Sampling

This study comprised a nationally representative survey with a target of 1,000 interviews, and 200 interviews in each of five flood affected areas. Both the flood affected and national surveys were carried out face-to-face (in the home) with adults aged 16+. We ensured that all respondents had been living in the area prior to February 2014 as the survey was focused on their experiences of the winter floods and storms.

National sample

The Primary Sampling Unit (PSU) for the national survey was Double Output Areas (OAs). An OA represents the lowest level at which census information is published, on demographic quotas (or targets) can be set. A Double OA consists of paired OAs within the same local authority that are the closest geographically, conditional on them being within the same electoral ward and connected directly by road.

The decision was made to use Double OAs as the PSU rather than single OAs after the pilot. The pilot showed the average interview length rate was 35 minutes rather 30 minutes. Consequently the strike rate (the number of interviews we would expect an interviewer to achieve each day) had to be adjusted. The strike rate was reduced from 6 to 5. Five interviews was too few to split out across the quota cells and so the decision was made to use Double OAs, which meant each interviewer would be asked to achieve 10 interviews per sample point over a two-day period.

The Double OAs were stratified by social grade and rurality within region. They were then randomly selected on a "1 in n" basis, with probability proportional to their size. In Scotland, grouped OAs were used as the original Census OAs tend to be too small to form practical sampling units.

This stratification ensured all types of area were fully represented and that selection of respondents was largely taken out of the hands of the interviewers.

For each of the selected sample points, quotas were set on age, gender and working status for the interviewers to achieve based on the local population of the Double OA to ensure the sample was representative. This information came from the recently published 2011 Census. In addition, half of all interviews were completed on weekday evenings (after 5pm) or at weekends to help the interviewers achieve their quotas on working status and ensure we did not simply speak to people who are more likely to be at home during the day.

Whilst random probability surveys may represent the 'gold standard', from experience we have found that precise sampling units of addresses combined with quotas to control for the likelihood of being at home produces a sample profile that is similar to random probability sampling.

Flood affected areas

The following five areas, affected by the winter floods and storms, were sampled:

- Hull
- West of London between Windsor and Sunbury;
- The River Severn between Tewksbury and Gloucester;
- The town and region of Aberystwyth, Ceredigion; and
- Dawlish.

The Somerset Levels were identified at the tender and proposal stages as one of the areas to sample however they were replaced by Hull due to concerns that people in the Somerset Levels were more likely to have taken part in research related to the floods or otherwise asked their opinion, for example by the media. As a check, all survey respondents were asked if they had been interviewed about climate change since November 2013, and only around 2% said they had suggesting the survey did not place too much of a burden on people who could potentially have been an over-researched audience.

In order to determine the survey areas we used a range of sources (including online searches and local knowledge) to help identify the neighbourhoods which were directly affected by the winter storms and floods in order to create an epicentre (or epicentres) in these locations. Ipsos MORI worked in close proximity with Cardiff University in agreeing the directions in which the survey areas should be expanded from the epicentre(s) to ensure there was sufficient addresses to support the number of sample points needed to achieve 200 interviews in each area. In Dawlish, there was no recorded flooding of properties, and so the epicentre was where the railway line had been washed away. Copies of the maps of the final survey areas are included in the Appendix.

Once the boundaries of the flood affected areas were agreed these were converted into postal geography by the Ipsos MORI sampling team. This process was similar to that used on the national sample, using Double OAs as the PSU. Any Double OAs selected for the main sample were excluded and they were stratified by social grade and

rurality. Once the stratification was complete Double OAs were selected on a random basis, with probability in proportion to their size. Following the selection of the Double OAs the quota targets were set using the 2011 Census.

Final fieldwork totals

The main stage fieldwork ran from 28 August to 31 October. The target number of interviews was met in Aberystwyth and Hull, as well as the national sample, and in the remaining three flood affected areas the final number was one or two short of the target. The pilot interview data was not included the main data file and tables.

	Target	Achieved	Shortfall
National Sample	1000	1002	0
Flood affected areas			
Aberystwyth	200	200	0
Dawlish	200	198	2
Gloucester to Tewkesbury	200	198	2
Hull	200	200	0
Sunbury to Windsor	200	199	1

1.1 Weighting

The national sample was weighted to match the population of Great Britain based on ONS data. Weights were applied on age, gender, social grade, working status and tenure within region, and by region to reflect their relative populations in the country as a whole.

Weights were similarly applied on age, gender, social grade, working status and tenure within the five flood affected areas using ONS data to ensure the sample for each area was representative. However no weighting was applied *across* the flood affected areas to correct for their different population sizes. The five flood affected area samples be seen as case-studies as opposed to representative of the flood affected population nationally.The weights were distributed as follows:

Max	5.95
Min	0
Mean	1.00
Median	0.88
Lower quartile	0.61
Upper quartile	1.27
Std Dev	0.54

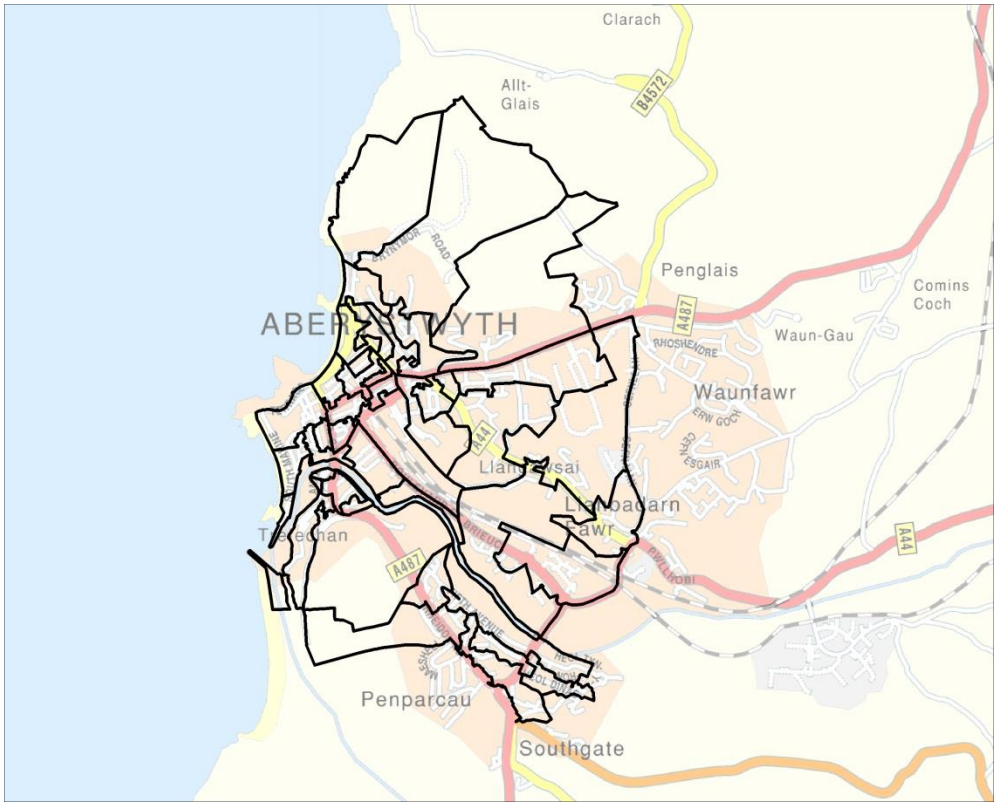
The unweighted and weighted sample profiles were as follows:

	TOTAL		Gender				Age											
			Male		Female		16-24		25-34		35-44		45-54		55-64		65-74		75+	
	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD
Aberystwyth	200	201	53.5%	51.1%	46.5%	48.4%	33.5%	54.8%	11.5%	11.5%	11.5%	7.5%	9.5%	7.6%	11.0%	5.3%	12.5%	6.8%	10.5%	6.0%
Dawlish	198	197	58.6%	46.8%	41.4%	53.7%	6.1%	10.6%	11.6%	9.6%	8.1%	9.0%	15.2%	20.1%	18.7%	16.7%	22.2%	18.5%	18.2%	16.0%
Gloucester to Tewkesbury	198	198	52.5%	48.5%	47.5%	51.5%	7.6%	12.2%	9.6%	16.6%	11.1%	11.8%	23.2%	26.4%	18.7%	11.4%	18.2%	12.6%	11.6%	9.0%
Hull	200	199	56.0%	48.5%	44.0%	52.0%	19.5%	12.4%	16.0%	14.8%	15.0%	15.4%	15.5%	17.7%	11.0%	13.3%	14.0%	17.0%	9.0%	10.0%
Sunbury to Windsor	199	200	53.3%	51.5%	46.7%	48.0%	11.1%	14.4%	11.1%	14.0%	16.6%	15.3%	21.1%	18.8%	9.5%	9.8%	17.1%	14.9%	13.6%	12.2%
National sample	1002	997	51.4%	48.7%	48.6%	51.4%	14.0%	14.6%	12.2%	16.4%	15.1%	15.4%	19.0%	18.8%	15.4%	14.1%	14.5%	11.7%	10.0%	9.0%

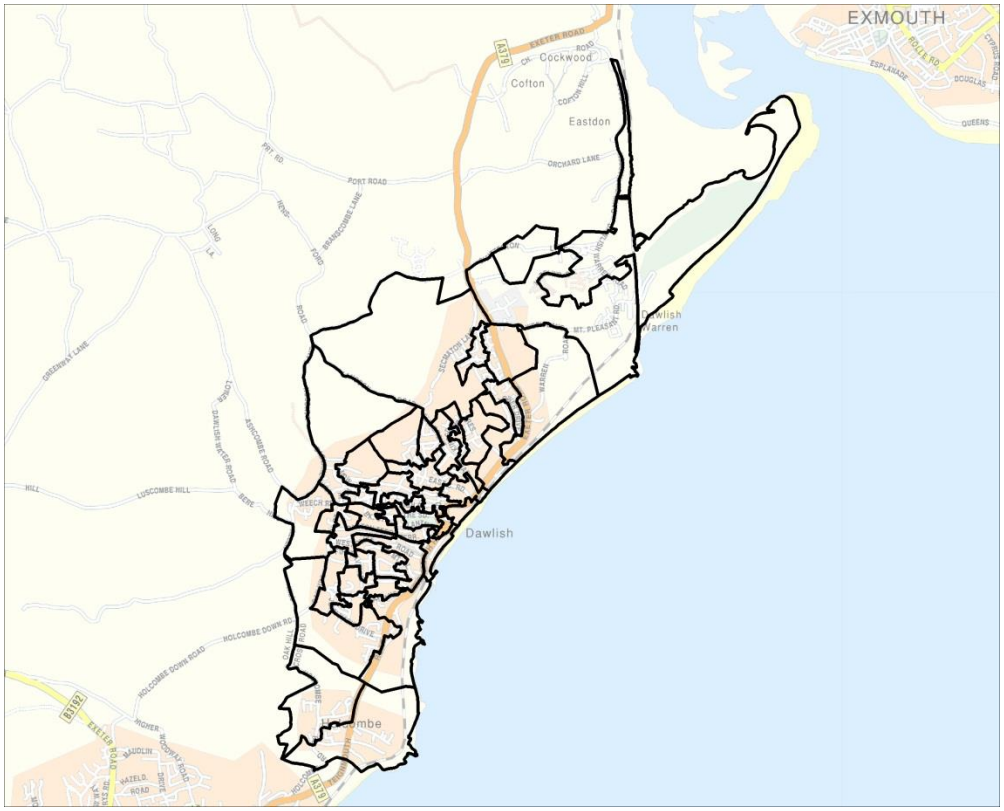
	TOTAL		Social grade								Tenure						Working Status					
			AB		C1		C2		DE		Owner occupier		Renting		Refused		Working full-time		Not working full-time		Refused	
	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD	UNWTD	WTD
Aberystwyth	200	201	22.5%	19.0%	43.0%	49.0%	13.5%	12.5%	21.0%	18.9%	50.0%	39.0%	47.5%	58.7%	0.0%	0.0%	27.0%	20.9%	72.0%	78.6%	1.0%	0.5%
Dawlish	198	197	34.3%	16.5%	30.3%	30.6%	18.7%	25.8%	16.7%	27.6%	69.2%	70.6%	29.3%	28.3%	1.0%	1.0%	31.3%	33.0%	68.7%	67.0%	0.0%	0.0%
Gloucester to Tewkesbury	198	198	41.9%	26.1%	32.3%	35.0%	18.2%	21.8%	7.6%	17.2%	80.3%	76.9%	18.2%	22.0%	0.0%	0.0%	45.5%	49.0%	54.5%	51.0%	0.0%	0.0%
Hull	200	199	17.5%	18.7%	27.5%	27.9%	17.0%	23.4%	38.0%	30.5%	51.5%	60.7%	45.5%	38.2%	0.0%	0.0%	38.5%	39.2%	61.5%	60.8%	0.0%	0.0%
Sunbury to Windsor	199	200	50.8%	40.4%	26.1%	33.9%	7.5%	14.3%	15.6%	10.9%	73.9%	69.7%	16.1%	25.1%	2.5%	1.0%	44.2%	46.5%	55.3%	53.0%	0.5%	0.5%
National sample	1002	997	29.1%	22.3%	31.3%	30.9%	18.4%	20.9%	21.2%	25.9%	63.6%	64.4%	34.4%	34.7%	0.5%	0.1%	37.6%	41.3%	62.2%	58.6%	0.2%	0.1%

Flood affected area maps

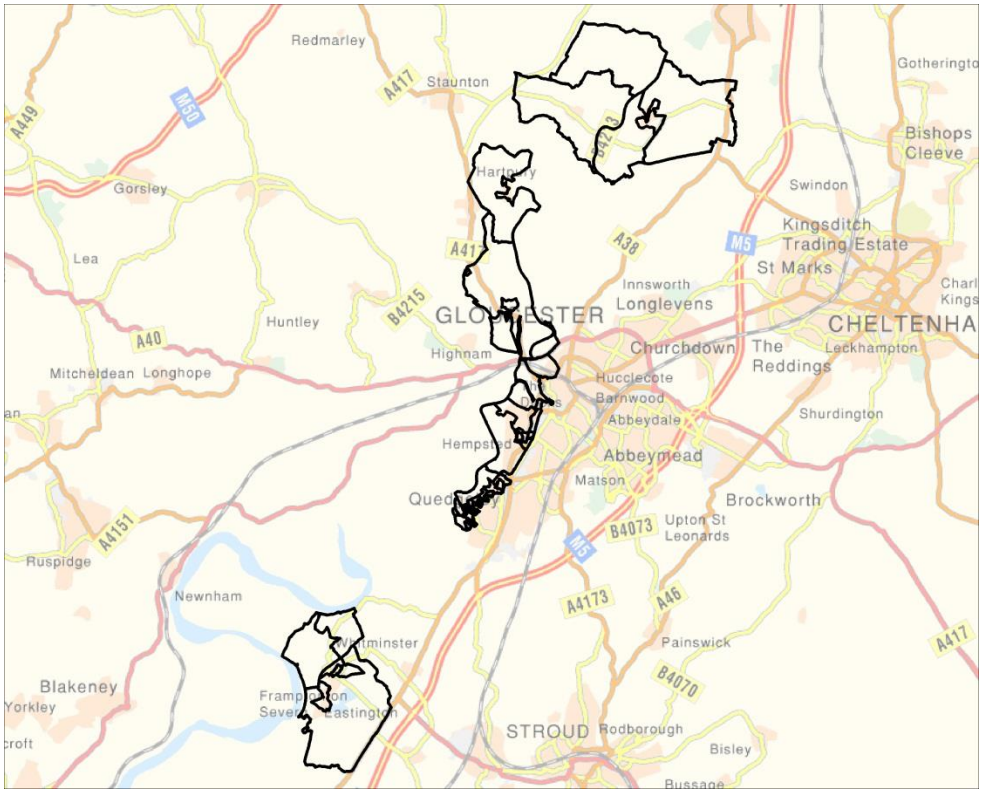
Aberystwyth



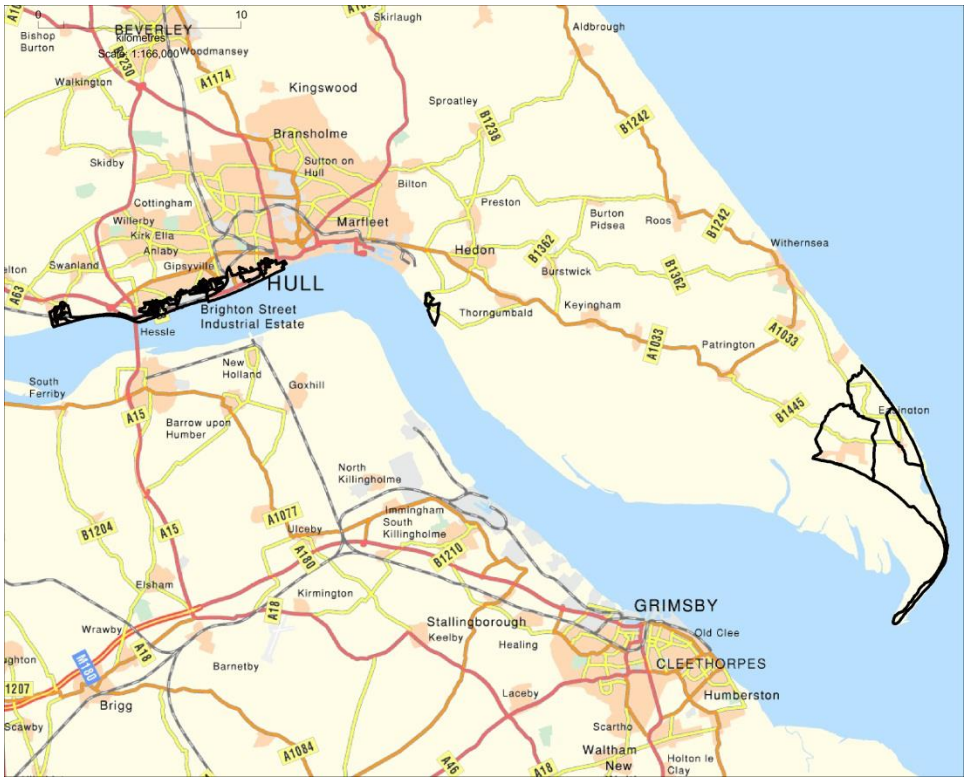
Dawlish



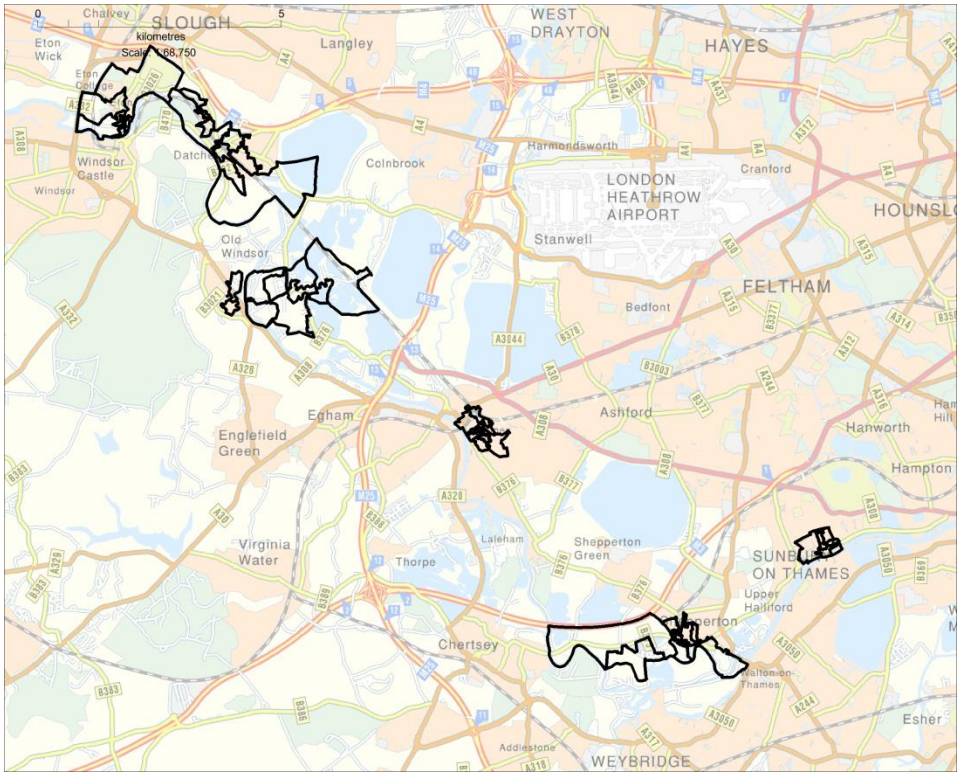
Gloucester to Tewkesbury



Hull



Windsor to Sunbury


0
5
kilometres
SLOUGH
Langley
WEST DRAYTON
HAYES
Eton Wick
Windsor Castle
Windsor
Old Windsor
Colnbrook
Harmondsworth
LONDON HEATHROW AIRPORT
Cranford
Stanwell
FELTHAM
Bedfont
Egham
Englefield Green
Ashford
Hanworth
Hampton
Virginia Water
Thorpe
Laleham
Shepperton Green
Upper Halliford
Chertsey
Esher
WEYBRIDGE