic profile. The areas within each Standard Region are stratified into population density bands and within band, in descending order by percentage of the population in socio-economic Grade I and II.
- 2.18 To maximise the statistical accuracy of the sampling, sequential waves of fieldwork are allocated systematically across the sampling frame to ensure maximum geographical dispersion. The 300 primary sampling units are allocated to 12 sub-samples of 25 points each, with each sub-sample in itself being a representative drawing from the frame. For each wave of fieldwork, a set of sub-samples is selected in order to provide the number of sample points required (typically c.139 for 2,000 interviews). Across sequential waves of fieldwork all sub-samples are systematically worked, thereby reducing the clustering effects on questionnaires asked for two or more consecutive weeks.
- 2.19 Each primary sampling unit is divided into two geographically distinct segments, both containing, as far as possible, equal populations. The segments comprise aggregations of complete postcode sectors. Within each half (known as the A and B halves) postcode sectors have been sorted by the percentage of the population in socio-economic groups I and II. One postcode sector from each primary sampling unit is selected for each survey wave, alternating on successive selections between the A and B halves of the primary sampling unit, again to reduce clustering effects. For each wave of interviewing, each interviewer is supplied with two blocks of 70 addresses, drawn from different parts of the sector.
- 2.20 To ensure a balanced sample of adults within the effective contacted addresses, a quota is set by sex (male, female housewife, female non-housewife); within the female housewife quota, presence of children and working status and within the male quota, working status. In each weekly wave of the survey, a target of 2,000 interviews is set and the survey data is weighted to ensure that the sample is representative of the UK population in terms of the standard demographic characteristics (see Section 3 for details of the bespoke weighting procedures used in MENE).
- 2.21 In each weekly wave, at least 1,600 interviews are undertaken in England. The MENE survey is included within a half sample of the English element of the survey, generating at least 800 interviews per week across at least 100 sample points. The half sample is obtained by automatically asking the questions of every other respondent included in an interviewing shift.
- 2.22 Within each sample point, only one interview is undertaken per household and a minimum of three households is left between each successful interview. As the MENE questions are asked in every other interview, this interval is increased to at least six households. This procedure ensures that interviewing in each sample point is not restricted to a small geographic area containing individuals with similar demographic and lifestyle characteristics thereby further minimising the effects of clustering within the sample.

Sample sizes achieved

2.23 The total samples of respondents and visits asked about in each of the nine years of surveying and in total, including the Christmas gap additional survey wave are shown in Table 2-1 below and overleaf.

Table 2-1 Total samples achieved – respondents and visits

	Total respondents	Visit takers (last 7 days)	All visits asked about (key details Q2 and Q4*)	Randomly selected visits asked about
Weekly questions included in every weekly survey wave				
March 2009 – February 2010	48,514	20,374	58,653	20,374
March 2010 – February 2011	46,099	17,389	47,825	17,389
March 2011 – February 2012	47,418	19,014	53,898	19,014
March 2012 – February 2013	46,749	18,185	53,208	18,185
March 2013 – February 2014	46,785	18,808	55,897	18,808
March 2014 – February 2015	45,225	18,658	55,573	18,658
March 2015 – February 2016	45,965	18,429	56,097	18,429
March 2016 – February 2017	46,558	20,600	n/a*	20,600
March 2017 – February 2018	47,477	23,006	n/a*	23,006
Total	420,790	174,463	381,151	174,463

*Prior to April 2012 Question 3 (visit duration) was also asked about all visits but after this date this question was asked about a single randomly selected visit only. From April 2016 Q2 and Q4 were also asked only about a single randomly selected visit.

Table 2-1 (continued) Total samples achieved – respondents and visits

	Total respondents	Visit takers (last 7 days)	Randomly selected visits asked about
Monthly questions included in last survey wave each month			
March 2009 – February 2010	11,107	4,755	4,755
March 2010 – February 2011	10,630	3,973	3,973
March 2011 – February 2012	10,587	4,421	4,421
March 2012 – February 2013	10,544	4,034	4,034
March 2013 – February 2014	10,552	4,309	4,309
March 2014 – February 2015	10,471	4,392	4,392
March 2015 – February 2016	10,676	4,310	4,310
March 2016 – February 2017	10,715	4,733	4,733
March 2017 – February 2018	10,846	5,070	5,070
Total	96,128	39,997	39,997
Quarterly questions included in 4 survey waves per year			
March 2009 – February 2010	3,549	1,452	1,452
March 2010 – February 2011	3,568	1,297	1,297
March 2011 – February 2012	3,544	1,506	1,506
March 2012 – February 2013	3,528	1,328	1,328
March 2013 – February 2014	3,535	1,472	1,472
March 2014 – February 2015	3,419	1,385	1,385
March 2015 – February 2016	3,488	1,387	1,387
March 2016 – February 2017	3,588	1,598	1,598
March 2016 – February 2017	3,666	1,776	1,776
Total	31,885	13,201	13,201

2.24 Over the nine years of surveying, a total of 420,790 interviews were undertaken and of this total, 174,463 respondents had taken a visit to the natural environment in the seven days prior to the interview (41 per cent of the total).

- 2.25 During the first seven years of the survey, key details (general type of place visited and activities) were asked for up to ten of the visits taken by each respondent. As such over this period these details were recorded for 381,151 visits.
- 2.26 However, since April 2016, (i.e. the second month of year 8 of the survey), a change in survey method meant that these visit details were only asked for a single randomly selected visit.
- 2.27 Throughout the nine years all other visit details were asked only of this single randomly selected visit. As such over the nine years of surveying, when questions were asked weekly, these details were collected for a total of 174,463 visits.

Sample sizes by region and groups of interest

- 2.28 Table 2-2 below illustrates the respondent and visit sample sizes achieved in year nine and overall across all nine years of fieldwork by region and for certain key demographic groups previously highlighted to be of interest by MENE users.

Table 2-2 Total samples achieved by region and groups of interest year 9 (March 2017 to February 2018) and full nine year period (March 2009 to February 2018)

	Total respondents		Randomly selected visits asked about	
	Year 9	Total years 1 to 9	Year 9	Total years 1 to 9
By region				
North East	2,456	21,531	1,264	9,550
North West	6,240	57,109	2,852	22,448
Yorkshire and the Humber	4,649	41,921	1,976	16,704
East Midlands	3,987	35,832	1,731	14,154
West Midlands	5,022	44,508	2,222	17,153
South West	4,318	40,528	2,433	20,873
East England	5,112	45,849	2,656	20,068
London	7,021	62,479	3,059	21,072
South East	7,699	68,961	4,342	31,509
By group				
BME Population	5,291	49,422	1,889	15,082
Aged 16 to 24	5,395	56,032	2,639	27,721

Questionnaire design

- 2.29 The MENE questionnaire was divided into a series of modules with certain questions included in every weekly survey wave while others were included in one survey wave per month or once every three months.
- 2.30 Table 2-3 details the question areas included at each level of frequency and the base of respondents asked each question. It also outlines the changes that were made to the question frequencies or inclusion from April 2016 (applying to year 8 and 9 data) where appropriate. A copy of the year nine questionnaire is provided in Appendix 1.

Table 2-3 Questionnaire topics and frequency of inclusion in 2017/18 (year 9) survey fieldwork

	Frequency – March 2009 – February 2016 (years 1 to 7)	Changes to frequency from April 2016 (from second month of year 8 onward)
Q1 - Visits taken in last 7 days	Weekly	No change
Q2 – Type of place visited (general)	Weekly, asked for up to 10 visits	From April 2016, asked weekly about a single randomly selected visit only
Q3 – Visit duration	Weekly, asked for up to 10 visits to March 2012 then asked for randomly selected visit only	From April 2016, continued to be asked weekly about a single randomly selected visit only
Q4 – Activities undertaken	Weekly, asked for up to 10 visits	From April 2016, asked weekly about a single randomly selected visit only
Q5 – Type of place visited (specific)	Weekly	Monthly from April 2016
Q6 – Village/ town/ city visited	Weekly	Monthly from April 2016
Q7 – Name of actual place visited or details of location if no name	Weekly	Monthly from April 2016
Q8 – Distance travelled to place visited	Weekly	Monthly from April 2016
Q9/10 – Where journey started from	Weekly	Monthly from April 2016
Q11 – Mode of transport used	Weekly	Monthly from April 2016
Q12 – Reasons for visit	Until March 2012, asked monthly April 2013- February 2016, asked weekly	Monthly from April 2016 to February 2017 Weekly from March 2017
Q13 – Party composition	Monthly	Quarterly from April 2016
Q14 – Whether a dog/ dogs taken on visit	Monthly	Quarterly from April 2016
Q15/16 – Expenditure during visit	Monthly	Quarterly from April 2016
E1 – Outcomes of visit	Quarterly	No change
Q17 – Frequency of visits during the last 12 months	Monthly	No change
Q18 – Barriers to visits during last 12 months	Monthly	No change
E2 – Attitudes to environment	Quarterly	Removed then reintroduced on quarterly basis from November 2016
E2b – Nature Connection Index questions	n/a	Added in from March 2017 on quarterly basis (year 9 only)
E3 – Activities in the natural environment	Quarterly	Removed then reintroduced on quarterly basis from November 2016

	Frequency – March 2009 – February 2016 (years 1 to 7)	Changes to frequency from April 2016 (from second month of year 8 onward)
E4 – Pro-environmental activities	Quarterly	No change
E5 – Changes in lifestyle	Quarterly	Removed then reintroduced on quarterly basis from November 2016
E6 – Attitudes to local greenspaces	Quarterly (introduced May 2014)	No change
E7/8 – Access to private gardens	Quarterly (introduced May 2014)	No change
Q1A/B/C NEW – Awareness of biodiversity decline	Quarterly (introduced May 2014)	No change
Q2NEW – Concern for biodiversity decline	Quarterly (introduced May 2014)	No change
CLASSIFICATION QUESTIONS		
Q19 – Access to a car	Weekly	Removed
Q20 – Dog ownership	Weekly	Removed
Q21 – Frequency of undertaking exercise	Weekly	Removed
Q22 – Disability and long-term illness	Weekly	Removed
Q23 – ONS wellbeing – life satisfaction	Monthly (introduced April 2015)	No change
Q24 – Rating of general health	Monthly (introduced April 2015)	No change

2.12 Note that many of the frequency questionnaire changes made took place once the year eight survey year was underway (the survey year starts on 1 March and the changes were made in April). This has resulted in some impact on the base sizes and weighted totals when analysis of results for this year is undertaken, affecting those questions where the frequency changed. Specifically, this impacts on a number of the ‘E questions’ where weighted totals of results will not always match those obtained in analyses of other question which were moved to a quarterly basis (e.g. Question 13). Recommendations on how to use this data are provided in the Weighing and Variable Guidance note.

2.13 The following classification questions included as standard in the Kantar TNS in-home Omnibus Survey have been asked of all respondents throughout the nine years (also see Appendix 2):

- Age
- Sex
- Socio-economic status (A, B, C1, C2, D and E groups)
- Working status
- Marital status
- Children in home/ life stage (for example, Young Independents, Family, Empty Nester)
- Region of residence
- Ethnicity
- Internet access and usage
- Housing tenure.

2.14 In each wave, during years 1 to 7 the questionnaire also contained additional profiling questions which were asked of all respondents regarding access to a car, dog ownership,

frequency of undertaking exercise and disabilities and long-term illnesses. These questions were removed from April 2016.

Changes to Q1 to Q4 from March 2016

- 2.12 From the start of Year 8 of the survey (March 2016), a number of changes were made to shorten and simplify the questionnaire. This included a simplification of the first three survey questions as follows.
- 2.13 In the first seven years of the survey respondents were asked to, in turn, record the volume of visits taken in each of the previous 7 days and the key details of every one of these visits. Specifically, the respondents were first asked about the volume of visits taken in each of the seven days preceding the interview (Question 1). During years one to seven, key details of up to ten of these visits were then recorded (Question 2 type of place visited and Question 4 activities since April 2013 and, prior to this date, also Question 3 duration of visit). In practice, the vast majority of respondents had taken ten or less visits (97 per cent).
- 2.14 If more than one visit had been taken in the last seven days (25 per cent of respondents in year seven), one of the visits was randomly selected as the basis for further questions. This approach ensured that there was no bias in the visit selection and the CAPI software was used to automatically make the random selection of one of the visits taken by each respondent.
- 2.15 From April 2016 (applying to years 8 and 9 of the survey), respondents were asked to record the total number of visits for the full 7 day period and then details regarding just one of these visits. In years eight and nine, all of the visit questions were asked of this single visit only, with this visit randomly selected from the data provided at Question 1 (randomly selected using the CAPI software).
- 2.16 **Note that this change in questionnaire structure resulted in an impact on the comparability of certain data trends as described in more detail in section 3 and in detail in Appendix 5.**

A seven day recall period

- 2.17 Ensuring the accurate collection of data on all of the visits taken on every day in the recall period was a priority at the questionnaire design stage and an area covered extensively in the interviewer briefings. It was thus decided that a seven day recall period provided the best approach for MENE, collecting accurate data for a large base of visits.

Communicating the survey scope

- 2.18 Reflecting the survey aims, the main focus of MENE is on time spent in the natural environment for leisure purposes. However, unlike previous surveys, MENE collects details of both visits to the natural environment such as on days out to the coast and countryside and more routine trips taken close to home for purposes such as dog walking or exercise - including those taken in urban green spaces. Whilst previous studies including the 2005 England Leisure Visits Survey are likely to have under-represented close to home visits to the natural environment, significant efforts have been made to ensure that MENE records the full spectrum of recreation in the natural environment undertaken by adults in England.
- 2.19 The outcomes of the aforementioned scoping study informed the wording of the introductory text used in MENE, as shown in Figure 2-1 below. The wording used aims to ensure that survey respondents are clear that participation in activities in both urban and rural locations are of interest and that there is no upper or lower time limit on the duration of the visit. Respondents are informed that routine shopping trips and time spent in the garden are not included in the definition of a visit. Interviewers are also provided with further guidance to provide to respondents who may be uncertain of what is and is not included within the definition of a visit.

Now I am going to ask you about occasions in the last week when you spent your time out of doors.

By out of doors we mean open spaces in and around towns and cities, including parks, canals and nature areas; the coast and beaches; and the countryside including farmland, woodland, hills and rivers.

This could be anything from a few minutes to all day. It may include time spent close to your home or workplace, further afield or while on holiday in England.

*However this **does not include**:*

- routine shopping trips or;

- time spent in your own garden.

Figure 2-1 Introduction to MENE interview

Interviewer briefings

- 2.20 It is particularly important that interviewers who undertake the MENE fieldwork are clear regarding key areas such as the definition of a visit and the level of detail to be recorded in questions regarding destinations visited, visit start points and visit expenditure.
- 2.21 Therefore, interviewer briefings have been undertaken by means of the following channels:
- Written instructions displayed to interviewers via their CAPI machine. These must be read prior to commencing every interviewing shift and can be referred to at any time during the interview.
 - A video 'pod cast' provided to all interviewers who work on the survey. This short training video communicates key points regarding the survey scope and the importance of collecting the correct data regarding visit destinations and start points and expenditure.
 - Annual presentations to regional fieldwork supervisors outlining the survey objectives and the importance of their interviewing teams following the instructions with a focus on the key areas mentioned above. Also, articles in the newsletter which is distributed to interviewers updating them on the survey progress, reinforcing the key areas to focus on in the interview.
- 2.22 Also, interviewers are periodically sent feedback forms inviting them to comment on the questionnaire design and any issues from both the interviewer's and respondent's perspectives.

Christmas gap

- 2.23 Fieldwork for the Kantar TNS in-home omnibus takes place from Friday to Tuesday every week with the exception of the Christmas period when no interviewing is undertaken. As MENE records details of visits taken during the seven days prior to interview, this gap in fieldwork coverage means that full data cannot be collected through the normal survey process for the preceding periods.
- 2.24 To address this gap additional interviewing has been undertaken during the omnibus waves immediately following Christmas. During these survey waves the half of the English sample not asked the normal MENE questions have been asked a similar series of questions regarding the visits they had taken in the period between 14 days and eight days prior to the interview date.

- 2.25 Questions identical to those normally asked regarding the previous seven days have been asked of this sample, the only difference being the period asked about and the addition of extra prompts to ensure that respondents were clear about the days being asked about.

3 Data analysis

- 3.1 This section of the report describes the approaches followed to check, code and analyse the data. Areas covered include the coding of standard survey responses, geocoding, weighting and grossing procedures.

Data checking and coding of ‘other’ responses

- 3.2 The CAPI (Computer Assisted Personal Interviewing) approach allows for checks on the validity of the data to be incorporated into the script programming and conducted ‘live’ in the course of the interview. For MENE, this includes a check at Question 1 where the interviewer is prompted to ‘double check’ if a respondent claims to have taken five or more natural environment visits in a single day.
- 3.3 While the MENE questionnaire does not include any fully open-ended questions, a number of questions provide an ‘other’ option which, if selected, requires the interviewer to record a response by handwriting this on their CAPI machine screen so that it can be digitally recorded. Following the interview, these responses are then reviewed and either ‘back coded’ to one of the existing answer options, if any are appropriate, or allocated a new code so that they can be included within the subsequent data analysis. This coding is undertaken for the ‘other’ responses to the following questions:
- Question 4 – Activities undertaken
 - Question 5 – Type of place visited (specific)
 - Question 11 – Mode of transport used
 - Question 12 – Reasons for visit
 - Question 18 – Barriers to visits during last 12 months.

Destination geocoding

- 3.4 Respondents are asked the following two questions about the location of the main destination of their visit. These questions are asked only of the single, randomly selected visit (asked in every weekly wave from years 1 to 7 and on a monthly basis from year 8):
- Question 6 - “What is the name of the city, town or village or nearest city, town or village to the place you visited?”
 - Question 7 - “Now please provide the name of the actual place you visited, for example the park, wood or canal.”
- 3.5 At Question 6, a Gazetteer which contains the names of all of England’s cities, towns and villages is used. Around 21,000 places are included in this Gazetteer. The interviewer selects the place named by the respondent from this list and it is then possible to analyse responses at a range of geographical levels including region, County or Local Authority. Following this approach, over the nine years of fieldwork, nearly all visits (99%) have been coded to a city, town or village.
- 3.6 At Question 7, a place name Gazetteer containing details of places which could be the main destination of visits to the natural environment is used. This Gazetteer was compiled on the basis of a number of existing sources provided to Kantar TNS by Natural England including the Ordnance Survey 1:50,000 Scale Gazetteer, and listings of designated areas and other potential outdoor recreation sites including Open Access Land, woodland and allotments. As well as place names, the Gazetteer contains location details in terms of six figure Eastings and Northings (using the Universal Transverse Mercator (UTM) coordinate system).
- 3.7 A total of 42,993 places are included in this Gazetteer, including over 7,000 woodland areas, around 6,000 water features (rivers, lakes, canals and other inland water), around 2,500 hills and mountains, over 2,000 Commons and over 250 Country Parks.

- 3.8 During the interview, the interviewers aim to initially find the name of the place visited from the Gazetteer. However, where the visit destination cannot be found or is not included in the Gazetteer, the interviewer records as many details as possible on the place visited (name, address and places close to destination such as shops, pubs, etc.) to facilitate the subsequent identification of the location after the interview, as discussed in the next section.
- 3.9 Where necessary, interviewers provide respondents with the following guidance to ensure that they are clear of how to respond and the appropriate details are recorded:
- *If the place does not have a name, provide a nearby street name or landmarks which would help us to find it on a map.*
 - *If you were on a walk with no particular 'destination', tell us the location of the furthest away place reached.*
 - *If you visited more than one place, provide the name of the place that was your final destination, for example, furthest away.*
- 3.10 Following each wave of interviewing, the responses provided are reviewed and locations are identified and verified using a variety of sources including Internet search engines, online mapping websites and the place name gazetteer mentioned above. Once the location is verified using these sources, Eastings and Nothings are added to the survey data file.
- 3.11 By pursuing this detailed approach, over the nine years of surveying it has been possible to apply destination grid references to 82 per cent of the 140,660 visits¹ asked about to provide a data base of 115,589 geocoded visits.
- 3.12 In the remaining cases it has not been possible to obtain a destination geocode. This is usually due to a lack of sufficient information being provided by the respondent to allow the place to be identified with sufficient accuracy to allocate a geocode. As described in Section Two, continuous efforts are made to ensure that the level of detail collected from respondents and recorded by interviewers is sufficient to identify the visit destination for the purposes of geocoding. The overall 82 per cent of visits allocated a grid reference over the nine years of surveying exceeds the targets agreed when MENE commenced (the level of success in allocating accurate geocodes has varied but on the whole, been fairly consistent over the 9 year survey period with an initial success rate of 79 per cent in year one and 80 per cent in the latest year).

¹ Note: This figure is different to that shown in Table 2.1. Table 2.1. shows the total number of randomly selected visits asked about as 174,463 for the nine year period. A sub-set of these were asked about location as this question moved from weekly to monthly from April 2016 (see Table 2.3).

Error checking

- 3.13 To ensure the accuracy of the destination geocodes the outputs of the above processes were profiled by Natural England to identify types of potential error:
- Grid references which are outside of England.
 - Grid references which are offshore and so are unlikely to be the main visit destination.
 - Grid references which have an identical Easting and Northing.
 - Grid references in positions which have a markedly different distance from the start point than recorded as the distance travelled in the main survey (at question 8).
- 3.14 These checks have been undertaken annually with potential errors flagged and checked. Where necessary data has then been corrected and further checks have been added at the data collection and coding stages to reduce the incidence of these types of error.

Destination geocode corrections (affecting data from period January 2014 – March 2016)

- 3.15 In the production of maps for the year six thematic report, an issue was identified that impacted some of the data recorded at Question 7 (actual place visited) from January 2014 to March 2016. This affected visits where the in-built survey Gazetteer had been used to code visits but did not affect the majority of visits where the information was recorded and geocoded manually.
- 3.16 This issue was discovered after the publication of the year five and six survey data and occurred due to a questionnaire script change being implemented at the beginning of January 2014.
- 3.17 During this period, the questionnaire script had incorrectly presented the Town and City Gazetteer at Question 6 instead of the Place Name Gazetteer. As such, for 8,291 visits recorded during this period (around 21% of the total recorded during this period), this less precise town level destination information had been recorded by the interviewer rather than the more specific exact place visited available in the Place Name Gazetteer.
- 3.18 In the remaining 79% of visits, the interviewer had typed in an open text description of the destination allowing the normal post-fieldwork geocoding process to be undertaken.
- 3.19 Following consultation with Natural England, it was agreed that the Town and City information collected in error at Question 6 could be used to identify a geocode for a central point in each town and city (based on postcodes which fall into the town).
- 3.20 It was recognised that this 'nearest town centre' approach would result in a less precise record of the visit destination than would have been possible if the correct, specific destination information had been collected at Question 7. As such where this less precise data has been used in the published data, a flag has been included to indicate that this is the case.
- 3.21 To prevent a repeat of an issue of this nature script, the correct Question 7 Gazetteer has been reinserted into the survey script. Checking processes have been enhanced – covering both the survey script checks and the checking of data from Question 6 and Question 7, which will take place on a more frequent basis.

Start point geocoding

- 3.22 In addition to the identification of the position of visit destinations, efforts have been made to identify the location of visit start points.
- 3.23 For the majority of visits taken (an average of 94 per cent over the nine years), the start point was the survey respondent's home and in 98% of these cases the full postcode included in the survey sample file has been used to identify the Easting and Northing of this point.

- 3.24 Around six per cent of visits started from a point other than the respondent's home. In these cases, the survey respondent was asked to specify the address and postcode of the start point or, if they did not know these details, to provide other information which could then be used to identify the address and an Easting and Northing for this point.
- 3.25 Following this approach it has been possible to obtain a grid reference for an average of around 35% of these start points. It has not possible to obtain a geocode for the remaining visit start points as insufficient information was provided by the respondent to allow for the point to be accurately identified.
- 3.26 Therefore, in total, of the nine years of interviewing, it has been possible to obtain a start point grid reference for 94 per cent of the visits recorded.

Impact of questionnaire change and data calibration

- 3.27 As mentioned in paragraphs 2.12-2.16, from April 2016 (the second month of year eight of MENE) a number of changes were made to shorten and simplify the questionnaire.
- 3.28 In the processing of the year eight data it was found that this simplification of the questionnaire had resulted in an overall increase in the volume of visits recorded by respondents. This was likely to be due to a proportion of respondents previously under reporting the true volume of visits they had taken, when faced with a fairly lengthy set of questions to answer. It is likely that the shorter questionnaire from April 2016 resulted in a more honest, complete response.
- 3.29 To take account of this change an exercise was undertaken to produce a calibration factor to apply to results from question 1-4. This allows for the weighted results from MENE years 8 and 9 to be adjusted to make them comparable to those collected prior to this questionnaire change. This was to enable users to continue to look at trends over time. This 'calibration factor' is incorporated into a set of converted weights included in the published data files. It is recommended that they are used in analysis of any visit level based year 8 and 9 data and respondent level based analysis of question 1. Note that other data such as respondent level data regarding general frequency of visit taking, attitudinal measure and pro-environmental activities are unaffected and should still be analysed using normal weights. Full guidance is provided in the Weighting and Variable Guidance Note.
- 3.30 All publish results, including those in the accompanying 2018 headline report use this calibration factor where it is applicable. Further details are provided in Appendix 5.

Weighting and grossing up of the survey data

- 3.31 This section provides details of the approaches taken to weight and gross up the MENE data. The outputs of this process are estimates of the total volume of visits taken to the natural environment by the English adult population and results representative of the adult population and the visits they have taken over the study period.
- 3.32 Reviews of these procedures were undertaken following the first six months of data collection and again after 12 months. The results of this review are provided in Appendix 4.
- 3.33 Since the survey launch the approach to weighting has been consistent with the exception of the removal of dog ownership as a target from March 2016 (Year 8), when the question that collected this data was removed.
- 3.34 The change in questionnaire structure relating to how the data was collected at Question 1 from March 2016 (Year 8) resulted in a loss of comparability in results relating to the volume of visits taken. As such a calibration exercise was undertaken to produce a set of factors which could be applied to the survey weights to increase the comparability of year 8 and 9 results with those collected in years 1 to 7. These factors have been applied as final stage of the weighting processes described in the sections below. These new weights are labelled in published datasets as 'converted' – see the accompanying Weighting and Variable Guidance note for details on how these should be used. Details of the calibration approach is described in Appendix 5.

Weighting and grossing procedures

A) Questions asked every week

3.35 Monthly data is based on the results of survey weeks which fell entirely or mainly within the reporting month. As such, monthly outputs for the nine years of surveying were based on the following periods (week numbers shown are weeks of the year).

Table 3-1 Weeks included in each MENE month

Month	Calendar weeks								
	Year One	Year Two	Year Three	Year Four	Year Five	Year Six	Year Seven	Year Eight	Year Nine
March	10-13	9-12	9-13	9-13	10-13	10-13	10-13	9-13	9-13
April	14-18	13-17	14-17	14-17	14-17	14-17	14-17	14-17	14-17
May	19-22	18-21	18-21	18-22	18-22	18-21	18-21	18-21	18-21
June	23-26	22-25	22-26	23-26	23-26	22-26	22-26	22-26	22-26
July	27-31	26-30	27-30	27-30	27-30	27-30	27-30	27-30	27-30
August	32-35	31-34	31-34	31-35	31-35	31-34	31-34	31-34	31-35
September	36-39	35-39	35-39	36-39	36-39	35-39	35-39	35-39	36-39
October	40-44	40-43	40-43	40-43	40-44	40-44	40-43	40-43	40-43
November	45-48	44-47	44-47	44-48	45-48	45-47	44-47	44-47	44-48
December	49-53	48-52	48-52	49-52	49-52	48-52	48-53	48-52	49-52
January	1-4	1-4	1-4	1-5	1-5	1-4	1-4	1-4	1-4
February	5-8	5-8	5-8	6-9	6-9	5-9	5-8	5-8	5-8

In December, no interviewing is undertaken on and around Christmas day so data collection for the last week of the year takes place in the following week. See Section 2 for specific details.

3.36 The steps followed to weight the results of questions included in every week of fieldwork are as follows:

- 1) Each month's data are weighted on the basis of age and sex (for example, males 16-24, females 85+), region of residence, social grade, presence of children in the household, sex and working status (for example, male full time), presence of a dog in the household and urban/rural residence.
- 2) The weighting targets used are representative of the English adult population and use the latest data available, updated each year (see Appendix 3 for details). The resultant Demographic Weight (DW) is used to weight respondent based data from questions asked every week (question 1 and classification questions).
- 3) The total claimed number of trips is calculated for each respondent (TCT). That is the sum of the claimed trips in the seven days preceding the interview as recorded at question 1.
- 4) The total number of trips with details given is calculated for each respondent (TDT). This is the sum of the trips taken in the seven days preceding the interview as recorded at question 2 and question 4. Each respondent can provide details of up to ten visits taken during the previous seven days.
- 5) The Trip Correction Factor (TCF) for each respondent is calculated as follows: $TCF = TCT / TDT$.
- 6) A Calendar Month Factor (CMF) is calculated as the total days in the reporting month divided by seven (i.e. the number of days for which visits have been collected for each respondent).
- 7) The Overall Trip Weight (OTW) is calculated for each respondent as the product of their Demographic Weight (DW), Trip Correction Factor (TCF) and Calendar Month Factor (CMF).

- 8) The estimate of the total number of visits taken in the month by the English adult population is the sum of each respondent's Overall Trip Weight. This weight is applied to visit based results which are collected for up to ten visits taken in the last seven days.
- 9) A Randomly Selected Trip Weight is calculated for each respondent as the product of their Demographic Weight (DW), Total Claimed Trips (TCT) and the Calendar Month Factor (CMF). This weight is applied to visit based results which are collected for a single randomly selected visit.
- 10) For years 8 and 9 the Overall Trip Weight and Randomly Selected Trip Weight have been multiplied by a calibration factor which takes account of the questionnaire change from March 2016 (see Appendix 5). This provides a set of 'converted' weights which provide weighted results for years 8 and 9 which are comparable with those from previous years.

B) Questions asked once a month and once a quarter

- 3.37 The steps followed to weight the results of questions which are included in one wave of fieldwork per month or one wave of fieldwork every three months are as follows:
- 1) Questions asked once a month and once a quarter are only included in quarterly tables with results based on the March to May, June to August, September to November and December to February periods.
 - 2) For each of the quarterly periods, the combined three months' sample (for example, March, April and May) is weighted to the same demographic targets as the monthly data. This Quarterly Demographic Weight (QDW) is used to weight respondent based data from questions asked once a month or once a quarter.
 - 3) A Quarter Factor (QF) is calculated as the number of days in the quarter divided by seven.
 - 4) The Initial Quarterly Weight (IQW) to be applied to the monthly questions is then calculated for each respondent as the product of their Quarterly Demographic Weight (QDW), the Quarter Factor (QF) and their Total Claimed Trips (TCT).
 - 5) An estimate of the total trips made in the quarter is calculated as a sum of the Initial Quarterly Weights. This sum will differ from the sum of the total trips in the quarter produced from the analysis of data collected every week (i.e. as described in bullet 8 above).
 - 6) It is therefore necessary to calculate a Processing Correction (PC) as the estimate of trips taken in the quarter as estimated in the analysis of data collected every week divided by the estimate obtained in bullet 5 above.
 - 7) The Final Quarterly Weight (FQW) for each individual is calculated as their IQW x PC. This weight is applied to visit based results which are collected on a monthly basis for a single randomly selected visit from Question 13 to Question 16 (and question 12 prior to April 2013).
 - 8) For years 8 and 9 the Final Quarterly Weights have been multiplied by a calibration factor which takes account of the questionnaire change from March 2016 (see Appendix 5). This provides a set of 'converted' weights which provide weighted results for years 8 and 9 which are comparable with those from previous years.
- 3.38 In summary the following outputs are produced by undertaking the above weighting processes:
- **Estimates of the total volume of visits taken by the English adult population during each month** – this is the sum of every respondent's Overall Trip Weight which takes account of the volume of adults resident in England (through the Demographic Weight), the number of visits taken by each respondent in the previous seven days (Total Claimed Trips) and the number of days in the month (through the Calendar Month Factor). The monthly estimates of visits are added together to obtain estimates of visits for longer periods.
 - **Results which relate to the English adult population such as percentages of the population taking visits at a certain level of frequency.** These 'respondent based' results are produced for question 1 (number of visits in last 7 days), question 17 (normal frequency of visits in last 12 months), question 18 (reasons for not taking visits) and all of the demographic classification questions. These results are obtained by applying the Demographic Weight.
 - **Results which relate to visits taken by English adult population such as the percentages of all visits involving a certain activity or taken to a particular type of place.** These 'visit based' results are produced for questions 2 to 16. These results are

obtained by applying the Overall Trip Weight when questions have been asked for all visits taken by the respondent and Randomly Selected Trip Weight (or quarterly and monthly versions of this weight) when questions are asked only of a single randomly selected visit. See Table 2-3 for details on the frequency of questions and bases.

4 Levels of accuracy

- 4.1 This section of the report provides details of the outputs of an analysis of Complex Standard Errors associated with the MENE data.
- 4.2 This analysis was undertaken annually following the first four years of data collection, most recently in relation to March 2012 to February 2013 period.
- 4.3 As the sampling methodology has remained the same since MENE commenced, this annual analysis of Complex Standard Errors has provided very similar results each year, showing consistency in the levels of accuracy of results. It was therefore agreed with Natural England that it was not necessary to continue to repeat this analysis on an annual basis. Instead, levels of accuracy for data collected in year's five to nine could be estimated by using the outcomes of the complex error analysis conducted for the previous years.
- 4.4 Normal confidence intervals and standard errors assume that the data has come from a Simple Random Sample (SRS). In such a sample, every individual in the population (for MENE, the English adult population) has an equal chance of being included in the survey sample.
- 4.5 In most surveys, however - including MENE - the sampling approach followed means that the survey sample is not a SRS. Complex Standard Errors (CSE) therefore take into account the extra information from the sampling design. Two sources of sample design are taken into account:
- Strata – showing homogenous groups, for example, gender, region.
 - Clusters – points where the data was sampled from.
- 4.6 The following estimates have been produced using a resampling method which resamples the original sample 1,000 times and then takes an average of all the estimates calculated in order to provide a more robust estimate of variance, taking account of the complex survey design.

Analysis of respondent-based data

- 4.7 Some of the MENE results are analysed and presented as proportions of the adult population in England, for example, the percentages taking visits in the last seven days or last 12 months. At an overall level these results are based on the full sample (see Table 2-1).
- 4.8 Table 4-1 overleaf illustrates the design effect associated with the overall sample and the sub-samples obtained in each of the English regions during each of the first four years of surveying and for the total, cumulative sample over this period. The design effect is an indication of how much larger the sample variance is with the complex survey design used in MENE than it would be if the survey was based on the same sample size but selected randomly (i.e. a Simple Random Sample (SRS)).
- 4.9 The table also includes a design factor which is an inflation factor for the standard errors obtained using a complex survey design. Over the first four years of MENE as a whole, the design factor at the all respondent level of 1.37 indicates that standard errors for these data are 1.37 times as large as they would have been had the design been an SRS.
- 4.10 The design factor is used to obtain the effective sample size which gives, for a complex survey design, an estimate of the sample size that would have been required to obtain the same level of precision in an SRS. The estimated effective sample size for respondent based results over the first four years of interviewing is 104,164 - 55 per cent of the actual achieved sample.
- 4.11 As the sampling approach for MENE has not changed over the nine years of surveying and total sample sizes achieved have been at a very similar level, it is valid to apply the levels of

accuracy estimated for years one to four to other years. Applying the design factor of 1.37 to the 47,477 interviews conducted in year nine of the survey suggests an effective sample size for this period of around 26,112.

Table 4-1 Levels of accuracy – respondent based results year 1 to year 4 and cumulative total

	Sample size (visits)					Design effect					Design factor					Effective sample size				
	Yr.1	Yr.2	Yr.3	Yr.4	Total	Yr.1	Yr.2	Yr.3	Yr.4	Total	Yr.1	Yr.2	Yr.3	Yr.4	Total	Yr.1	Yr.2	Yr.3	Yr.4	Total
All respondents	48,514	46,099	47,418	46,749	188,780	1.79	1.62	1.84	2.05	1.87	1.34	1.27	1.35	1.43	1.37	27,100	28,458	25,769	22,837	104,164
By region																				
East Midlands	4,148	3,917	4,085	3,900	16,050	1.51	1.48	1.84	1.75	1.67	1.23	1.22	1.36	1.32	1.29	2,755	2,649	2,219	2,229	9,852
East of England	5,407	5,011	5,143	5,072	20,633	1.32	1.43	1.57	1.79	1.54	1.15	1.20	1.25	1.34	1.24	4,105	3,495	3,272	2,832	13,704
London	7,020	6,588	6,865	6,949	27,422	1.93	1.77	1.67	1.61	1.78	1.39	1.33	1.29	1.27	1.34	3,629	3,728	4,111	4,312	15,780
North East	2,452	2,374	2,472	2,421	9,719	1.38	1.30	1.29	1.49	1.38	1.18	1.14	1.14	1.22	1.18	1,771	1,820	1,909	1,620	7,120
North West	6,563	6,283	6,511	6,373	25,730	1.42	1.49	1.47	1.72	1.57	1.19	1.22	1.21	1.31	1.25	4,630	4,206	4,432	3,705	16,973
South East	8,036	7,606	7,764	7,751	31,157	1.43	1.53	1.75	1.80	1.66	1.20	1.24	1.32	1.34	1.29	5,612	4,983	4,446	4,299	19,340
South West	4,765	4,671	4,751	4,605	18,792	1.49	1.32	1.68	1.95	1.64	1.22	1.15	1.30	1.40	1.28	3,198	3,550	2,820	2,365	11,933
West Midlands	5,206	4,926	5,022	4,952	20,106	1.38	1.54	1.67	1.87	1.65	1.17	1.24	1.29	1.37	1.29	3,775	3,205	3,006	2,642	12,628
Yorkshire & the Humber	4,917	4,723	4,805	4,726	19,171	1.41	1.30	1.23	1.40	1.35	1.19	1.14	1.11	1.18	1.16	3,499	3,638	3,891	3,383	14,411

- 4.12 This design factor of 1.37 may be used to obtain an indication of the levels of accuracy of results obtained at a total sample level and for certain sub sets of the data. For example it can be estimated that with an SRS, a result of 50 per cent with the total year nine sample of 47,477 would have a margin of error of +/-0.5 percentage points at the 95 per cent levels of confidence. Multiplying this value by 1.37 provides us with the margin of error when taking account of the MENE sample design i.e. +/-0.63 percentage points. This is equal to the margin of error that would be obtained for this result with a simple random sample of around 26,112. The design factors may be applied in a similar way to the results obtained for the sub samples obtained in each region.
- 4.13 It should be borne in mind that those questions which were included in the survey once a month or once a quarter have smaller sample sizes (see Table 2-3). A similar design factor is applicable to these sub-samples.
- 4.14 On the basis of the overall respondent based data design factor of 1.37, the following provides an indication of the general levels of accuracy of respondent based MENE results:
- Where the sample size is in excess of 40,000 respondents, the data will generally be accurate to around +/-0.7 per cent at the 95 per cent confidence level.
 - When the sample size is around 10,000 respondents, the data will generally be accurate to around +/-1.3 per cent at the 95 per cent confidence level.
 - Where the sample size is around 5,000 respondents, the data will generally be accurate to around +/-1.9 per cent at the 95 per cent confidence level.
 - Where the sample size is around 1,000 respondents, the data will generally be accurate to around +/-4.3 per cent at the 95 per cent confidence level.

Analysis of visit-based data

- 4.15 Some of the MENE results are analysed and presented as proportions of the visits taken by the adult population in England, for example the percentages of the visits taken in the last week which involved time spent in the countryside. At an overall level some of these results for the first seven years of the survey are based on all of the visits for which key details were collected (referred to below as 'all visits' data), while other results are based on the randomly selected visits which more details were collected for (referred below as 'selected visit' data).

All visits data (only applicable to years one to seven)

- 4.16 Table 4-2 illustrates the design effects and design factors associated with the all visits data obtained from the overall sample of visits which were asked about. The total column relates to the averages across the first four years of data collection and can be taken as a good guide to the accuracy of data collected for all visits in subsequent years (i.e. years five to seven).
- 4.17 The design factors relating to sub-samples of visits to different general types of place are also shown (as recorded at question two). These may be applied as outlined for the respondent based results. For example, across the first four years as a whole, with an SRS sample, a result of 50 per cent of visits taken to seaside coastline would be accurate to around +/-2.2 percentage points at the 95 per cent levels of confidence. Applying the seaside coastline visits design factor of 1.26 provides the margin of error when taking account of the MENE sample design i.e. +/-2.8 percentage points.

Table 4-2 Levels of accuracy – all visit based results year 1 to year 4 and cumulative total

	Sample size (visits)					Design effect					Design factor					Effective sample size				
	Yr.1	Yr.2	Yr.3	Yr.4	Total	Yr.1	Yr.2	Yr.3	Yr.4	Total	Yr.1	Yr.2	Yr.3	Yr.4	Total	Yr.1	Yr.2	Yr.3	Yr.4	Total
All visits	58,653	47,825	53,898	53,208	213,584	1.79	1.62	1.84	2.05	1.87	1.34	1.27	1.35	1.43	1.37	32,771	29,515	29,245	26,020	113,796
By general place visited																				
Town or city	24,328	18,304	21,324	23,880	87,836	1.74	1.74	1.66	1.76	1.70	1.32	1.32	1.29	1.33	1.30	13,990	10,550	12,567	13,500	49,656
Seaside resort or town	4,469	3,454	3,373	3,710	15,006	1.89	1.96	1.85	1.79	1.83	1.37	1.40	1.28	1.34	1.35	2,367	1,759	2,055	2,066	8,234
Seaside coastline	2,256	1,690	1,997	1,806	7,749	1.72	1.59	1.59	1.62	1.59	1.19	1.26	1.36	1.27	1.26	1,596	1,065	1,079	1,120	4,881
Countryside	27,600	24,377	27,204	23,812	102,993	1.79	1.99	1.85	1.98	1.89	1.34	1.41	1.33	1.41	1.38	15,425	12,250	15,221	11,977	54,082

4.18 On the basis of the four year average data design factor of 1.37, the following provides an indication of the general levels of accuracy of all visit based MENE results:

- When the sample size is around 50,000 visits, the data will generally be accurate to around +/-0.6 per cent at the 95 per cent confidence level.
- When the sample size is around 20,000 visits, the data will generally be accurate to around +/-0.9 per cent at the 95 per cent confidence level.
- When the sample size is around 10,000 visits, the data will generally be accurate to around +/-1.3 per cent at the 95 per cent confidence level.
- Where the sample size is around 5,000 visits, the data will generally be accurate to around +/-1.9 per cent at the 95 per cent confidence level.

Selected visit data – applicable to all years

4.19 Table 4-3 illustrates the design effects and design factors associated with the sample of selected visits and the sub-samples of visits taken to different specific types of place (as recorded at question five). The total column relates to the averages across the first four years of data collection.

4.20 This exercise has not been repeated for the data collected in subsequent years but as the sampling approaches have not changed over the survey period, it can be taken as a good guide to the accuracy of data collected in subsequent years. Note that while the specific place question (Q5) reduced in frequency to a monthly question from year 8, resulting in a smaller annual sample size, the estimated design effects are still valid due to the consistent sampling methods so can be applied to obtain estimates of the effective sample size.

Table 4-3 Levels of accuracy – selected visit based results year 1 to year 4 and cumulative total

	Sample size (visits)					Design effect					Design factor					Effective sample size				
	Yr.1	Yr.2	Yr.3	Yr.4	Total	Yr.1	Yr.2	Yr.3	Yr.4	Total	Yr.1	Yr.2	Yr.3	Yr.4	Total	Yr.1	Yr.2	Yr.3	Yr.4	Total
All selected visits	20,374	17,389	19,014	18,185	74,962	1.79	1.62	1.84	2.05	1.87	1.34	1.27	1.35	1.43	1.37	11,347	10,781	10,433	8,893	39,939
By specific place visited																				
A playing field or other recreation area	1,206	1,066	1,267	1,115	4,654	1.11	1.16	1.14	1.23	1.16	1.05	1.08	1.07	1.11	1.08	1,108	911	1,112	905	4,025
Another open space in a town or city	1,362	1,099	1,347	1,499	5,307	1.17	1.20	1.29	1.24	1.23	1.08	1.10	1.14	1.11	1.11	1,110	802	1,039	1,217	4,307
Another open space in the countryside	1,830	1,609	1,769	1,557	6,765	1.48	1.38	1.82	1.54	1.56	1.22	1.17	1.35	1.24	1.25	1,540	1,331	973	1,013	4,349
Beach	1,541	1,341	1,371	1,348	5,601	1.44	1.33	1.37	1.38	1.39	1.20	1.15	1.17	1.17	1.18	916	1,013	1,003	985	4,023
Children's Playground	786	698	778	837	3,099	1.22	1.25	1.10	1.07	1.17	1.10	1.12	1.05	1.03	1.08	611	556	705	789	2,657
Country Park	1,710	1,473	1,578	1,503	4,654	1.21	1.21	1.27	1.21	1.23	1.10	1.10	1.13	1.10	1.11	1,302	1,195	1,239	1,242	3,777
Farmland	1,051	1,078	1,161	989	4,279	1.44	1.38	1.57	1.36	1.44	1.20	1.18	1.25	1.17	1.20	600	775	739	722	2,972
Mountain, hill or moorland	464	422	474	435	1,795	1.16	1.15	1.27	1.24	1.22	1.08	1.07	1.13	1.11	1.10	395	368	369	353	1,483
Park in town or city	5,532	4,827	5,376	5,251	20,986	1.50	1.36	1.38	1.45	1.44	1.22	1.17	1.18	1.21	1.20	3,184	3,585	3,892	3,587	14,574
Path, cycleway or bridleways	1,981	1,784	2,196	2,109	8,070	1.40	1.56	1.52	1.55	1.53	1.18	1.25	1.23	1.25	1.23	1,306	1,140	1,444	1,350	5,334
River, lake or canal	1,718	1,483	1,743	1,518	6,492	1.35	1.42	1.37	1.40	1.38	1.16	1.19	1.17	1.18	1.18	1,199	1,048	1,274	1,090	4,662
Village	1,202	1,023	1,171	955	4,351	1.38	1.63	1.69	1.48	1.54	1.18	1.28	1.30	1.22	1.24	817	625	693	642	2,830
Woodland or forest	1,747	1,777	1,875	1,695	7,094	1.28	1.29	1.40	1.42	1.36	1.13	1.14	1.18	1.19	1.16	1,308	1,365	1,342	1,197	5,272

Accuracy of visit estimates

- 4.21 An output of the weighting and grossing procedures used in MENE (see Section 3) is a series of estimates of the total number of visits taken by adults in England during each year surveying. Estimates are produced at various different levels including visits taken by residents of particular regions and visits taken to general and specific types of place.
- 4.22 Table 4-4 to Table 4-6 illustrates the upper and lower confidence limits associated with these estimates during the first four years of MENE. These estimates take account of two sources of variation: the uncertainty associated with respondent based results and the sample variation in terms of the number of visits respondents report to have taken in the seven days prior to interview.
- 4.23 As sampling approaches have remained consistent and the level of variation in numbers of visits taken have remained fairly consistent over the nine years of MENE, the confidence intervals associated with the results collected in years one to four provide a good indication of the accuracy of data in subsequent years.

Table 4-4 Visit estimates – total, and by region of residence

	Year 1 March 2009 to February 2010			Year 2 March 2010 to February 2011			Year 3 March 2011 to February 2012			Year 4 March 2012 to February 2013		
	12 month visit estimate '000s visits	Lower confidence limit '000s visits	Upper confidence limit '000s visits	12 month visit estimate '000s visits	Lower confidence limit '000s visits	Upper confidence limit '000s visits	12 month visit estimate '000s visits	Lower confidence limit '000s visits	Upper confidence limit '000s visits	12 month visit estimate '000s visits	Lower confidence limit '000s visits	Upper confidence limit '000s visits
All visits	2,857,759	2,785,840	2,929,678	2,493,837	2,431,187	2,556,448	2,726,476	2,655,216	2,797,749	2,849,081	2,791,653	2,906,509
By GOR of residence												
East Midlands	265,514	242,682	288,346	243,148	221,300	264,996	279,114	252,469	305,547	255,377	229,006	281,748
East of England	371,514	346,355	396,673	283,137	262,296	303,978	338,679	314,216	363,144	293,445	268,962	317,928
London	275,195	253,442	296,948	167,338	152,589	182,087	202,371	186,187	218,457	273,214	252,093	294,335
North East	157,498	138,605	176,391	170,322	150,707	189,937	195,278	174,608	215,751	188,035	166,762	209,308
North West	310,530	288,863	332,197	273,159	252,811	293,507	317,386	293,936	340,619	363,386	335,347	391,425
South East	530,961	502,335	559,587	425,203	398,298	452,114	413,969	385,580	442,093	432,617	401,699	463,535
South West	417,131	388,555	445,707	418,379	390,952	445,806	413,221	381,862	443,739	404,891	369,703	440,079
West Midlands	242,041	220,375	263,707	222,491	201,262	243,720	284,459	260,771	308,149	283,302	256,298	310,306
Yorkshire & the Humber	287,375	262,147	312,603	290,661	266,488	314,834	282,000	261,796	302,206	284,279	261,129	307,429

Table 4-5 Visit estimates – by general place visited

	Year 1 March 2009 to February 2010			Year 2 March 2010 to February 2011			Year 3 March 2011 to February 2012			Year 4 March 2012 to February 2013		
	12 month visit estimate '000s visits	Lower confidence limit '000s visits	Upper confidence limit '000s visits	12 month visit estimate '000s visits	Lower confidence limit '000s visits	Upper confidence limit '000s visits	12 month visit estimate '000s visits	Lower confidence limit '000s visits	Upper confidence limit '000s visits	12 month visit estimate '000s visits	Lower confidence limit '000s visits	Upper confidence limit '000s visits
Town or city	1,157,932	1,113,597	1,200,945	923,060	887,798	958,322	1,048,624	1,009,654	1,087,598	1,218,141	1,182,142	1,254,140
Seaside resort or town	207,101	190,725	223,237	172,573	156,109	189,037	162,241	148,367	176,115	185,341	173,844	196,838
Seaside coastline	112,820	97,830	127,684	88,267	78,391	98,142	101,002	89,252	112,752	98,967	89,750	108,184
Countryside	1,379,905	1,325,345	1,432,896	1,309,938	1,257,351	1,362,525	1,414,610	1,357,302	1,471,925	1,346,632	1,303,947	1,389,317

Table 4-6 Visit estimates – by specific place visited

	Year 1 March 2009 to February 2010			Year 2 March 2010 to February 2011			Year 3 March 2011 to February 2012			Year 4 March 2012 to February 2013		
	12 month visit estimate '000s visits	Lower confidence limit '000s visits	Upper confidence limit '000s visits	12 month visit estimate '000s visits	Lower confidence limit '000s visits	Upper confidence limit '000s visits	12 month visit estimate '000s visits	Lower confidence limit '000s visits	Upper confidence limit '000s visits	12 month visit estimate '000s visits	Lower confidence limit '000s visits	Upper confidence limit '000s visits
Playing field or other recreation area	195,411	168,693	222,129	190,962	173,106	208,818	228,865	209,810	247,921	206,731	186,869	226,593
Allotment or Community Garden	17,205	11,923	22,487	15,637	11,507	19,767	20,600	14,962	26,239	22,420	16,638	28,203
Another open space in a town or city	226,280	198,148	254,412	188,684	171,178	206,190	221,587	202,061	241,113	247,703	227,374	268,033
Another open space in the countryside	319,011	288,213	349,809	307,211	281,996	332,426	328,169	299,141	357,198	323,155	294,967	351,344
Beach	174,137	159,038	189,236	159,083	143,993	174,173	151,792	138,448	165,137	170,437	154,715	186,160
Children's Playground	82,157	73,116	91,198	75,804	65,791	85,818	80,171	71,052	89,291	85,516	77,084	93,948
Country Park	198,630	182,662	214,598	176,258	161,847	190,669	196,595	180,542	212,649	204,311	187,647	22,0946
Farmland	208,953	187,641	230,265	232,977	209,686	256,267	241,213	216,984	265,443	244,610	220,124	26,9097
Mountain, hill or moorland	61,126	53,172	69,080	63,938	54,689	73,188	76,343	64,823	87,864	73,009	62,170	83,844
Park in town or city	677,631	647,689	707,573	557,838	532,798	582,883	628,383	600,050	656,719	709,861	675,438	744,287
Path, cycleway or bridleways	369,187	341,782	396,592	359,534	330,312	388,755	430,117	399,777	460,458	448,256	414,988	481,525
River, lake or canal	253,373	230,815	275,931	231,907	210,907	252,908	261,436	241,053	281,821	251,803	230,389	273,217
Village	175,968	157,276	194,660	157,450	139,966	174,934	194,448	173,998	214,899	166,294	147,243	185,346
Woodland or forest	316,825	292,431	341,219	325,554	300,792	350,316	358,314	331,431	385,198	356,575	328,194	384,956

Appendix 1 MENE year 9 questionnaire

See Table 2-3 for details of questionnaire frequencies in years prior to year 9

	Asked of	Frequency in year 9
<p>READ THE FOLLOWING TEXT IN FULL TO RESPONDENTS AND ENSURE THAT THEY UNDERSTAND.</p> <p>SEE INSTRUCTIONS FOR FURTHER CLARIFICATION.</p> <p>Now I am going to ask you about occasions in the last week when you spent your time out of doors.</p> <p>By out of doors we mean open spaces in and around towns and cities, including parks, canals and nature areas; the coast and beaches; and the countryside including farmland, woodland, hills and rivers.</p> <p>This could be anything from a few minutes to all day. It may include time spent close to your home or workplace, further afield or while on holiday in England.</p> <p>However this <u>does not include</u>:</p> <ul style="list-style-type: none"> - routine shopping trips or; - time spent in your own garden. 		
<p>1) Firstly I would like to record details of occasions when you made out of door visits during each of the last 7 days.</p> <p>How many times, if at all, did you make this type of visit yesterday/on <DAY>?)</p> <p>_____</p>	ALL RESPONDENTS	WEEKLY
<p>IF NO VISITS TAKEN IN ANY OF LAST 7 DAYS SKIP TO Q17</p>		
<p>AUTOMATED SELECTION OF RANDOM VISIT: I would now like to ask you some further questions about the [first/second/third] visit to the out of doors you took Yesterday/ on <DAY>. This visit was to [location from Q2]</p>	ALL VISIT TAKERS	

	Asked of	Frequency in year 9
<p>INSERT TEXT IF MORE THAN ONE VISIT IN DAY BEING ASKED ABOUT: So, thinking of the [first/second/third] of the visits you took on that day.</p> <p>2) Which of the following best describes where you spent most of your time on this visit? SHOW SCREEN. RANDOM ORDER. SINGLE CODE.</p> <ul style="list-style-type: none"> • In a town or city • In a seaside resort or town • Other seaside coastline (including beaches and cliffs) <p>In the countryside (including areas around towns and cities)</p>	ALL VISIT TAKERS	WEEKLY Randomly selected visit only
<p>3) How long did this visit last altogether – that is from the time you left to when you returned? RECORD IN HOURS AND MINUTES</p> <p>Hours _____ Minutes _____</p>	ALL VISIT TAKERS	WEEKLY Randomly selected visit only

	Asked of	Frequency in year 9
<p>4) Which of these activities, if any, did you undertake?</p> <p>SHOW SCREEN. RANDOM ORDER. CODE ALL MENTIONED.</p> <ul style="list-style-type: none"> • Eating or drinking out • Fieldsports (for example, shooting and hunting) • Fishing • Horse riding • Off-road cycling or mountain biking • Off-road driving or motorcycling • Picnicking • Playing with children • Road cycling • Running • Appreciating scenery from your car (for example, at a viewpoint) • Swimming outdoors • Visits to a beach, sunbathing or paddling in the sea • Visiting an attraction • Walking, <u>not with a dog</u> (including short walks, rambling and hill walking)? • Walking, <u>with a dog</u> (including short walks, rambling and hill walking)? • Watersports • Wildlife watching <p>OPTIONS BELOW NOT RANDOMISED – ALWAYS AT END OF LIST:</p> <ul style="list-style-type: none"> • Informal games and sport (for example, Frisbee or golf) (SPECIFY) • Any other outdoor activities (for example, climbing) (SPECIFY) 	ALL VISIT TAKERS	WEEKLY Randomly selected visit only

	Asked of	Frequency in year 9
<p>5) Which of the following list of types of place best describe where you spent your time during this visit?</p> <p>Select more than one if necessary.</p> <p>SHOW SCREEN. RANDOM ORDER. CODE ALL MENTIONED.</p> <ul style="list-style-type: none"> • A woodland or forest (including community woodland) • Farmland • A mountain, hill or moorland • A river, lake or canal • A village • A path, cycleway or bridleway • Country park • Another open space in the countryside <p>----</p> <p>KEEP TOGETHER IN THIS ORDER:</p> <ul style="list-style-type: none"> • A park in a town or city • An allotment or community garden • A children's playground • A playing field or other recreation area • Another open space in a town or city <p>----</p> <p>KEEP TOGETHER IN THIS ORDER:</p> <ul style="list-style-type: none"> • A beach • Other coastline <p>---</p> <p>ALWAYS AT END:</p> <ul style="list-style-type: none"> • Other (specify) 	ALL VISIT TAKERS	MONTHLY Randomly selected visit only
<p>6) What is the name of the city, town or village or nearest city, town or village to the place you visited?</p> <p>FOLLOW UP IF NECESSARY:</p> <p>This may be the place you live in. If you visited more than one city, town or village provide the name of the place nearest your final destination.</p> <p>NAME OF (NEAREST) TOWN OR VILLAGE:</p> <p>(USES LIST OF TOWNS AND VILLAGES AS IN UKTS SURVEY – INCLUDES SCOTTISH AND WELSH PLACES TO ALLOW FOR CROSS BORDER TRIPS)</p>	ALL VISIT TAKERS	MONTHLY Randomly selected visit only

	Asked of	Frequency in year 9
<p>7) Now please provide the name of the actual place you visited, for example the park, wood or canal.</p> <p>ADD AS NECESSARY, IMPORTANT!:</p> <ul style="list-style-type: none"> • If the place does not have a name, provide a nearby street name or landmarks which would help us to find it on a map. • If you were on a walk with no particular 'destination', tell us the location of the furthest away place reached. • If you visited more than one place, provide the name of the place that was your final destination, for example, furthest away. <p>PLACE VISITED (IF JUST TOWN OR VILLAGE NAME GIVEN PROBE FOR MORE DETAIL).</p> <p><u>INTERVIEWER NOTE: IF RESPONDENT DOES NOT KNOW NAME OF PLACE VISITED PROBE FOR AS MUCH DETAIL AS POSSIBLE TO ALLOW US TO IDENTIFY THE LOCATION AFTER INTERVIEW, FOR EXAMPLE, ADDRESS, STREET NAME, NEARBY LANDMARKS, ETC. – THE MORE DETAIL THE BETTER!</u></p>	ALL VISIT TAKERS	MONTHLY Randomly selected visit only
<p>8) Approximately how far, in miles, did you travel to reach this place? By that I mean the one way distance from where you set off to the place visited.</p> <p>SHOW SCREEN. DO NOT RANDOMISE. SINGLE CODE.</p> <p>Less than 1 mile 1 or 2 miles 3 to 5 miles 6 to 10 miles 11 to 20 miles 21 to 40 miles 41 to 60 miles 51 to 80 miles 81 to 100 miles More than 100 miles</p>	ALL VISIT TAKERS	MONTHLY Randomly selected visit only

	Asked of	Frequency in year 9
<p>9) And did this journey start from...</p> <p>SHOW SCREEN. DO NOT RANDOMISE. SINGLE CODE.</p> <ul style="list-style-type: none"> • Your home • Someone else's home • Work • Holiday accommodation • Somewhere else 	ALL VISIT TAKERS	MONTHLY Randomly selected visit only
<p>IF JOURNEY DID NOT START FROM RESPONDENT'S HOME:</p> <p>10) Please provide the address of where your journey started from?</p> <p>INTERVIEWER NOTE: IDEALLY COLLECT POSTCODE (FOR EXAMPLE, FOR WORKPLACES). IF THIS IS NOT POSSIBLE ASK FOR AS MUCH DETAIL AS POSSIBLE ON ADDRESS FOR EXAMPLE, NAME OF HOTEL AND TOWN.</p>	ALL VISIT TAKERS	MONTHLY Randomly selected visit only
<p>11) What form of transport did you use on this journey?</p> <p>INTERVIEWER NOTE: IF MORE THAN ONE FORM OF TRANSPORT USED RECORD THAT USED FOR LONGEST DISTANCE.</p> <p>SHOW SCREEN. RANDOM ORDER. SINGLE CODE.</p> <ul style="list-style-type: none"> • Car or van • Train (includes tube/underground) • Public bus or coach (scheduled service) • Coach trip/ private coach • Motorcycle/ scooter • Bicycle/ mountain bike • On foot/ walking • Wheelchair/mobility scooter • On horseback • Boat (sail or motor) • Taxi <p>ALWAYS AT END:</p> <ul style="list-style-type: none"> • Other 	ALL VISIT TAKERS	MONTHLY Randomly selected visit only

	Asked of	Frequency in year 9
<p>12) Which of the following, if any, best describe your reasons for this visit?</p> <p>Select all of those which apply to you. SHOW SCREEN. RANDOM ORDER. CODE ALL MENTIONED.</p> <ul style="list-style-type: none"> • To spend time with family • To spend time with friends • To learn something about the outdoors • For fresh air or to enjoy pleasant weather • For health or exercise • For peace and quiet • To relax and unwind • To exercise your dog • To enjoy scenery • To enjoy wildlife • To entertain children • To challenge yourself or achieve something • To be somewhere you like • For other reasons (SPECIFY) 	ALL VISIT TAKERS	WEEKLY Randomly selected visit only
<p>13) On this visit...</p> <p>a) how many adults aged 16 or over, including yourself, were on this visit?</p> <p>_____ ZERO NOT ALLOWED AS INCLUDES RESPONDENT</p> <p>b) how many children aged under 16 were on this visit?</p> <p>_____ MAY BE ZERO</p>	ALL VISIT TAKERS	QUARTERLY Randomly selected visit only
<p>14) Were you accompanied by a dog on this visit?</p> <ul style="list-style-type: none"> • Yes • No 	ALL VISIT TAKERS	QUARTERLY Randomly selected visit only

	Asked of	Frequency in year 9
<p>15) During this visit, did you personally spend any money on any of the items listed on the screen? PROBE Any others? SHOW SCREEN. RANDOM ORDER. CODE ALL MENTIONED.</p> <ul style="list-style-type: none"> • Food and drink • Petrol\diese\LPG • Car parking • Bus\train\ferry fares • Hire of equipment • Purchase of equipment • Maps\guidebooks\leaflets • Gifts\souvenirs • Admission fees • Other items • Didn't spend any money 	ALL VISIT TAKERS	QUARTERLY Randomly selected visit only
<p>16) How much did you spend on...</p> <p>ASKED FOR THOSE SELECTED AT Q17</p> <p>Food and drink _____</p> <p>Petrol\diese\LPG _____</p> <p>Car parking_____</p> <p>Bus\train\ferry fares _____</p> <p>Hire of equipment_____</p> <p>Purchase of equipment _____</p> <p>Maps\guidebooks\leaflets_____</p> <p>Gifts\souvenirs _____</p> <p>Admission fees _____</p> <p>Other items _____</p>	ALL VISIT TAKERS	QUARTERLY Randomly selected visit only

	Asked of	Frequency in year 9
<p>E1) Thinking of this visit, how much do you agree or disagree with the following statements?</p> <p>SHOW SCREEN. SINGLE CODE</p> <p>...I enjoyed it ...It made me feel calm and relaxed ...It made me feel refreshed and revitalised ...I took time to appreciate my surroundings ...I learned something new about the natural world ...I felt close to nature</p> <ul style="list-style-type: none"> • Strongly agree • Agree • Neither agree nor disagree • Disagree • Strongly disagree 	ALL VISIT TAKERS	<p>QUARTERLY</p> <p>Randomly selected visit only</p>

LAST 12 MONTHS SECTION		
<p>17) Now thinking about the last 12 months, how often, on average, have you spent your leisure time out of doors, away from your home?</p> <p>Again, by out of doors we mean open spaces in and around towns and cities, the coast and the countryside.</p> <p>This could be anything from a few minutes to all day. It may include time spent close to your home, further afield or while on holiday in England. However this does not include routine shopping trips or time spent in your own garden.</p> <p>SHOW SCREEN. SINGLE CODE.</p> <ul style="list-style-type: none"> • More than once per day • Every day • Several times a week • Once a week • Once or twice a month <p>-----</p> <ul style="list-style-type: none"> • Once every 2-3 months • Once or twice • Never 	<p>ALL RESPONDENTS</p>	<p>MONTHLY</p>

<p>18) IF ONCE EVERY 2-3 OR ONCE OR TWICE AT Q17: Why have you not spent more of your time out of doors?</p> <p>IF NEVER AT Q17: Why have you not spent any of your time out of doors?</p> <p>DO NOT PROMPT - PROBE FULLY. SELECT ALL THAT APPLY. DO NOT RANDOMISE – KEEP IN GROUPINGS SHOWN BELOW.</p> <p>Bad\poor weather</p> <p>Old age</p> <p>Poor health</p> <p>A physical disability</p> <p>Pregnant</p> <p>Have young children</p> <p>Have other caring responsibilities</p> <p>Too busy at home</p> <p>Too busy at work</p> <p>Not interested</p> <p>This isn't something for me/people like me</p> <p>Don't like going on my own</p> <p>No access to a car</p> <p>Lack of public transport</p> <p>Too expensive</p> <p>Prefer to do other leisure activities</p> <p>Worried about safety/ doesn't feel safe</p> <p>Concerns about where allowed to go/restrictions</p> <p>I don't feel welcome/feel out of place</p> <p>Lack of suitable places to go/suitable paths</p> <p>Don't know where to go/lack of information</p> <p>Other (SPECIFY)</p> <p>No particular reason</p>	<p>THOSE WHO HAVE TAKEN VISITS ONCE EVERY 2-3 MONTHS, ONCE OR TWICE OR NEVER IN LAST 12 MONTHS</p>	<p>MONTHLY</p>
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<p>The following questions are about you and nature. By nature we mean all types of natural environment and all the plants and animals living in them. Nature can be close to where you live in towns; the countryside or wilderness areas further away.</p>	<p>ALL RESPONDENTS</p>	<p>QUARTERLY</p>
<p>E2) How much do you agree or disagree with the following statements?</p> <p>SHOW SCREEN. SINGLE CODE</p> <p>...Spending time out of doors (including my own garden) is an important part of my life</p> <p>...I am concerned about damage to the natural environment</p> <p>...There are many natural places I may never visit but I am glad they exist</p> <p>...Having open green spaces close to where I live is important</p> <ul style="list-style-type: none"> • Strongly agree • Agree • Neither agree nor disagree • Disagree • Strongly disagree 	<p>ALL RESPONDENTS</p>	<p>QUARTERLY</p>
<p>E2b) Thinking further about nature, how much to you agree or disagree with the following?</p> <p>SHOW SCREEN. SINGLE CODE</p> <p>...I always find beauty in nature</p> <p>...I always treat nature with respect</p> <p>...Being in nature makes me very happy</p> <p>...Spending time in nature is very important to me</p> <p>... I find being in nature is really amazing</p> <p>... I feel part of nature</p> <p>7 Strongly agree</p> <p>6</p> <p>5</p> <p>4</p> <p>3</p> <p>2</p> <p>1 Strongly disagree</p>	<p>ALL RESPONDENTS</p>	<p>QUARTERLY</p>

<p>E3) Which of the following activities involving the natural environment do you take part in? Please choose everything you do, both regularly and occasionally.</p> <p>SHOW SCREEN. RANDOM ORDER. CODE ALL MENTIONED</p> <ul style="list-style-type: none"> • Watching or listening to nature programmes on the TV or radio • Looking at books, photos or websites about the natural world • Looking at natural scenery from indoors or whilst on journeys • Sitting or relaxing in a garden • Gardening • Watching wildlife (including bird watching) • Choosing to walk through local parks or green spaces on my way to other places • Doing unpaid voluntary work out of doors • None of these (fix at bottom) 	<p>ALL RESPONDENTS</p>	<p>QUARTERLY</p>
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<p>E4) Thinking about the last 12 months, which of the following environment-related activities did you do? Please choose all that apply.</p> <p>SHOW SCREEN. RANDOM ORDER. CODE ALL MENTIONED</p> <ul style="list-style-type: none"> • I usually recycle items rather than throw them away • I usually buy eco-friendly products and brands • I usually buy seasonal or locally grown food • I choose to walk or cycle instead of using my car when I can • I encourage other people to protect the environment • I am a member of an environmental or conservation organisation • I volunteer to help care for the environment • I donate money at least once every three months to support an environmental or conservation organisation • I donate my time at least once every three months to an environmental or conservation organisation • I have signed a conservation petition or participated in an online\other conservation campaign • None of these (fix at bottom) 	<p>ALL RESPONDENTS</p>	<p>QUARTERLY</p>
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<p>E5) Please think about whether or not you are likely to make changes to your lifestyle to protect the environment, for example by recycling rather than throwing things away, using your car less and buying local food. Which of these statements best describes your intentions?</p> <p>SHOW SCREEN. SINGLE CODE</p> <ul style="list-style-type: none"> • I like my lifestyle the way it is and am not likely to change it • I'd like to make changes to my lifestyle but I don't know what to do • I'd like to make changes to my lifestyle but it's too difficult • I'd make changes to my lifestyle if I knew other people were willing to make changes • I intend to make changes to my lifestyle • I already do a lot to protect the environment so it would be difficult to do more • Don't know (fix at bottom) 	<p>ALL RESPONDENTS</p>	<p>QUARTERLY</p>
<p>E6) How much do you agree or disagree with the following statements relating to your nearest greenspace areas?</p> <p>...My local greenspaces are within easy walking distance</p> <p>...My local greenspaces are of a high enough standard to want to spend time there</p> <p>...My local greenspaces are easy to get into and around</p> <ul style="list-style-type: none"> • Strongly agree • Agree • Neither agree nor disagree • Disagree • Strongly disagree 	<p>ALL RESPONDENTS</p>	<p>QUARTERLY</p>

<p>E7) Which of the following best applies to you ...?</p> <p>SHOW SCREEN. SINGLE CODE</p> <ul style="list-style-type: none"> • I have access to a private garden • I have access to a private communal garden • I have access to a private outdoor space but not a garden (balcony, yard, patio area) • I don't have access to a garden 	<p>ALL RESPONDENTS</p>	<p>QUARTERLY</p>
<p>E8) Thinking about your garden or communal garden, which of the following statements, if any, do you agree with?</p> <p>SELECT ALL THOSE THAT APPLY TO YOU</p> <p>SHOW SCREEN. MULTI CHOICE</p> <ul style="list-style-type: none"> • My garden is an important place to me • I like spending time in my garden • I don't like my garden • I enjoy gardening • I like to grow fruit, vegetables or herbs in my garden • My garden is too small • My garden is too large • My garden is a place where children can play • I enjoy my garden because it is private • I enjoy the trees in my garden, plants in my garden, water features in my garden • I enjoy the grass • I enjoy the pond • I enjoy feeding birds in my garden • I encourage wildlife in my garden • I enjoy the wildlife in my garden • I enjoy my garden because of its views (e.g. of land, sky, water) 	<p>ALL RESPONDENTS</p>	<p>QUARTERLY</p>

<p>We would like you to think about the variety of all species of animals and plants that are alive on our planet.</p>	<p>ALL RESPONDENTS</p>	<p>QUARTERLY</p>
<p>Q1A/B/C NEW) Thinking about the variety of life in the next 50 years, which of the following statements do you most agree with?</p> <p>SHOW SCREEN. SINGLE CODE</p> <ul style="list-style-type: none"> • There will be less variety of life • There will be no change to the variety of life • There will be more variety of life 	<p>ALL RESPONDENTS</p>	<p>QUARTERLY</p>
<p>Q2NEW) How concerned are you about the consequences of a loss of variety of life in England?</p> <p>SHOW SCREEN. SINGLE CODE</p> <ul style="list-style-type: none"> • Not at all concerned • Not concerned • Neither concerned or unconcerned • Concerned • Extremely concerned 	<p>ALL RESPONDENTS</p>	<p>QUARTERLY</p>
<p>23) Overall, how satisfied are you with your life nowadays?</p> <p>0 – 10 scale</p> <p>Interviewer instruction: where nought is 'not at all satisfied' and 10 is 'completely satisfied'</p>	<p>ALL RESPONDENTS</p>	<p>MONTHLY</p>
<p>Q24) How is your health in general? Would you say it was:</p> <p>READ OUT</p> <p>Very good Good Fair Bad Very bad</p>	<p>ALL RESPONDENTS</p>	<p>MONTHLY</p>

Appendix 2 Standard classification questions included in KTNS Omnibus

Question 1

Sex of respondent ?

- 1 MALE
- 2 FEMALE

Question 2a

What was your age last birthday ?

Question 2b

INTERVIEWER - ESTIMATE AGE GROUP OF RESPONDENT

Age of respondent

- 1 16-17
- 2 18-24
- 3 25-34
- 4 35-44
- 5 45-54
- 6 55-64
- 7 65-74
- 8 75+

Question 3

Thinking about your household's food and grocery shopping, are you personally responsible for selecting HALF OR MORE of the items to be bought from supermarkets and food shops ?

- 1 YES - HALF OR MORE
- 2 NO - LESS THAN HALF

Question 4

Do you have any children under 16 ?

- 1 YES
- 2 NO

Question 5

Working status ?

- 1 FULL-TIME PAID WORK (30+ HOURS PER WEEK)
- 2 PART-TIME PAID WORK (8-29 HOURS PER WEEK)
- 3 PART-TIME PAID WORK (UNDER 8 HOURS PER WEEK)
- 4 RETIRED
- 5 STILL AT SCHOOL
- 6 IN FULL TIME HIGHER EDUCATION
- 7 UNEMPLOYED (SEEKING WORK)
- 8 NOT IN PAID EMPLOYMENT (NOT SEEKING WORK)

Question 6

SHOW SCREEN - MULTI CHOICE

Through which of the following ways, if any, do you receive television in your household?
Please think about all the TV sets in your household.

- 1 Digital Satellite TV through Sky for a monthly subscription (i.e. satellite dish)
- 2 Free-Sat TV through any satellite dish WITHOUT a monthly subscription
- 3 Cable through Virgin Media (previously ntl\Telewest)
- 4 Freeview TV through TV aerial and set-top box without a monthly subscription
- 5 Top-Up TV through TV aerial and set-top box for a monthly subscription
- 6 TV which has Freeview channels built in (IDTV using TV aerial, without a separate set-top box)
- 7 TV from Tiscali\Homechoice
- 8 TV from BT Vision
- 9 TV through a normal aerial but receiving the main 4 or 5 channels only
- 10 Other

Question 7

SHOW SCREEN - MULTI CHOICE

Q.1 Do you have any of the following ?

INTERNET ACCESS E-MAIL

- 1 Access to the Internet at home on a computer\laptop
- 2 Access to the Internet at work on a computer\laptop
- 3 An e-mail address at home
- 4 An e-mail address at work
- 6 Access to the Internet via a mobile phone
- 7 Other Internet access
- 8 Other e-mail address
- 11 Access to the Internet at school\college\university on a computer
- 12 Access to the Internet at home on a games console
- 13 Internet at home through your TV screen via a computer
- 14 Internet access from a library on a computer
- 15 Internet access in a café\bar on a computer
- 18 Access to the Internet on a Palmtop or Personal Digital Assistant (PDA)\Pocket PC
- 19 Internet access at a friends or relatives house on a computer

Question 8

Marital status of respondent

- 1 MARRIED\LIVING AS MARRIED
- 2 SINGLE
- 3 WIDOWED\DIVORCED\SEPARATED

Question 9

ENTER YOUR RESPONSE USING THE PAD ON SCREEN

How many people are there in your household altogether,
including any children and yourself ?

And how many children under the age of 16 are there in
the household ?

Question 10

COLLECT SEX AND AGE OF CHILDREN STARTING WITH THE ELDEST

Question 11

SHOW SCREEN - MULTICHOICE

Which, if any, of the following apply to you ?

- 1 A. I am currently up to 3 months pregnant
- 2 B. I am currently 4-6 months pregnant
- 3 C. I am currently 7-9 months pregnant
- 4 D. My partner is currently up to 3 months pregnant
- 5 E. My partner is currently 4-6 months pregnant
- 6 F. My partner is currently 7-9 months pregnant
- 7 G. I have a baby aged 0-3 months
- 8 H. I have a baby aged 4-6 months
- 9 I. I have a baby aged 7-12 months

Question 12

Tenure

- 1 OWN OUTRIGHT
- 2 OWN WITH A MORTGAGE
- 3 RENT FROM COUNCIL
- 4 RENT PRIVATELY
- 5 OTHER

Question 13

SHOW SCREEN

Which of these best describes your ethnic group ?

(IF NECESSARY: By this I mean your cultural background)

- 1 White British
- 2 White Irish
- 3 Any other white background
- 4 White & Black Caribbean
- 5 White & Black African
- 6 White & Asian
- 7 Any other mixed background
- 8 Indian
- 9 Pakistani
- 10 Bangladeshi
- 11 Any other Asian background
- 12 Caribbean
- 13 African
- 14 Any other Black background
- 15 Chinese
- 16 Any other

Question 14

Working status of Chief Income Earner (CIE)

- 1 EMPLOYED
- 2 SELF-EMPLOYED
- 4 NOT WORKING, DEPENDENT ON STATE BENEFIT
- 5 NOT WORKING, OTHER INCOME

Question 15

Social grade (codes selected by interviewer or in post interview manual coding based on series of questions regarding occupation status)

- 1 . A .
- 2 . B .
- 3 . C1 .
- 4 . C2 .
- 5 . D .
- 6 . E .

Appendix 3 Weighting targets

Table A Weighting targets

Weighting target	Year One Mar 2009 - Feb 2010 '000s	Year Two Mar 2010 – Feb 2011 '000s	Year Three Mar 2011 - Feb 2012 '000s	Year Four Mar 2012 - Feb 2013 '000s	Year Five Mar 2013 - Feb 2014 '000s	Year Six Mar 2014- Feb 2015 '000s	Year Seven Mar 2015- Feb 2016 '000s	Year Eight Mar 2016- Feb 2017 '000s	Year Nine Mar 2017- Feb 2018 '000s
Age x Sex									
Male 16-24	2,941	3,041	3,066	3,130	3,116	3,105	3,076	3,067	3,036
Male 25-34	3,324	3,393	3,421	3,634	3,631	3,655	3,690	3,744	3,789
Male 35-44	3,954	3,849	3,881	3,524	3,508	3,456	3,448	3,456	3,449
Male 45-54	3,345	3,437	3,465	3,599	3,607	3,697	3,718	3,750	3,747
Male 55-64	3,025	3,008	3,033	2,885	2,902	2,940	2,975	3,043	3,116
Male 65-74	2,044	2,006	2,022	2,207	2,259	2,437	2,495	2,559	2,599
Male 75-84	1,191	1,258	1,268	1,384	1,293	1,355	1,381	1,390	1,418
Male 85+	308	350	353	385	422	433	455	465	486
Female 16-24	2,853	2,932	2,956	2,942	2,959	2,971	2,942	2,917	2,877
Female 25-34	3,357	3,420	3,449	3,586	3,477	3,653	3,662	3,710	3,735
Female 35-44	4,025	3,903	3,934	3,543	3,528	3,494	3,484	3,490	3,487
Female 45-54	3,413	3,509	3,538	3,668	3,685	3,780	3,806	3,847	3,845
Female 55-64	3,138	3,128	3,154	3,004	3,019	3,032	3,067	3,138	3,213
Female 65-74	2,233	2,179	2,197	2,385	2,462	2,621	2,682	2,752	2,795
Female 75-84	1,652	1,673	1,686	1,830	1,654	1,684	1,700	1,699	1,721
Female 85+	570	633	638	692	819	824	845	844	859
Total	41,373	41,719	42,061	42,400	42,341	43,137	43,426	43,870	44,173

Weighting target	Year One Mar 2009 - Feb 2010 '000s	Year Two Mar 2010 – Feb 2011 '000s	Year Three Mar 2011 - Feb 2012 '000s	Year Four Mar 2012 - Feb 2013 '000s	Year Five Mar 2013 - Feb 2014 '000s	Year Six Mar 2014- Feb 2015 '000s	Year Seven Mar 2015- Feb 2016 '000s	Year Eight Mar 2016- Feb 2017 '000s	Year Nine Mar 2017- Feb 2018 '000s
Region									
East Midlands	3,551	3,612	3,641	3,726	3,672	3,698	3,720	3,712	3,683
East of England	4,528	4,620	4,658	4,748	4,684	4,777	4,814	4,593	4,655
London	6,183	6,192	6,243	6,250	6,505	6,724	6,806	7,013	7,045
North East	2,098	2,095	2,113	2,102	2,106	2,112	2,118	2,097	2,137
North West	5,602	5,613	5,659	5,630	5,604	5,685	5,703	5,680	5,648
South East	6,690	6,724	6,779	6,830	6,820	6,992	7,044	6,888	7,159
South West	4,220	4,255	4,290	4,372	4,281	4,352	4,380	4,036	4,090
West Midlands	4,358	4,368	4,404	4,394	4,416	4,517	4,541	4,569	4,643
Yorkshire and the Humber	4,143	4,240	4,274	4,348	4,253	4,280	4,300	4,135	4,179
Social Grade									
AB	9,162	9,959	10,041	10,765	10,750	10,952	11,026	11,139	11,216
C1	11,716	11,998	12,097	12,171	12,154	12,382	12,465	12,593	12,680
C2	8,460	8,603	8,673	8,961	8,949	9,117	9,178	9,271	9,335
D	6,796	6,260	6,311	6,381	6,379	6,500	6,543	6,610	6,655
E	5,239	4,899	4,939	4,115	4,109	4,186	4,214	4,257	4,287
Total	41,373	41,719	42,061	42,400	42,341	43,137	43,426	43,870	44,173

Weighting target	Year One Mar 2009 - Feb 2010 '000s	Year Two Mar 2010 - Feb 2011 '000s	Year Three Mar 2011 - Feb 2012 '000s	Year Four Mar 2012 - Feb 2013 '000s	Year Five Mar 2013 - Feb 2014 '000s	Year Six Mar 2014- Feb 2015 '000s	Year Seven Mar 2015- Feb 2016 '000s	Year Eight Mar 2016- Feb 2017 '000s	Year Nine Mar 2017- Feb 2018 '000s
Children in Household									
Yes	11,960	11,893	11,990	12,078	12,070	12,297	12,379	12,251	12,594
No	29,413	29,826	30,071	30,313	30,271	30,840	31,047	31,620	31,578
Working									
Male Full Time	12,214	12,379	12,481	11,890	11,884	12,078	12,170	12,295	12,379
Male Part Time	688	721	727	1,023	965	981	988	998	1,005
Male Not Working	7,230	7,242	7,301	7,836	7,890	8,019	8,080	8,163	8,220
Female Full Time	6,747	7,168	7,227	6,972	6,956	7,104	7,145	7,218	7,268
Female Part Time	3,690	3,463	3,491	4,110	3,903	3,985	4,008	4,049	4,077
Female Not Working	10,804	10,746	10,834	10,569	10,743	10,970	11,035	11,148	11,224
Dog									
Yes	9,607	9,687	9,766	9,845	9,831	10,016	10,083	n/a	n/a
No	31,766	32,032	32,295	32,555	32,510	33,121	33,343	n/a	n/a
Urban/Rural									
Urban	33,415	33,695	33,971	34,602	34,197	34,840	35,073	35,419	36,914
Rural	7,958	8,024	8,090	7,798	8,144	8,297	8,353	8,451	7,259
Total	41,373	41,719	42,061	42,400	42,341	43,137	43,426	43,870	44,173

Appendix 4 Review of demographics used in weighting

- 4.24 The table below provides details of the unweighted number of visits reported by respondents during the first 12 months of interviewing and estimates of total visits following the application of weights. A review of the weighting was undertaken following the first year of surveying using the data collected over this period and has not been repeated since. The review previously undertaken compared the unweighted and weighted profiles of visits and illustrated the following:
- The application of weighting inflated the visit estimates for men aged 16 to 64 (from 36 per cent of unweighted visits to 40 per cent with weighting), members of the ABC1 socio-economic group (from 51 per cent to 56 per cent) and men who work full time (from 23 per cent to 29 per cent).
 - Conversely, the application of weighting deflated the visit estimates for women aged 65 and over (from 11 per cent to 8 per cent), those in the E socio-economic group (from 16 per cent to 10 per cent) and women who work part time or are not working (from 40 per cent to 35 per cent).
- 4.25 The above variations reflected varying response rates amongst these population groups, with those listed in the second bullet above more likely to be available for interview and therefore, included in the survey. The demographic weighting used in MENE corrects for these variations.
- 4.26 The next stage of the review involved an analysis of the average number of visits per adult amongst the groups which weighting is based upon. Across the population as a whole an estimated 68.7 visits were taken per adult during the first 12 months of interviewing.
- 4.27 As the table below 4 illustrates (see column furthest to right), there were significant differences in average levels of visit-taking across all of the categories used in the weighting except for children in household.
- 4.28 These large differences in visit taking levels indicated that these characteristics were relevant variables to use in the MENE weighting. Therefore, the recommendation for these characteristics to continue to be used in the weighting of future years' outputs was implemented.

Table B Review of demographics used in weighting – March 2009 to February 2010 targets

	Population	Visits				Visits per adult
	'000s	Unweighted	Weighted '000s	Unweighted %	Weighted %	
TOTAL						
Age x Gender						
Male 16-24	2,941	146,61	161,953	5%	6%	55.1
Male 25-34	3,324	159,05	186,053	6%	7%	56.0
Male 35-44	3,954	213,40	276,660	8%	10%	70.0
Male 45-54	3,345	234,50	261,273	9%	9%	78.1
Male 55-64	3,025	223,03	243,057	8%	9%	80.3
Male 65-74	2,044	197,90	170,354	7%	6%	83.3
Male 75-84	1,191	8,263	62,290	3%	2%	52.3
Male 85+	308	812	7,895	0%	0%	25.6
Female 16-24	2,853	13,410	151,338	5%	5%	53.0
Female 25-34	3,357	217,28	219,767	8%	8%	65.5
Female 35-44	4,025	30,676	332,841	11%	12%	82.7
Female 45-54	3,413	25,732	277,627	9%	10%	81.3
Female 55-64	3,138	26,147	258,491	10%	9%	82.4
Female 65-74	2,233	19,979	155,803	7%	5%	69.8
Female 75-84	1,652	8,420	69,257	3%	2%	41.9
Female 85+	570	836	8,510	0%	0%	14.9
GOR						
East Midlands	3,551	25,232	263,162	9%	9%	74.1
East of England	4,528	36,801	369,851	13%	13%	81.7
London	6,183	25,771	273,246	9%	10%	44.2
North East	2,098	14,979	158,680	5%	6%	75.6
North West	5,602	29,091	312,709	11%	11%	55.8
South East	6,690	52,742	512,479	19%	18%	76.6
South West	4,220	38,388	412,582	14%	15%	97.8
West Midlands	4,358	23,063	240,311	8%	8%	55.1
Yorkshire and the Humber	4,143	27,391	285,734	10%	10%	69.0

Table continued...

	Population		Visits			Visits per adult
	'000s	Unweighted	Weighted '000s	Unweighted %	Weighted %	
Social Grade						
AB	9,162	61,847	766,085	23%	27%	83.6
C1	11,716	767,32	823,489	28%	29%	70.3
C2	8,460	56,279	567,323	21%	20%	67.1
D	6,796	35,271	408,904	13%	14%	60.2
E	5,239	43,332	277,391	16%	10%	52.9
Children in Household						
Yes	11,960	83,105	836,777	30%	29%	70.0
No	29,413	190,354	2,006,419	70%	71%	68.2
Working Status						
Male Full Time	12,214	62,149	811,255	23%	29%	66.4
Male Part Time	688	6,222	44,998	2%	2%	65.4
Male Non Working	7,230	58,157	513,314	21%	18%	71.0
Female Full Time	6,747	37,599	490,768	14%	17%	72.7
Female Part Time	3,690	31,036	304,328	11%	11%	82.5
Female Not Working	10,804	78,323	678,536	29%	24%	62.8
Dog in Household						
Yes	9,607	143,762	1,511,580	53%	53%	157.3
No	31,766	129,697	1,331,617	47%	47%	41.9
Urban/Rural						
Urban	33,415	202,774	2,123,517	74%	75%	63.5
Rural	7,958	70,686	719,683	26%	25%	90.4
Access to a Car						
Yes	30,957	221,386	2,364,810	81%	83%	76.4
No	10,416	52,072	478,388	19%	17%	45.9
Long Standing Illness						
Yes	7,626	49,288	446,844	18%	16%	58.6
No	33,747	224,173	2,396,352	82%	84%	71.0

Appendix 5 2016/17 and 2017/18 (year 8 and 9) data calibration approach

Background

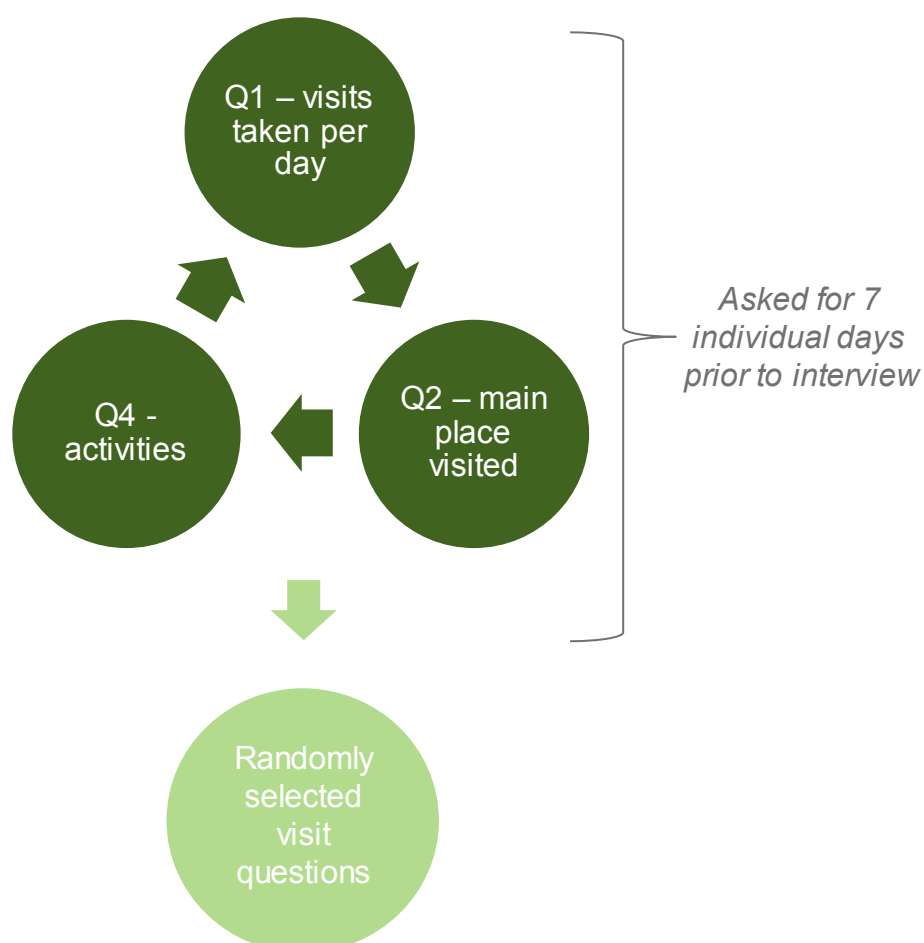
Between March 2009 and February 2016 (the first seven years of MENE), the way that respondents were asked about visits remained consistent. To record visits taken in the seven days prior to being interviewed, respondents were asked how many visits they had taken and then a small amount of detail about each visit (up to a maximum of 10 visits per day).

This was done by asking how many visits were taken on the day before the interview and then asking details for those visits before moving on to the day before that and so on (as illustrated below).

Once all of those details were collected, a single visit was chosen at random and a series of more detailed questions asked about that visit.

FIGURE A MENE Q1 to Q4 questionnaire design in years 1 to 7 (March 2009 to February 2016)

Year 1 to 7



For example, if a respondent took two visits on the day before being interviewed, they would be asked the following:

Day 1

Number of visits taken

Visit 1:

Main place visited

Activities undertaken

Visit 2

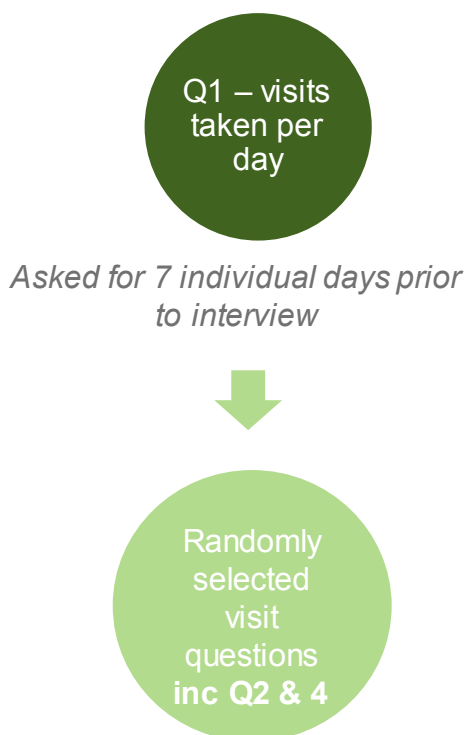
Main place visited

Activities undertaken

They would then move on to answer the same loop of questions for visits taken on each of the previous 7 days.

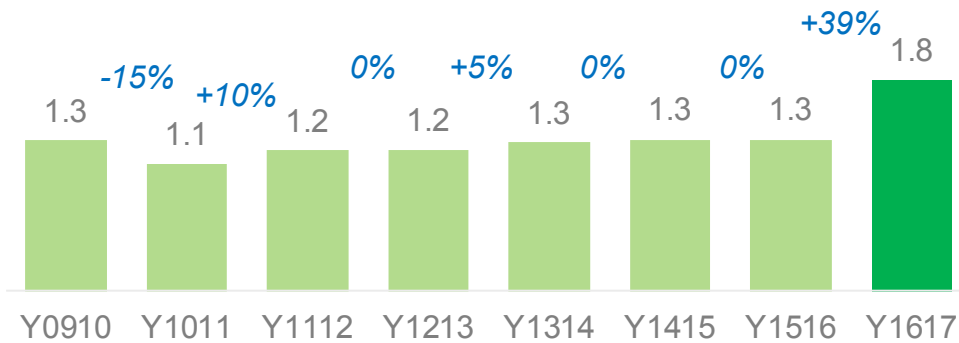
A number of changes were made to MENE from March 2016 (the start of Year 8 of survey). This included an amendment to the format of questions 1, 2 and 4 at the start of the survey to the simpler approach illustrated below. Following this new approach question 1 was asked for the full 7 day period then the main place visited (question 2) and activities undertaken (question4), which had previously asked of up to 10 separate visits, were only asked about a single randomly selected visit.

FIGURE B MENE Q1 to Q4 questionnaire design in year 8 onward (from March 2016)



As shown in the chart below, this change in the questions resulted in an increase in the average number of visits recorded, which when grossed up by the overall number of visits taken by the adult population suggested a significant increase in total volumes of visits on previous years.

FIGURE C Average number of visits recorded at Question 1 by year



To test the belief that increase was a respondent effect, a parallel run was undertaken in July 2017.

The MENE survey sample consists of half of the adults aged 16+ in England who are interviewed as part of the Kantar TNS Omnibus Survey (c.800 per week). For the parallel run these respondents were asked the year 8 questionnaire as usual, while the other half were asked the questions in the format used during the previous years (i.e. years 1 to 7).

This parallel run found that a higher average number of visits per week was recorded by those asked the questions in the new (year 8) format, confirming that the increase in visits reported was a result of the changes made to the questionnaire.

It was surmised that the observed change in the volume of visits reported between the old and new question formats was a respondent effect with the greater length and repetitiveness of questions 1 to 4 during years 1 to 7 creating respondent fatigue and under reporting of visits by some respondents.

In discussions with Natural England, it was felt that publishing estimates with the level of increase recorded between year 7 and year 8 would lead users to believe that there had been a more significant change in visit-taking behaviour than there was really likely to have been.

Therefore, Kantar TNS looked into ways in which the survey data from Years 8 and 9 could be modified (calibrated) to take account of the change in responses as a result of the questionnaire amendments. Following this exercise, to ensure comparability with historical trend levels and survey methods, it was decided that year 8 and year 9 data would be calibrated down.

It should be noted that checks undertaken on subsequent visit characteristic questions (e.g. party composition, mode of transport etc.) have not shown the same level of variation and therefore, the main impact of the change has been on visit propensity measures. However, some changes in the type of activities undertaken (question 4) were noticed as described in more detail in a later section.

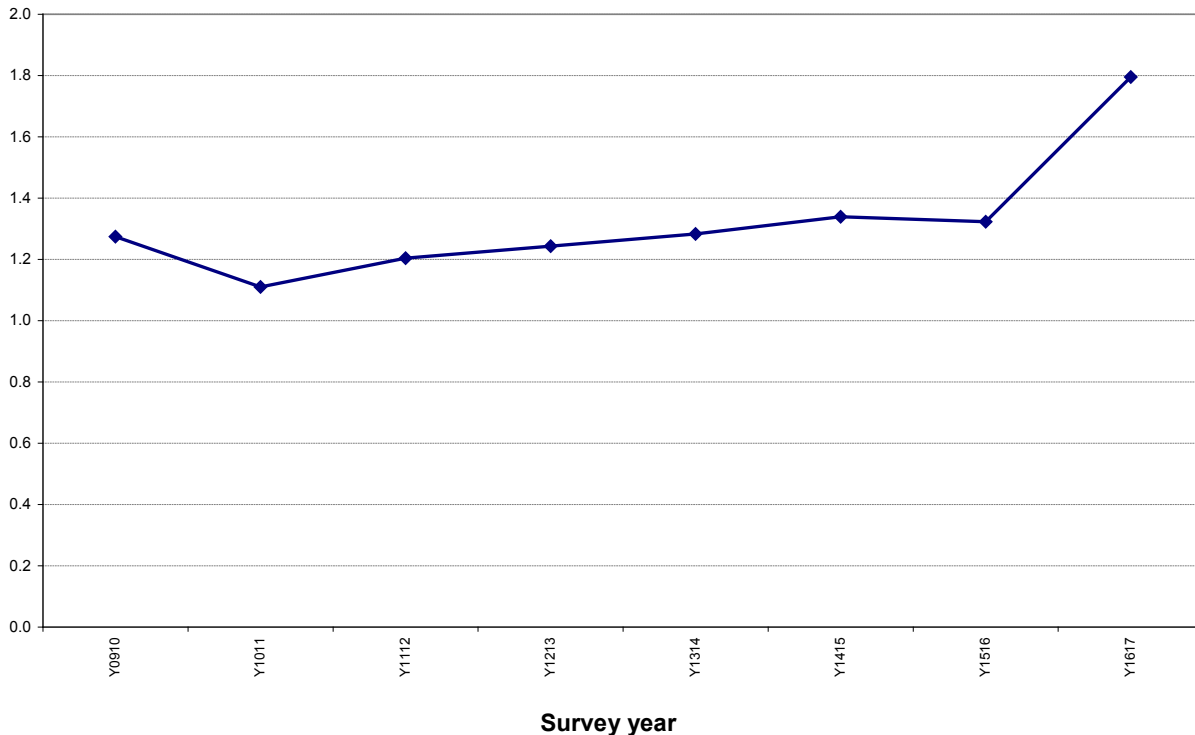
Also note that the calibration approach was designed on the basis of an analysis of MENE data collected during years 1 to 8 but the resulting factors have been applied to both year 8 and year 9 data and will be applied to year 10 data when it is available.

The following sections describe the calibration exercise in more detail.

Initial exploration

An initial assessment was made of the mean visit frequency reported (Question 1 – visits taken in last 7 days). This was based on Quarterly results from year 1 (2009/10) to year 8 (2016/17). As can be seen below, there was a sizeable increase in score in Year 8 from a mean trend around 1.2-1.3 to 1.8 visits per person per week:

FIGURE D Question 1 (visits taken in last 7 days) responses by year – mean score (numbers include zeros)



When comparing the proportion of respondents in each of the 7 day frequency bands from year 7 to year 8, a decrease in the amount of people stating “0” and “1”, and an increase in all visits of “4” or more can be seen:

Visits in last 7 days:	0	1	2	3	4	5	6	7	8+
Year 7	58%	17%	8%	4%	2%	2%	1%	5%	2%
Year 8	54%	15%	7%	4%	3%	2%	2%	9%	4%

The calibration exercise set out to find a way to adjust the response pattern in Year 8 (and ongoing years) to better reflect the distribution recorded in previous years.

Two alternative methods were initially considered for the calibration - rescaling the numeric values or using weighting factors. However after some exploratory analyses, the first of these approaches, rescaling the numeric values was discounted as suitable for the following key reasons:

- It gave very different answers per reporting period, suggesting that it is somewhat unstable.
- If applied this approach would create some major complications if the data was to be cross-analysed, for example by creating unusual numerical values at Question 1 (e.g. 1.75).

Given these complications it was recommend that this approach should not be used while the weighting factor calibration approach was found to be suitable, as described below.

Weighting factor calibration approach

In many respects this approach is implemented in a similar manner to normal survey weighting.

However, it differs from normal target based (RIM / Cell) weighting because, rather than prescribing targets to our answer group proportion, a conversion ratio for each respondent is determined contingent upon their answer to Question 1 (Visit frequency in last 7 days). This ratio is then applied to the existing demographic weight variable to create a final (composite) weight value for the respondent.

Estimating Visit Frequency trends

The table below shows a summary of the weighted sample proportions for each of the visit frequency bands from years 2 to 7:

Q1 Visits 7 days	0	1	2	3	4	5	6	7	8	9	10+
Year 2	60.6%	18.3%	7.4%	3.7%	1.9%	1.4%	1.2%	4.0%	0.3%	0.1%	1.1%
Year 3	58.3%	18.8%	7.9%	4.0%	2.2%	1.4%	1.3%	4.2%	0.3%	0.2%	1.4%
Year 4	59.1%	17.3%	7.8%	4.3%	2.3%	1.5%	1.1%	4.7%	0.3%	0.2%	1.6%
Year 5	57.8%	18.1%	8.0%	4.0%	2.3%	1.4%	1.2%	4.9%	0.4%	0.2%	1.6%
Year 6	56.4%	18.3%	8.3%	4.2%	2.4%	1.6%	1.3%	5.3%	0.4%	0.2%	1.6%
Year 7	57.9%	17.3%	7.7%	4.3%	2.5%	1.7%	1.3%	5.2%	0.4%	0.2%	1.6%

To determine a likely projection of the proportions for each frequency band (0 to 10+) a simple linear projection with conducted. This required the determination of an intercept and slope for each of the columns of proportions, using the following formula:

$$y = \alpha + \beta x \quad (\text{where } x \text{ represents each successive year})^2$$

The process was implemented in Excel (available separately on request by emailing Mene@naturalengland.org.uk). The formula results were as below:

Q1 Freq	0	1	2	3	4	5	6	7	8	9	10+
Intercept (α)	61%	19%	7%	4%	2%	1%	1%	3%	0%	0%	1%
Slope (β)	-0.59%	-0.16%	0.08%	0.10%	0.09%	0.06%	0.03%	0.27%	0.02%	0.02%	0.08%

Applying this to project year 8 proportions yielded the following results:

q1 Q1 Visits 7 days	0	1	2	3	4	5	6	7	8	9	10+
Year 7	57.9%	17.3%	7.7%	4.3%	2.5%	1.7%	1.3%	5.2%	0.4%	0.2%	1.6%
Year 8 - projected	56.3%	17.5%	8.1%	4.4%	2.6%	1.7%	1.3%	5.7%	0.4%	0.2%	1.8%

The result is similar to Year 7 but subtly different. As can be seen, the Year 8 Projected row has a slightly lower proportion of sample with no visits made in the last 7 days, and slightly higher proportions in some of the higher bands (e.g. 7 & 10) than previous years. If this method had not been implemented then the calibration would not have accounted for the very slight upward trend in visit frequency witnessed over the survey lifetime.

² For more details on linear trend estimation, see this short article: https://en.wikipedia.org/wiki/Linear_trend_estimation

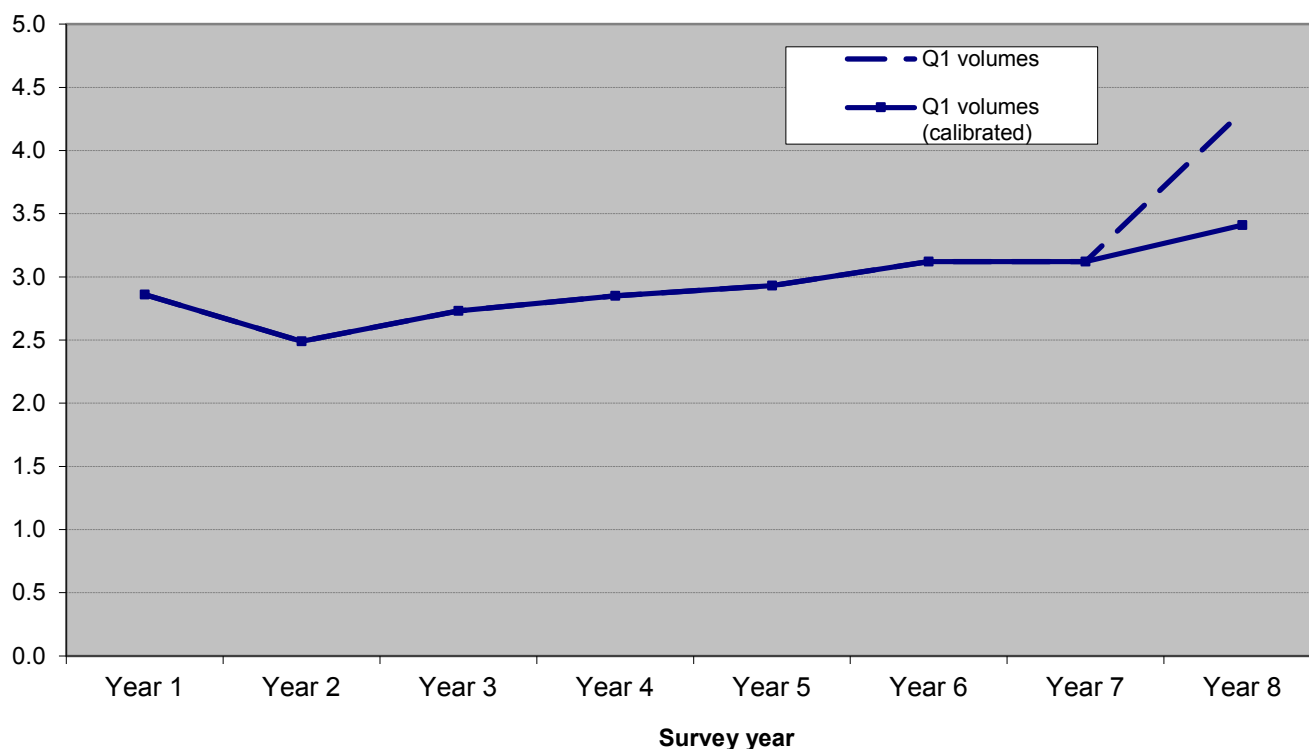
Deriving the frequency calibration factor

The sample proportions used to develop the calibration factors were based on comparing the Year 8 Projected proportions with the actual Year 8 proportions, as below:

q1 Q1 Visits 7 days	0	1	2	3	4	5	6	7	8	9	10+
Year 8 - actual	53.9%	15.3%	7.1%	4.2%	2.9%	2.0%	1.7%	9.3%	0.4%	0.4%	2.8%
Year 8 - projected	56.3%	17.5%	8.1%	4.4%	2.6%	1.7%	1.3%	5.7%	0.4%	0.2%	1.8%
Weighting factor to convert current to Old:	1.0453	1.1438	1.1450	1.0440	0.8930	0.8293	0.7612	0.6088	0.9470	0.6819	0.6388

The calibration factor was derived by dividing the proportion of people in each visit banding from the prior (projected) figures, by the current (actual) proportion (i.e. $56.3\% / 53.9\% = 1.0453$). So for visit values 0, 1, 2 and 3 the calibration factor was a slight upweight value (greater than 1.00), whereas 4+ frequencies were slight down weights (less than 1.00). This had the effect of reducing the proportion of higher visit frequency respondents, and increasing the lower visit frequency respondents, therefore bringing the new mean visit volumes closer to historical levels, as illustrated below:

FIGURE E Question 1 volumes reported and year 8 calibrated– mean score



This simulation of calibrated scores has been developed by applying the calibration factor to the existing respondent weight values. The existing weights are necessary to ensure a stable breakdown of demographic sample characteristics and so need to be accounted for. This is achieved by multiplying each respondent's demographic weight by the specific factor depending upon their answer to the 7 day frequency question (Q1). The resultant weight value is then used as the respondent's main survey weight.

To be clear, this method cannot prescribe the absolute levels of respondent proportions, and instead rescales them in a relative manner. Therefore, any real upward or downward trends in the underlying data will be reflected in the calibrated results, as witnessed by the fluctuations in the chart above.

Enhancing and checking the calibration factors

Following initial consultation and review of the above approach by Natural England, further work was undertaken by Kantar TNS to develop and test the method as follows.

- *Accounting for any genuine trend changes in score*

As can be seen from the chart above, aside from a slight drop from year 1 to year 2, from years 2 to 7 there has been a slight upward trend to average level of visit frequency (estimated as an annualised increase of: Q1 (Last 7 days): 0.043).

This means that we cannot strictly compare the visit levels from Year 7 with Year 8. This is because Year 8 scores would probably have increased slightly, based on prior trends. Therefore, a projection of the likely sample proportions for year 8 was developed, using historical trend levels.

q1 Q1 Visits 7 days	0	1	2	3	4	5	6	7	8	9	10+
Weighting factor to convert current to Old:	1.0453	1.1438	1.1450	1.0440	0.8930	0.8293	0.7612	0.6088	0.9470	0.6819	0.6388

Initial testing of this approach showed that it was a viable method for addressing the trend change issues so it was implemented to the final proposed calibration approach.

- *Testing and validation*

As part of the testing of the approach a data file containing the final proposed calibration weight factors was produced and various weighted data tables of results were produced and checked. These checks ensured that the visit volumes scores were applied correctly, and that there were no unforeseen consequences on other survey characteristics (especially demographics and key trended measures as published in the annual report).

Questions checked included the following key measures:

- Q1 volume of visits in the last 7 days
- Q2 general type of place visited
- Q4 activities undertaken
- Q5 specific types of place visited
- Q12 visit motivations
- Q17 frequency of visit in last 12 months
- E4 environmental attitudes
- E5 environmental behaviours
- Demographics

On the whole, implementing the calibration factor had only had a small impact on the above questions, resulting in a maximum change of +/- 2 percentage points (comparing Year 8 results calibrated vs non-calibrated) on most statements tested.

One exception was in relation to question 4, activities undertaken, in particular the activity 'walking with a dog' which was down weighted by 4 percentage points. This change is logical in the context that the calibration has reduced the proportion of people with the highest visit frequencies, including dog walkers.

Given this discrepancy it was decided that further work was required to understand this change in the profile of results at question 4 and to produce a separate calibration factor which would allow for comparable analyses of the data collected on activities before and after the questionnaire change. This additional work is ongoing so the data and reports released in September 2018 exclude question 4 (activities).

Application of calibration to published data

All published reports including year 8 and year 9 reports use results produced using the agreed calibrated weights. In the published datasets these weights are clearly labelled as 'converted' and a description of how and when they should be used is given in the accompanying 'Weighting Guidance' document.

Conclusions

The calibration approach was developed by projecting what year 8 would have looked like assuming a linear trend from years 1-7, then comparing to actual year 8. This has yielded calibration factors which account for the questionnaire change. These factors can now be applied to all years going forward.

The key advantage of the calibration approach is that it can help to ensure comparability of data collected for year 8 and beyond with historical trends. Without implementing this approach there would be a sudden increase in absolute visit volumes, which is considered likely to be unrealistic in terms of any actual change in visit-taking behaviours.

As the source of the change is likely to be a consequence of minor methodology differences, then we have grounds to undertake the calibration. A fundamental assumption of the approach taken is in how the methodology effect was isolated. This was based on presuming a linear trend for estimating what the distribution for year 8 would have looked like under the original survey structure. In reality the trend may not have been purely linear, so there might be a hidden bias in the calibration, however this is likely to be minor.

There is also a minor consequence of making adjustments to the respondent weight values, in that the weights could be made more extreme. If so, this could lower the weighting efficiency of the data, thereby reducing precision of the estimates. However, an assessment of the year 8 data suggests that the weighting efficiency is not negatively impacted.