

Annexe D: Core activity survey methods and questionnaire

D.1 Core activity survey (CAS) quantitative research

The core activity survey consisted of a short set of core questions, repeated on a recurring basis, in order in particular to provide a picture of the incidence of burning across the year based on the percentage of respondents who said they had burned in the last week and estimates of burning activity in the previous week. Data was collected on solid fuel type (including seasoning of wood burned), quantities of fuel burned, appliance type and length of operation.

D.2 Methodology

CAS data was collected via the Kantar face-to-face-omnibus survey. In an omnibus survey, clients reserve space to ask a small module of questions. In a single omnibus wave, participants can be asked questions on a range of topics. The total interview is generally no more than 30 minutes. Interviewing is conducted on customised hand-held CAPI machines.

The Kantar omnibus uses a random location sampling approach. Quotas are set according to characteristics known to have a bearing on individuals' probabilities of being at home and so available for interview. Around 2,100 interviews with a representative cross-section of UK adults aged 16+ are achieved each wave.

Demographic information on the individual and household is gathered as part of the survey, including gender, age, work status, social grade, ethnicity, urban/rural location, tenure, household composition, marital status and internet usage.

C.3 Sampling approach

The omnibus survey uses a hybrid sample design which combines a tightly controlled stratified random sample of areas with quota controls to ensure a representative sample.

The UK is divided into 630 primary sampling units (PSUs), each comprising a set of whole council wards and each with approximately equal population size. Kantar runs omnibus surveys every week, and occasionally two waves are conducted in one week. At each wave, and for each omnibus, a representative set of PSUs is selected to provide the number of PSUs required (the actual number ranges from 147 to 215 depending on interview length).

One council ward is sampled at random from each active PSU, and a Census Output area (OA) is also sampled at random, with an adjacent OA selected if required to generate 200-250 addresses.

Interviewers are given a list of addresses in these streets at which they must call, in order to restrict interviewer discretion in where they carry out interviews. Interviewers are also instructed to work during different days of the week and times of day when

completing their assignments. Quotas (on region, gender, age, working status, and whether there are children in the household) are set for each interviewer assignment to help prevent natural variations in response propensity.

C.4 Questionnaire development

The CAS questionnaire was developed with Defra, based on discussions with a Steering Group with expertise on domestic burning. Its primary aim was to collect data on the types and quantities of fuel burned. Respondents were asked to estimate the weight of the solid fuel they had burned in the last seven days. If they could not estimate by weight they were asked to estimate by volume (the number of 10 litre buckets the amount of each solid fuel they burned would have filled). Respondents were shown a bucket next to a tin of beans to help them conceptualise the volume. There were further questions on the appliance they used, when and for how long they burned in the last seven days, the source of any wood they burned and its level of seasoning.

The Kantar research team cognitively tested the CAS questions with 10 burners to examine how the intended wording of the questions was understood by respondents. The cognitive interviews focused on whether respondents interpreted the questions consistently and correctly. The interviews mainly focused on how respondents conceptualised weights of fuels. The interviewees ranged from occasional social burners to heavier burners (who burn a lot of fuel).

C.5 Fieldwork

The CAS was run on 22 waves between April 2018 and February 2019 (see Table C.1). Overall 46,729 interviews were conducted among a sample representative of the UK population. This figure includes those who answered no to the first question of whether anyone in their household had burned anything at their property in the previous 12 months (the majority) and therefore were not asked any further questions. In addition to the CAS, a separate screener question was asked on alternate waves, which asked the same question on burning at the property in the last year. An additional 61,992 responses to this question were achieved over 30 waves between 13 April 2018 and 10 March 2019, although their responses are not included in the incidence rates provided in this report because of a slight risk that a non-solid fuel burner might have mistakenly be included.

Table C.1: CAS fieldwork dates

Wave	Start	End
1	Wed 4 Apr 2018	Sun 8 Apr 2018
2	Wed 18 Apr	Sun 22 Apr
3	Wed 2 May	Sun 6 May
4	Wed 16 May	Sun 20 May
5	Wed 30 May	Sun 3 Jun
6	Wed 13 Jun	Sun 17 Jun

Wave	Start	End
7	Wed 4 Jul	Sun 8 Jul
8	Wed 18 Jul	Sun 22 Jul
9	Wed 1 Aug	Sun 5 Aug
10	Wed 15 Aug	Sun 19 Aug
11	Wed 5 Sep	Sun 9 Sep
12	Wed 19 Sep	Sun 23 Sep
13	Wed 3 Oct	Sun 7 Oct
14	Wed 17 Oct	Sun 21 Oct
15	Wed 31 Oct	Sun 4 Nov
16	Wed 14 Nov	Sun 18 Nov
17	Wed 28 Nov	Sun 2 Dec
18	Wed 12 Dec	Sun 16 Dec
19	Fri 4 Jan 2019	Tue 8 Jan 2019
20	Wed 16 Jan	Sun 20 Jan
21	Wed 30 Jan	Sun 3 Feb
22	Wed 13 Feb	Sun 17 Feb

C.6 Weighting

The Department for Environment, Food and Rural Affairs (Defra) would like to ask some questions about anything you have burned at home.

Have you, or anyone in your household, burned anything at your property in the last 12 months? This can be anything you have burnt inside, for example on an open fire or a wood burner, or outside, for example on a bonfire, a barbecue or a chimenea

IF NECESSARY: This includes any burning by anyone in your household at your property in the last 12 months.

[SINGLE-CODE]

Yes – continue to survey		
No – screen out		

Question 1 – ask all eligible (“Yes” at Screener question)

Which of the following have you burnt at your property in the last 12 months? Please tell me for each if you have burnt these inside (e.g. on an open fire or wood burning stove) or outside (e.g. on a bonfire, barbecue or chimenea)? *

IF NECESSARY: This includes any burning by anyone in your household at your property in the last 12 months.

[READ OUT; MULTI-CODE]

Material:	Yes - Burned inside Yes – Burned outside No not burned inside or outside
Wood: including logs, pellets, manufactured wood logs, briquettes and woodchips	
Coal: including anthracite, manufactured fuels and briquettes	
Charcoal	
Green or garden waste	
Waste wood	
Household waste or rubbish	
Peat	
Other (please specify): _____	

**If a respondent says “yes” to having burned something in the last 12 months at the screener question, and then select that they have not burned anything at Q1 they will be asked a check question to confirm whether they have burned anything in the past 12 months.*

Question 2A – ask all eligible (“Yes” at Screener question); mask list based on responses at Q1

How many kilograms of the following have you burned in the last 7 days?

IF NECESSARY: Please provide your best estimate if you are unsure.

IF NECESSARY: We are interested in any indoor or outdoor burning by anyone in your household in the last 7 days.

INTERVIEWER: ENTER KG, USE BUCKET ESTIMATION IF KG UNKNOWN

[READ OUT; MULTI-CODE]

Material:	Amount (KG):
[SHOW IF “WOOD” AT Q1] Wood logs	
[SHOW IF “WOOD” AT Q1] Wood briquettes (IF NECESSARY: this could be wood or wood like, including artificial/manufactured wood logs)	
[SHOW IF “WOOD” AT Q1] Wood pellets	
[SHOW IF “WOOD” AT Q1] Woodchips	
[SHOW IF “CHARCOAL” AT Q1] Charcoal	
[SHOW IF “COAL” AT Q1] Smokeless coal	
[SHOW IF “COAL” AT Q1] Briquettes – coal or coal like	
[SHOW IF “COAL” AT Q1] Coal (house or bituminous coal)	
[SHOW IF “WASTE WOOD” AT Q1] Waste wood: including wood from fallen trees / branches or that has been discarded e.g. from building sites or skips	
[SHOW IF “GREEN OR GARDEN WASTE” AT Q1] Green or garden waste	
[SHOW IF “HOUSEHOLD WASTE OR RUBBISH” AT Q1] Handfuls of household rubbish	
[SHOW IF “PEAT” AT Q1] Peat	
Other (please specify): _____	
I haven’t burnt anything inside or outside in the last 7 days – GO TO Q11 (RE-CONTACT)	
Don’t know – GO TO Q11 (RE-CONTACT)	

Question 2B – ask for every material the respondent selected, but didn't know the weight of

And if you had to think of the [INSERT] you burned in the last 7 days, how many buckets do you think it would have filled?	
[SHOW BUCKET; READ OUT; MULTI-CODE]	
Material:	Amount (Buckets):
[SHOW IFSELECTED AT Q2A] Wood logs	
[SHOW IFSELECTED AT Q2A] Wood briquettes (IF NECESSARY: this could be wood or wood like, including artificial/manufactured wood logs)	
[SHOW IFSELECTED AT Q2A] Wood pellets	
[SHOW IFSELECTED AT Q2A] Woodchips	
[SHOW IFSELECTED AT Q2A] Charcoal	
[SHOW IFSELECTED AT Q2A] Smokeless coal	
[SHOW IFSELECTED AT Q2A] Briquettes – coal or coal like	
[SHOW IFSELECTED AT Q2A] Coal (house or bituminous coal)	
[SHOW IFSELECTED AT Q2A] Waste wood: including wood from fallen trees / branches or that has been discarded e.g. from building sites or skips	
[SHOW IFSELECTED AT Q2A] Green or garden waste	
[SHOW IFSELECTED AT Q2A] Handfuls of household rubbish	
[SHOW IFSELECTED AT Q2A] Peat	
[SHOW IFSELECTED AT Q2A]Other (please specify): _____	
Don't know – GO TO Q11 (RE-CONTACT)	

Q3 Burning appliance – ask all who have burned inside or outside in the last 7 days (Q2A/2B >0)

Which appliance have you used to burn inside or outside in the last 7 days?	
IF NECESSARY: Which one best matches your appliance? If you are unsure an estimate is fine.	
IF NECESSARY: If you have several appliances indoors, please select the one that you have used the most in the last 7 days. [READ OUT; SINGLE-CODE]	
An open fire	
A burner or enclosed fireplace installed before 2000	
A burner or enclosed fireplace installed between 2000 and 2009	
A burner or enclosed fireplace installed after 2009	
A burner or enclosed fireplace – unsure of installation date	
A biomass boiler	
[OUTSIDE BURNERS ONLY] Bonfire	
[OUTSIDE BURNERS ONLY] Barbeque	
[OUTSIDE BURNERS ONLY] Chimenea	
Other (e.g. range cooker, pellet stove)	

Question 4 - ask all those with a burner or enclosed fireplace (Q3=2,3,4,5)

Thinking about your burner or enclosed fireplace, do you know if it is any of the following...	
IF NECESSARY: If you have more than one burner, please think about the one your household has used the most in the last 7 days.	
[READ OUT; SINGLE-CODE]	
An appliance approved by Defra for use in smoke controlled areas (IF NECESSARY: a Defra exempt appliance)	
An 'Ecodesign Ready' or Ecodesign appliance (IF NECESSARY: this means it conforms with EU legislation coming into force in 2022 to reduce emissions)	
Or neither a Defra exempt or Ecodesign appliance	
Don't know	

Question 5 – ask all who burned inside in the last 7 days (any “inside” at Q1)

In the last 7 days, at what times of day have you burned inside?

READ OUT: You can select more than one answer

[MULTI-CODE; READ OUT]

- a. During the day Monday to Friday
- b. During the evening Monday to Thursday
- c. During the evening on Friday
- d. During the day at the weekend
- e. During the evening at the weekend
- f. Other (please specify)
- g. Don't know

Question 6 – ask all who burned inside in the last 7 days (any “inside” at Q1)

For each day of the last week, roughly how many hours do you think your household's fire or burner has been lit for?

IF NECESSARY: Please give your best estimate if you are unsure.

IF NECESSARY: If left to die down overnight say so and think about the number of hours it was lit for before you went to bed (similarly if you let it die down when you left the house) (Interviewer to note left to die down).

IF NECESSARY: Think about the number of times you refuelled the fire (e.g. added coal/wood etc.) (interviewer to note number of times refuelled)

	(ENTER HOURS)
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

Question 7 – ask all who burned wood or wood related material in the last 7. (Route from Q2 – those that burned: Wood logs, wood or wood like briquettes, wood pellets, woodchips, waste wood)

Where did the wood that you burned in the last 7 days mostly come from?

IF NECESSARY: Please think of all wood you and your household burnt in the last week, whether this was inside or outside, and whether you sourced this or not.

IF MULTIPLE SOURCES: Please think of how you sourced most of the wood.

[SINGLE-CODE; PROMPT TO PRECODES]

Source:	
General supplier (IF NECESSARY: supermarkets, petrol station, DIY store)	
Specialist supplier (IF NECESSARY: supplier specialising in supplying wood for burning such as a tree surgeon)	
From my own garden (IF NECESSARY: This would be from trees. If you have burned fence posts or garden furniture, please select salvaged wood)	
Bought from landowner or farmer	
Fallen wood from trees in public places (IF NECESSARY: including parks, the forest)	
Salvaged wood: (IF NECESSARY: including wood that has been discarded e.g. from building sites or skips and old furniture/fence posts/other items from your home)	
Given by friends / family members / others	
Other (please specify):	

Question 8 – ask all who burned wood this week (Route from Q2 – those that burned: Wood logs, wood or wood like briquettes, wood pellets, woodchips; [not waste wood])

8 – How would you describe the seasoning of most of the wood you burned in the last 7 days? By seasoning, I mean leaving the wood to dry for a period after the tree has been felled or cut.

[SINGLE CODE; PROMPT TO PRECODES]

Time period:	
It was seasoned when you bought or got it	
It was pre-dried when you bought or got it	
It was seasoned at home for less than 6 months	
It was seasoned at home for between 6-12 months	
It was seasoned at home for between 13-18 months	
It was seasoned at home for over 18 months	
It was unseasoned	
Other (please specify)	

Q9 - Ask those who have a burner or enclosed fireplace (Q3 = 2,3,4,5)**Q9 - When you used your burner in the last 7 days, did you mostly have the air controls...**

[READ OUT; SINGLE-CODE]

Fully open	
Partially open	
At the minimum setting	
DO NOT READ OUT - I alter the settings frequently	
Don't know	

Q10 – Ask all

Q10 - Please could you look at this screen and tell me which of these represents your household's total income, before tax and any other deductions. This includes earnings from employment or self-employment, income from benefits and pensions, and income from other sources such as interest from savings.

Please just tell me the letter that applies to your household.

SHOW SCREEN

Annual	Monthly	Weekly	
Under £5,000	Under £420	Under £100	
£5,000 - £10,000	£420 - £830	£100 - £190	
£10,000 - £15,000	£830 - £1250	£190 - £290	
£15,000 - £20,000	£1,250 - £1,670	£290 - £390	
£20,000 - £25,000	£1,670 - £2,080	£390 - £480	
£25,000 - £30,000	£2,080 - £2,500	£480 - £580	
£30,000 - £40,000	£2,500 - £3,330	£580 - £770	
£40,000 - £50,000	£3,330 - £4,170	£770 - £960	
£50,000 - £60,000	£4,170 - £5,000	£960 - £1,150	
£60,000 - £70,000	£5,000 - £5,830	£1,150 - £1,350	
£70,000 - £80,000	£5,830 - £6,670	£1,350 - £1,540	
£80,000 or more	£6,670 or more	£1,540 or more	
Don't know			
Refused			

Q11 – ask all (who say “Yes” at the screener question)

The Department for Environment, Food and Rural Affairs would like to conduct further research to understand people’s fuel use and fuel costs.

Would you be willing for Kantar to keep a record of your details for up to 12 months for the purpose of re-contacting you to take part in future research on this subject in the next 12 months?

As with this survey, your responses will be completely anonymous and nobody will be able to identify from the results that you’ve taken part in the research, unless give your express permission to do so.

IF NECESSARY: Please be reassured that the purpose of this re-contact is for research only and that your answers remain confidential.

[SINGLE-CODE]

Yes [Proceed to ask telephone number]		
No [end of survey]		

Q12 – ask those who agreed to re-contact

What is your full 11 digit telephone number, including the area code, that you would like to be contacted on?

[enter number]		
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