United Utilities
Utilities

Water for the North West
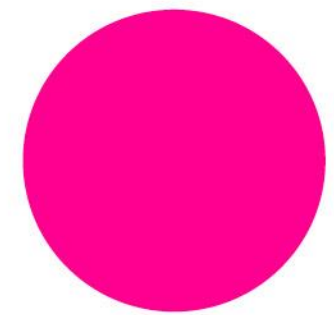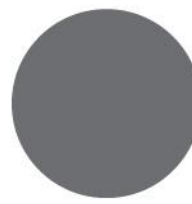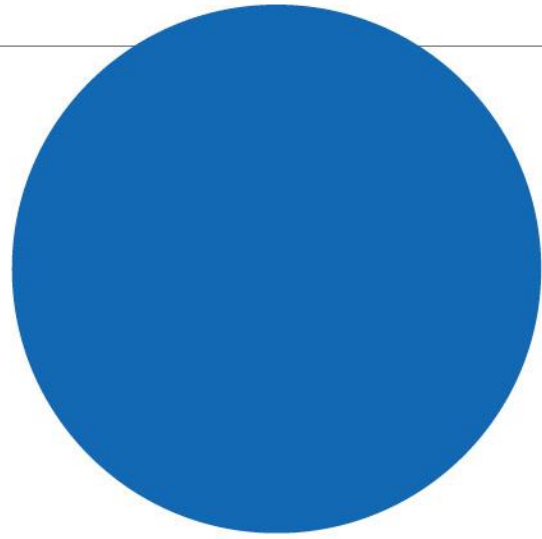
United Utilities Occupancy Survey 2020:
Methodology report

Faye Jasmine Waterhouse, Senior Research Executive
fwaterhouse@djsresearch.com

Ali Sims, Research Director
asims@djsresearch.com

Head office: 3 Pavilion Lane, Strines, Stockport, Cheshire, SK6 7GH

Leeds office: 2 St. David's Court, David Street, Leeds, LS11 5QA

+44 (0)1663 767 857
djsresearch.co.uk

djs research

Contents

Background & objectives

In 2016 United Utilities (UU) commissioned DJS Research to undertake their Occupancy Survey, the results of which fed into the PR19 Water Resources Management Plan.

The survey was used to forecast PCC water usage based on household size.

UU have since noticed a disconnect between the household size predicted by this survey and ONS data. This is likely to be mainly down to the fact that a disproportionate sample was drawn for the Occupancy Survey so that all 4 water resource zones were represented.

To this end, UU wanted to undertake a repeat of the survey, this time interviewing a regionally representative sample of customers, with the main objective of understanding average household size in the region in order to help them forecast how much water is needed in future.

Methodology

UU wished to mirror the methodology used previously which was Call Assisted Telephone Interviewing (CATI). We have an in-house CATI Unit and used a core team of B2C interviewers highly experienced at engaging with consumer audiences on behalf of water companies and the sector more broadly.

At the start of the project, the interviewers were briefed on the project background and the questionnaire. Calls were monitored and 10% listened into for quality checks.

This year, UU wanted to also conduct an online survey to target those less inclined to participate a telephone interview. Our software allows us to run the same survey concurrently online and on the phone. We made some wording changes to the script to adapt it to online. Quotas were set to ensure we surveyed demographically and regionally matched samples.

A link to the survey was emailed to a sample of UU customers. Sample was provided by UU for both methodologies. Customers were offered a prize draw as an incentive to participate.

Sample Size

In 2016, 2,082 CATI interviews were completed. The decision was taken to match this figure using the CATI methodology and then to repeat it using the online methodology.

Table 1 below shows the margin of error on a sample size of 2,000 and 4,000 at a 95% confidence limit.

Sample size	Margin of error
2000	+/-2.1%
4000	+/-1.5%

Questionnaire

UU and DJS collaborated to reduce the size of the original 2016 questionnaire. New Covid-19 questions were asked in 2020 to measure how the pandemic has impacted on household size in the region since March.

The questionnaire covered a range of topic areas including:

- Metered/unmetered
- Property type
- Property ownership
- Age of property
- Household composition (age of residents, number of permanent or temporary residents, working status of residents)
- Household composition change due to Covid-19
- Indoor and outdoor appliance ownership and frequency of use

A copy of the questionnaire is appended for reference.

Quotas and Weighting

Quotas were applied to the sample to ensure it was representative of United Utilities' operating area. The quotas set were:

- Region
- CACI segments
- IMD (Indicators of Multiple Deprivation).
-

The quotas were calculated using statistics from UU's entire database. The data was weighted to reflect the current proportion of metered (46%) and unmetered (54%) domestic accounts across the UU area.

Sample	Water connection	Unweighted	Weighted
Online (n=2001)	Metered	62%	46%
	Unmetered	38%	54%
CATI (n=2010)	Metered	48%	46%
	Unmetered	52%	54%
Total Sample (n=4011)	Metered	55%	46%
	Unmetered	45%	54%

In addition, the data was also weighted by CACI and IMD quintile within region with the exception of the small number of cases in the Border area (n=8 online and n=6 CATI).

Sample	Region	Unweighted	Weighted
Online (n=2001)	Border Areas	0.4%	0.4%
	Cheshire	19.6%	19.6%
	Cumbria	4.7%	4.7%
	Greater Manchester	36.1%	36.1%
	Lancashire	27.2%	27.2%
	Liverpool	12.0%	12.0%
CATI (n=2010)	Border Areas	0.3%	0.3%
	Cheshire	19.5%	19.6%
	Cumbria	6.7%	4.7%

	Greater Manchester	34.9%	36.2%
	Lancashire	27.0%	27.1%
	Liverpool	11.6%	12.0%

Sample	CACI	Unweighted	Weighted
Online (n=2001)	A	19.1%	17.7%
	B	4.6%	4.7%
	C	17.1%	17.0
	D	16.6%	16.3%
	E	8.8%	8.4%
	F	11.0%	12.4%
	G	8.6%	9.0%
	H	9.0%	9.2%
	U	5.2%	5.0%
CATI (n=2010)	A	25.4%	17.7%
	B	4.1%	4.7%
	C	11.6%	17.0%
	D	13.0%	16.3%
	E	11.3%	8.4%
	F	10.1%	12.4%
	G	13.9%	9.0%
	H	6.8%	9.2%
	U	3.6%	5.0%

Sample	IMD -Quintile	Unweighted	Weighted
Online (n=2001)	1 – most deprived	31.7%	34.6%
	2	19.8%	19.1%
	3	16.2%	15.2%

	4	17.7%	17.0%
	5 – least deprived	14.6%	14.1%
CATI (n=2010)	1 – most deprived	32.8%	34.6%
	2	19.4%	19.1%
	3	14.6%	15.2%
	4	18.1%	17.0%
	5 – least deprived	15.1%	14.1%

No extreme weights were necessary in the weighting routine. An extreme weight would be a value greater than 3 times the median weight.

The Weighting Efficiency = 88.9%

Weighting efficiency is a measure of the strength of the weights applied to the sample in order to match the profile of the population of domestic customers. Efficiency scores run from 0% thru to 100%. Efficiency of 100% means that the sample matched the population exactly and no weighting was required. The higher the efficiency score, the closer the sample match to the population demographics. A score of 70% or more indicates a good weighting system.

The quotas set and numbers achieved are appended to this document.

Fieldwork

Surveys were conducted from 12th October – 2nd November, with the average interview duration being 6 minutes and 20 seconds (CATI) and 5 minutes and 18 seconds (online). Following the initial pilot launch of fieldwork, a review took place and contact information for UU was provided to participants to reassure them of the purpose of the research.

A total of 4011 interviews were completed (2001 online and 2010 in CATI). Data tables for CATI, online and a merged set have been provided to UU by DJS Research alongside this report and an anonymised datafile.

Appendix

Sample & quotas achieved

1. CATI sample

Region	No. of interviews (target)
Borders	6 (8)
Cheshire	392 (392)
Cumbria	135 (150)
Greater Manchester	702 (722)
Lancashire	542 (542)
Liverpool	233 (240)
Total	2010 (2000)

CACI	A	B	C	D	E	F	G	H	U	Total
Border Areas	1 (2)	-	1 (1)	2 (2)	2 (4)	-	-	-	-	6 (8)
Cheshire	105 (108)	12 (20)	28 (60)	55 (80)	67 (75)	33 (40)	45 (55)	28 (35)	19 (28)	392 (392)
Cumbria	46 (46)	4 (4)	12 (15)	16 (20)	15 (15)	10 (17)	17 (25)	9 (15)	6 (10)	135 (94)
Greater Manchester	155 (155)	33 (39)	73 (119)	94 (115)	65 (70)	88 (116)	120 (120)	50 (66)	24 (34)	702 (722)
Lancashire	148 (150)	21 (30)	87 (104)	70 (86)	55 (59)	46 (53)	55 (60)	40 (55)	20 (29)	542 (542)
Liverpool	55 (55)	13 (18)	33 (43)	26 (32)	25 (26)	26 (33)	42 (45)	9 (18)	4 (12)	233 (240)

IMD	0	1 + 2	3 + 4	5+6	7+8	9+10	Total
Border Areas	-(-)	-(1)	-(-)	1 (1)	2 (3)	3 (6)	6 (8)
Cheshire	2 (4)	92 (104)	80 (85)	37 (52)	74 (76)	107 (110)	392 (392)
Cumbria	-(-)	26 (30)	33 (34)	33 (34)	29 (32)	14 (20)	135 (94)
Greater Manchester	-(-)	272(274)	142 (155)	98 (105)	103 (103)	87 (87)	702 (722)
Lancashire	-(3)	148 (158)	97 (105)	97 (105)	121 (125)	79 (86)	542 (542)
Liverpool	-(-)	119 (129)	36 (42)	28 (33)	35 (35)	15 (20)	233 (240)

2. Online sample

Region	No. of interviews
Borders	8 (8)
Cheshire	392 (392)
Cumbria	94 (94)
Greater Manchester	723 (722)
Lancashire	545 (542)
Liverpool	241 (240)
Total	2002 (2000)

CACI	A	B	C	D	E	F	G	H	U	Total
Border Areas	2	-	2	4	-	-	-	-	-	8 (8)
Cheshire	85	15	61	77	47	25	27	35	20	392 (392)
Cumbria	28	4	13	16	4	7	8	9	5	94 (94)
Greater Manchester	115	35	121	118	60	104	69	66	35	723 (722)
Lancashire	114	22	108	86	44	51	40	49	31	544 (542)
Liverpool	40	15	38	33	21	33	28	21	12	241 (240)

IMD	0.0	1 + 2	3 + 4	5+6	7+8	9+10	Total
Border Areas	0	0	0	0	3	5	8
Cheshire	4	84	67	59	81	97	392
Cumbria	0	13	25	24	19	13	94
Greater Manchester	0	258	160	112	105	88	723
Lancashire	3	150	104	93	115	80	542
Liverpool	0	125	37	35	32	12	241

Questionnaire

Introduction

All respondents:

Good morning/afternoon/evening. My name is <INTERVIEWER NAME> and I am calling from DJS Research, on behalf of United Utilities, to conduct some research into water usage in the region. This will feed into the forecasts they use to predict how much water is needed in their area. Could you spare 5 minutes to answer some questions? We can assure you the survey is completely confidential and that our discussion will be undertaken under strict market research codes of conduct.

Interviewer note: If the respondent is worried about the research, or who we are as a company please state:

If you are worried or wish to verify that we are conducting research for United Utilities I can give you the following number for them to call and check it is 0345 6722999.

DJS Research abide by the Market Research Society Code of Conduct and I stress that no selling will be involved, and your details will not be passed to a third party.

Would it be possible to speak to you?

Yes	*Continue. If not able to continue, make an appointment to call back.*
No	*Thank and close*

CATI – INTERVIEWER READ OUT: All interviews will be recorded for training and quality purposes

Firstly, just to check we are speaking to the right person…

1. All respondents

What type of property do you live in?

SINGLE CODE

Code	Answer list	Scripting notes	Routing
1	Detached house		
2	Semi-detached house		
3	Bungalow		
4	Terraced house/mews		
5	Flat/maisonette		
6	Other (please specify)		

2. All respondents

Is this property owned or rented?

SINGLE CODE

Code	Answer list	Scripting notes	Routing
1	Owned		
2	Rented		
3	Other		

3. All respondents

And approximately when was your house built?

SINGLE CODE

Code	Answer list	Scripting notes	Routing
1	Before 1989		
2	Between 1989 and 2010		
3	After 2010		

4. All respondents

Please can you tell me how many people in the following age ranges are currently living in your house all year round?

Write in number of residents next to each age group. If there are none, please use '0'.

SINGLE CODE

Code	Answer list	Scripting notes	Routing
1	16 years or less		
2	17-29 years		
3	30-44 years		
4	45-64 years		
5	65 years and over	CHECK QUOTA	

DP: CALCULATE TOTAL NUMBER OF RESIDENTS

5. All respondents

Are there any other people who are not based at the property but stay for at least 6 weeks of the year (e.g. students)?

SINGLE CODE

Code	Answer list	Scripting notes	Routing
1	Yes		
2	No		

6. All respondents who have temporary residents

In what age range are they?

Write in number of residents next to each age group. If there are none, please use '0'.

SINGLE CODE

Code	Answer list	Scripting notes	Routing
1	16 years or less		
2	17-29 years		
3	30-44 years		
4	45-64 years		
5	65 years and over		

7. All respondents

Since the COVID-19 pandemic has the number of permanent people in your household changed?

SINGLE CODE, ORDERED

Code	Answer list	Scripting notes	Routing
1	Yes, there are more people in the household now		
2	Yes, there are less people in the household now		
3	No, but there were more people in our household for a short while when the pandemic first arrived		
4	No, but there were less people in our household for a short while when the pandemic first arrived		
5	No		

8. All respondents saying yes (codes 1 or 2 at Q7)

Please can you tell me how many people in the following age ranges were living in your house all year round before the pandemic?
Write in number of residents next to each age group. If there are none, please use '0'.
SINGLE CODE

Code	Answer list	Scripting notes	Routing
1	16 years or less		
2	17-29 years		
3	30-44 years		
4	45-64 years		
5	65 years and over		

DP: CALCULATE TOTAL NUMBER OF RESIDENTS

9. All respondents

When thinking about your current permanent residents, how many members of your household in the following age groups are normally home during working hours either because they work from home or are retired/do not work?

Write in number of residents next to each age group. If there are none, please use '0'. Write in number of residents next to each response.

Code	Answer list	Scripting notes	Routing
1	16 years or less		
2	17-29 years		
3	30-44 years		
4	45-64 years		
5	65 years and over		

10. All respondents

Is this any different to how it was before the pandemic struck in March?

Code	Answer list	Scripting notes	Routing
1	Yes		
2	No		

11. All respondents saying yes at Q10

How many permanent members of your household in the following age groups were normally home during working hours before the COvid-19 pandemic?

Write in number of residents next to each age group. If there are none, please use '0'. Write in number of residents next to each response.

Code	Answer list	Scripting notes	Routing
1	16 years or less		
2	17-29 years		
3	30-44 years		
4	45-64 years		
5	65 years and over		

12. All respondents

What is the working status of the adult members of your household (i.e. aged 18+)
Write in number of residents next to each response.

Code	Answer list	Scripting notes	Routing
1	Work full time		
2	Work part time		
3	Student		
4	Not working		
5	Retired		

13.All respondents

Has this changed as a result of the Covid-19 pandemic?

Code	Answer list	Scripting notes	Routing
1	Yes		
2	No		

14. All respondents saying yes at Q13

What was the working status of the adult members of your household (i.e. aged 18+) pre Covid-19?
Write in number of residents next to each response.

Code	Answer list	Scripting notes	Routing
1	Work full time		
2	Work part time		
3	Student		
4	Not working		
5	Retired		

Moving on to talk about the applicances in your household

15. All respondents

How many of the following do you have in your house?

INT: PROMPT FOR VEHICLE IF NECESSARY: Car, motor bike, caravan?

SINGLE CODE FOR EACH OPTION

	None	1	2	3	4	5 or more	Don't know
Dishwasher							
Washing machine							
Bath							
Electric shower i.e. with an electricially heated flow							
Other shower							
Dual flush toilet							
Single flush toilet							
Sink waste disposal unit (macerator)							
Vehicle							

16. All respondents owning items at Q15

Approximately how many times a <u>week</u> does your household use…?

SINGLE CODE FOR EACH OPTION

|	0	1	2	3	4	5 or more	Don't know
Dishwasher							
Washing machine							
Bath							
Electric shower i.e. with an electricially heated flow							
Other shower							
Dual flush toilet							
Single flush toilet							
Sink waste disposal unit (macerator)							

17.All respondents

Finally, just so we can understand more about the people we have spoken to can we check your postcode, our records show that it is [insert from sample] is this correct?

Write in postcode if not correct

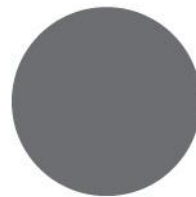| Code	Answer list	Scripting notes	Routing
1	Yes		
2	No (code correct postcode)		

For more information
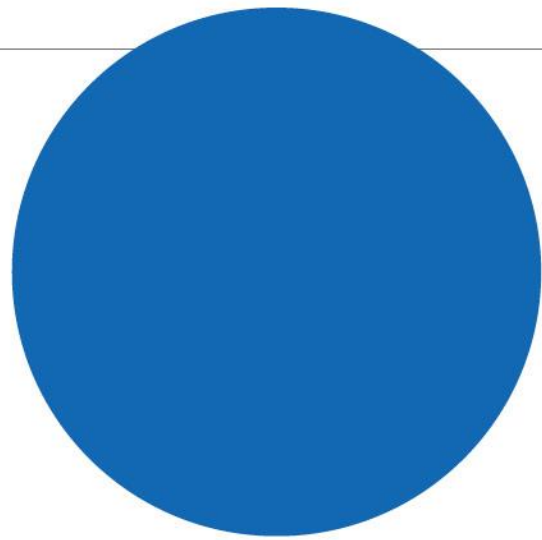
Faye Jasmine Waterhouse, Senior Research Executive
fwaterhouse@djsresearch.com

Ali Sims, Research Director
asims@djsresearch.com
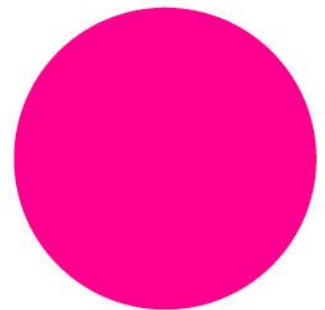
Head office: 3 Pavilion Lane, Strines, Stockport, Cheshire, SK6 7GH

Leeds office: 2 St. David's Court, David Street, Leeds, LS11 5QA

+44 (0)1663 767 857
djsresearch.co.uk

djs research

Follow us on LinkedIn...

For free market research findings and our latest news and developments: linkedin.com/company/djs-research-ltd

For regularly updated market research findings from your sector, please have a look at our complimentary insights: djsresearch.co.uk/blog/articles