Cornwall Council behaviour change and engagement programme – survey of residents

Report to Cornwall Council by the Centre for Climate Change and Social Transformations

February 2023

Mark Wilson and Lorraine Whitmarsh

About CAST

Led by the University of Bath, the UK Centre for Climate Change and Social Transformations (CAST) is a collaboration between Bath, Cardiff, Manchester, York, and East Anglia universities, and the charity Climate Outreach. The Centre aims to be a global hub for understanding the profound changes required to address climate change. We research and develop the social transformations needed to produce a low-carbon and sustainable society. Our experts include psychologists, sociologists, political scientists, engineers and organisational specialists working across multiple scales (individual, community, organisational, city-region, national and global) to identify and experiment with various routes to achieving lasting change. CAST is funded by the Economic and Social Research Council (ESRC). For further details on CAST see: https://cast.ac.uk/

This report was authored by: Mark Wilson and Lorraine Whitmarsh

Summary

Cornwall Council is working with researchers from the Centre for Climate Change and Social Transformations (CAST) to develop recommendations for encouraging low-carbon behaviours and to provide an evidence base to inform the Council's climate action. This report presents the findings of an online survey which measured Cornwall residents' (n=859) perceptions of climate change and their current behaviours in four areas of daily life - travel, home energy use, products they buy, and food. The survey investigated residents' willingness to alter some of these behaviours in favour of low-carbon alternatives, and to what extent the cost of living crisis has already prompted behaviour change. Residents were also asked their views on the Council's role in tackling climate change.

Our findings indicate that travel is the area where most support is needed to change behaviour. Car is the dominant mode of travel in Cornwall, particularly for commuting, and most journeys are single occupancy. There is strong interest in active travel and moderate interest in using public transport, although many residents experience personal and practical barriers to modal shift. Encouragingly, one-third of respondents are considering buying an electric car and one in five is thinking about buying an e-bike. There is an opportunity to consolidate this existing interest in e-mobility by facilitating access (e.g., expanding the Beryl Bike shared mobility scheme) and removing barriers (e.g., provide EV charging infrastructure).

Another potential area for intervention is home energy use. Many home owners have made energy efficiency improvements, but relatively few have invested in domestic renewable energy. One-third of participants are considering installing domestic renewables and so information could be targeted at addressing uncertainties they may have about the technologies. Given that most are already saving energy and reducing spending due to the rising cost of living, people are likely to be receptive to advice framed around the economic benefits of climate action, particularly if these actions lock in energy and cost savings in the long term.

The majority of respondents expressed a high level of climate concern and they believe Cornwall is already experiencing multiple impacts related to climate change. However, they attribute greater responsibility for addressing climate change to the Government and to businesses, than to the Council or to individuals. Awareness-raising initiatives could emphasise the critical role of individuals' consumption decisions in tackling climate change, as well as overcome some misperceptions about the efficacy of different low-carbon behaviours. One suggestion would be to promote locally-relevant, inspiring, solution-focused climate narratives to motivate positive behaviour change and alleviate concern.

People are unsure whether the Council is taking enough action on climate change. There is broad support for travel policies which reduce emissions but also improve the health and wellbeing of people in Cornwall, such as low speed zones and traffic-free neighbourhoods. Subsidised public transport and using building regulations to raise environmental standards for new housing are also popular policies. Around three-quarters of respondents approve of developing solar and onshore wind infrastructure in Cornwall. Collectively, these findings reveal strong public support for multiple policy measures which the Council is already implementing to reduce emissions and provide societal co-benefits.

Contents

1 Introduction and methods

As part of their broader activities directed at achieving net zero, Cornwall Council commissioned the Centre for Climate Change & Social Transformations (CAST) to help them develop recommendations for encouraging low-carbon behaviours. This project focuses on motivating behaviour change among Cornwall residents and it runs in parallel with ongoing work to embed carbon neutral thinking and behaviours across the Council's workforce[1]. The core aims of this project are to identify areas for intervention and engagement with residents, and to provide an evidence base to support the Council's climate policies and service delivery.

There are three components of this mixed-method study. The first combines quantitative and qualitative insights from an online survey of Cornwall residents (this report). Forthcoming reports will present: 1) in-depth qualitative findings from focus groups which explore residents' travel behaviours and their views on modal shift options, and 2) insights from a targeted intervention to encourage low-carbon travel behaviour among residents. These research activities are co-designed with members of the Carbon Neutral Cornwall team, with input and support from members of other Council departments - Wellbeing and Public Health, and Connectivity and Transport Policy.

Existing research on behaviour change

A detailed review of behaviour change literature was conducted prior to the launch of the CAST survey of Council staff and so is not repeated here[1]. In summary, previous research has found that values and beliefs (e.g., climate change concern) can predict low-impact pro-environmental actions (e.g., recycling), whereas broader social and structural factors, such as income or location, better explain higher-impact environmental behaviours (e.g., avoiding driving)[2]. Pro-environmental attitudes can influence behaviour but do not always translate into behaviour change[3, 4], a dissonance often referred to as the 'value-action gap'. Social norms (what is perceived to be normal or the 'right thing to do') have a strong effect on behaviour[5], and new behaviours can spread via peer influence or neighbourhood effects[6]. Habits are unconscious routines triggered by contextual cues rather than conscious deliberation of alternative ways of doing something[7]. Habits are one of the strongest

[1] Please see previous CAST reports: 1) Cornwall Council Behaviour Change & Engagement Programme - Phase 1 Report to Cornwall Council, October 2021, and 2) Exploring Green Travel in Cornwall - Focus Group Findings, August 2022.

[2] Stern, P. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*, 56(3), 407-424.

[3] University of Essex, Institute for Social and Economic Research (2018). *Insights.* Understanding Society: Waves 1-11, 2009-2020 and Harmonised BHPS: Waves 1-18, 1991-2009. Insights 2018 launched | Understanding Society

[4] Whitmarsh, L. et al. (2017). Who is reducing their material consumption and why? A cross-cultural analysis of dematerialization behaviours. *Philosophical Transactions of the Royal Society* A, 20160376.

[5] van der Werff, E. et al. (2013). It is a moral issue: The relationship between environmental self-identity, obligation-based intrinsic motivation and pro-environmental behaviour. *Global Environmental Change,* 23, 1258-1265.

[6] Wolske, K. S. et al. (2020). Peer influence on household energy behaviours. *Nature Energy*, 5, 2012-212.

[7] Kurz, B. et al. (2015). Habitual behaviours or patterns of practice? Explaining and changing repetitive climate-relevant actions. *WIREs Climate Change*, 6:113–128.

impediments to lifestyle change, acting to reinforce or 'lock in' existing behaviours[8, 9]. However, new habits can be formed, either through conscious effort or as a result of interventions that disrupt and reconfigure routines[10]. In terms of actively influencing behaviour change, the COM-B model[11] is one of the most widely used approaches. This model groups together the various factors that shape behaviour (B) into three main categories: Capabilities (C; our physical and psychological skills and abilities), Opportunities (O; the social and physical context and available options), and Motivations (M; our habitual and conscious drives and attitudes). This model has been widely applied by practitioners and emphasises that effective behaviour change requires making desirable behaviours easier, more attractive, and more 'normal'.

1.1 Survey objectives and design

We designed an online survey which had five objectives:

1. Measure residents' current behaviours in four areas of daily life - travel, energy use in the home, products they buy, and food. Individual behaviours and choices in each of these consumption domains can have a significant carbon footprint[12, 13].
2. Assess residents' level of 'change readiness', or how willing they are to alter some of their existing behaviours in favour of low-carbon alternatives.
3. Explore perceptions and experiences of climate change.
4. Understand the impact of the cost of living crisis on people's behaviours.
5. Garner residents' views on a range of policy measures which aim to reduce emissions.

Table 1 shows the survey structure. Participants were randomly assigned to either block 3 or block 4 in order to reduce the length of the survey, while ensuring data was collected on the broad range of topics described above.

[8] Marechal, K. and Lazaric, N. (2011). Overcoming inertia: insights from evolutionary economics into improved energy and climate policies. *Climate Policy*, 10, 103-119.
[9] Dyen, M. et al. (2018). Exploring the dynamics of food routines: a practice-based study to understand households' daily life. *European Journal of Marketing*, 52(12), 2544-2556.
[10] Verplanken, B. et al. (2018). Cracks in the Wall: Habit Discontinuities as Vehicles for Behavior Change. In Verplanken, B. (Ed). *The Psychology of Habit*. Springer.
[11] Michie, S. et al. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Sci,* 6, 42.
[12] Creutzig, F. et al. (2018). Towards demand-side solutions for mitigating climate change. *Nature Climate Change,* 8, 260-263.
[13] Ivanova, D. et al. (2020). Quantifying the potential for climate change mitigation of consumption options. *Environmental Research Letters*, 15, 093001.

Table 1, Overview of the survey structure

Block	Theme
1	Information sheet and consent form
2	Travel behaviour
3	Household energy use (50% of the sample)
4	Material consumption and diet (50% of the sample)
5	Climate change risk perception and experiences; attitudes towards Council policies
6	Cost of living
7	Sociodemographic characteristics
8	Debrief

Many questions in the survey were adapted from previous research and are known to be reliable. However, measuring behaviour change readiness is a relatively novel area of climate research and so a scale was designed for this purpose[14]. Figure 1 shows five distinct phases of a behaviour change decision-making process[15]. These phases are not presented as linear or pre-deterministic, as people can and do change their minds and consequently their behaviours based on new information and experiences. Rather, the phases measure where people currently are in terms of choosing a low-carbon behaviour, for example reducing car use.

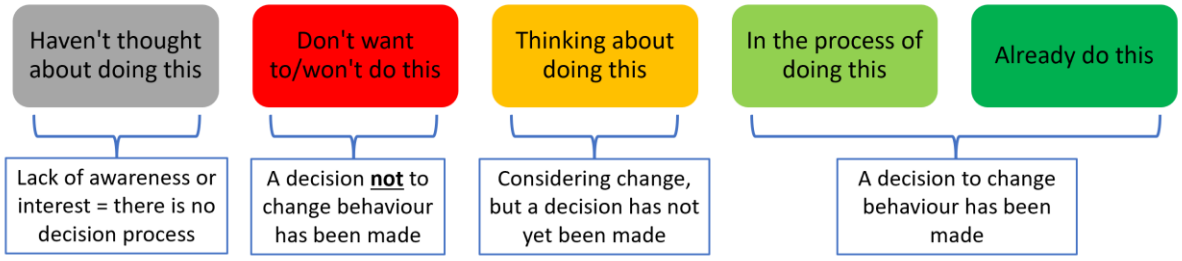

Figure 1, Different phases of 'change readiness', or a decision-making process to engage in a behaviour change

All survey items were piloted and revised to ensure comprehensibility and relevance for the context. The full questionnaire can be found in 'Appendix – survey questions'. We obtained ethical approval for this research from the University of Bath's Psychology Research Ethics Committee (PREC Ref: 22-127).

[14] The CAST survey of Council staff used a different scale to measure willingness to engage in low-carbon behaviours: 1 (Not willing at all) to 4 (Very willing). The scale shown in Figure 1 was chosen for this survey to measure two additional aspects: 1) a lack of awareness/interest in behaviour change (Haven't thought about doing this), and 2) whether respondents have already made a decision to change their behaviour and then acted on this decision (Already do this)

[15] Prochaska, J. O. (2020). Transtheoretical model of behavior change. *Encyclopedia of Behavioral Medicine*, 2266-2270.

1.2 Survey participants

The survey was designed and tested during October/November 2022, and then launched to Cornwall residents on 22nd November. It was promoted via several Council communication channels, such as the Council website and resident newsletters. Participants were also recruited through a market research agency. Participation was incentivised by optional entry into a prize draw for shopping vouchers, or direct reimbursement for those recruited by the market research agency. The survey was closed after six weeks on 3rd January 2023. Following a process of data cleaning and quality checks, 859 completed responses were included in the final dataset. Analysis was based on fully completed responses.

The population of Cornwall is 570,300[16] and so this sample of 859 people comprises 0.15% of Cornwall's population, or one in every 664 residents. A sample of around 400 can be sufficient to be representative of a population of this size, although our sample does not fully match the population's demographics and so care should be taken when generalising to the wider Cornish population[17]. The sample is predominantly female (68.6%), 29.1% are male and 1.0% are non-binary. The youngest participant in the survey is 16 years old, the oldest is 89 years old, and the mean age is 51.9 years. Most people identified their ethnicity as 'White British/White Cornish' (95.3%). Around one in five (21.3%) stated they have a long-standing illness, injury or disability that limits their normal day-to-day activities.

Table 2 shows the level of education for the sample. Approximately half of the respondents have an undergraduate degree or higher.

Table 2, Highest level of education achieved so far

Level of education	Frequency	% of respondents
No formal qualifications	19	2.2
GCSE or O-level	136	15.8
A-level	128	14.9
Undergraduate degree (e.g. Bachelor)	269	31.3
Postgraduate degree (e.g. Master, PhD)	159	18.5
Vocational qualification	101	11.8
Other	26	3.0
Prefer not to say	21	2.4

[16] Census 2021. See Office for National Statistics: Cornwall population change, Census 2021 – ONS

[17] Compared to Census 2021 data, this study sample is broadly representative of Cornwall's population for ethnicity, age, health condition or disability, and employment status. However, it differs for gender (women are overrepresented in this sample), education (people with an undergraduate or postgraduate degree are overrepresented in this sample), household occupancy (single person households are underrepresented in this sample, although families with dependent children are comparable) and home ownership (home owners are overrepresented in this sample). How life has changed in Cornwall: Census 2021 (ons.gov.uk) ; Education, England and Wales - Office for National Statistics (ons.gov.uk)

Employment status is shown in Table 3 and a relatively high proportion (28.9%) are retired, which reflects the older demographic of Cornwall.

Table 3, Employment status

Employment status*	Frequency	% of respondents
Employed full time (30+ hours per week)	292	34.0
Employed part time (less than 30 hour per week)	119	13.9
Self-employed	78	9.1
Unemployed	23	2.7
Looking after home / family	32	3.7
Studying	22	2.6
Retired	248	28.9
Other	30	3.5
Prefer not to say	14	1.6

* Participants were asked: *'Which option best describes your employment status?'*, accepting that multiple options are possible for some individuals

Data for household combined income reveals 20.0% of households earn between £32,000 to £47,999 per year (Figure 2). A third of households earn less than £26,000 per year.

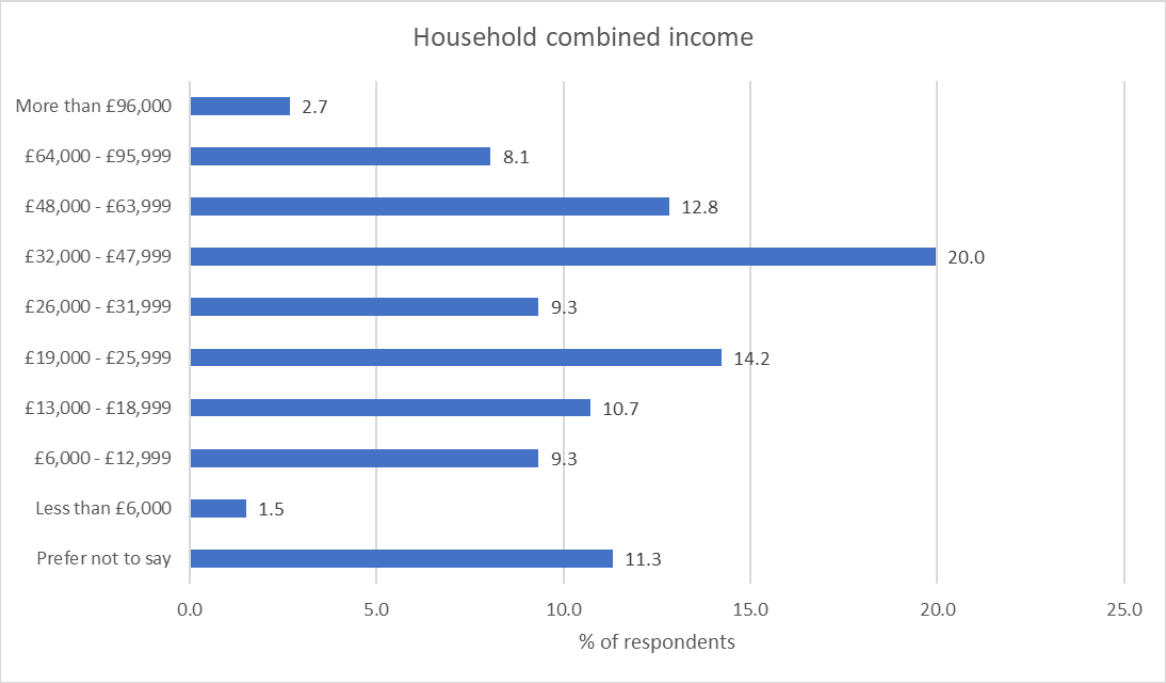

Figure 2, Household combined income (per year, before tax deductions)

In terms of household occupancy, 22.7% live in single person households, 60.0% have two adults, and 17.3% have three or more adults living at home. 26.3% of participants are families with children

(under 18) living at home. The mean household size is 2.49 people. For property size, 4.9% of participants live in one bedroom properties, 28.3% have two bedrooms, 44.0% have three bedrooms, and 22.8% have four or more bedrooms. The type of property the participants live in is shown in Figure 3.

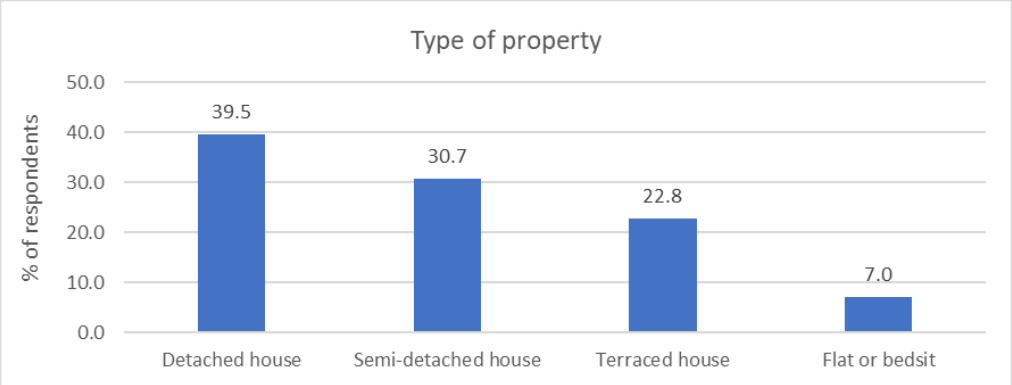

Figure 3, Type of property the respondents live in

Most (77.0%) participants own their own home (either with a mortgage, or outright) or live in a family-owned home, compared to 23.0% of participants who live in rented accommodation. In terms of location, 44.0% live in an urban area, 28.8% live in a rural town area and 27.2% live in a rural village area[18]. Most (88.7%) respondents own or have regular access to a car and approximately one in ten cars are hybrid or electric.

Statistical analysis

Much of the data presented in this report is based on descriptive statistics of the entire survey sample (e.g., this sample of Cornwall residents have these perceptions on climate change). The sociodemographic characteristics described in this section form the basis of inferential statistical analysis. This is used to explore differences between sub-groups of the sample (e.g., perceptions of younger people vs older people). The between-group statistical tests used are independent-samples t-test, Mann-Whitney U test, one-way ANOVA, and Kruskal-Wallis H test.

[18] In terms of geographic coverage, this survey sample includes respondents from all postcode districts in Cornwall. Postcode districts were used to segment participants into three location categories: urban area, rural town area, or rural village area, based on Office for National Statistics definitions. Where postcode districts include postcodes that fall under multiple definitions, the majority category was used.

Office for National Statistics definition	Postcode district
Urban city and town	PL12, PL25, PL31, TR1, TR7, TR10, TR11, TR13, TR14, TR15, TR16, TR18
Rural town and fringe, Rural town and fringe in a sparse setting	EX23, PL10, PL11, PL13, PL14, PL17, PL22, PL23, PL24, PL26, PL33, TR6, TR26, TR27
Rural village and dispersed, Rural village and dispersed in a sparse setting	EX22, PL15, PL16, PL18, PL27, PL28, PL29, PL30, PL32, PL34, PL35, TR2, TR3, TR4, TR5, TR8, TR9, TR12, TR17, TR19, TR20

See: Rural/urban classifications - Office for National Statistics

2 Measuring consumption behaviour and 'change readiness'

This section measures participants' current behaviours in four consumption domains: travel, household energy use, material consumption, and diet. Their level of change readiness for a range of low-carbon behaviours within each consumption domain was explored.

2.1 Travel

Reducing emissions from travel is a priority area for the Council and so the survey included a greater number of questions to investigate travel than for the other three consumption domains. Participants were asked about: 1) travel for commuting and leisure, 2) their willingness to use low-carbon travel modes and their perceptions of potential barriers to modal shift, and 3) holiday travel.

Commute and non-commute journeys

Commute journeys

Participants were asked: *'In a typical week, how many journeys per week do you make to/from your place of work or education (i.e. commuting) using the following modes of transport?'*. The results are presented in Table 4. Car/van (travelling alone) is the most common mode with 38% of respondents, and a further 11% share lifts with others. One in five (21%) respondents choose active travel (on foot and bicycle), whereas 12% use public or shared transport (bus, train, car club). People can of course travel by multiple modes in a typical week, although in practice most participants use only one mode for commuting. The mean number of journeys per week is fairly consistent across all travel modes, with most participants reporting 4 - 5 journeys. One-third (31%) of respondents do not commute because they work entirely from home, or they do not work.

The choice of travel mode for commuting is likely affected by how far people have to travel. Participants were therefore asked about the distance to their place of work or study (Figure 4). Some commute distances are very far, reflecting Cornwall's rural dispersed communities. However, a third of participants' commute journeys are less than three miles, as indicated by the green bars. Encouraging a switch to active travel is, unsurprisingly, more feasible for people with shorter journeys, while taking road safety and individual ability into consideration.

Table 4, Participants' number of commute journeys per week using different travel modes

Travel mode	Frequency	% of respondents	Mean no. of journeys per week*	Mode no. of journeys per week*	Standard deviation
On foot	144	17	6.4	2	5.895
Bicycle (including electric bike)	31	4	4.0	4	2.496
Scooter (including electric scooter)	8	1	4.3	2	2.435
Motorbike	16	2	4.3	2	2.892
Car / van (travelling alone)	323	38	5.5	2	3.673
Car / van (sharing lifts with others)	95	11	4.8	4	3.541
Car club (e.g. Co Cars)	7	1	4.0	2	3.215
Bus	62	7	5.1	2	3.393
Train	37	4	2.8	2	1.913
Other	9	1	2.1	1	2.643
N/A - I didn't work or I worked entirely from home	269	31			

* The question was phrased so that travelling there and back would count as two journeys

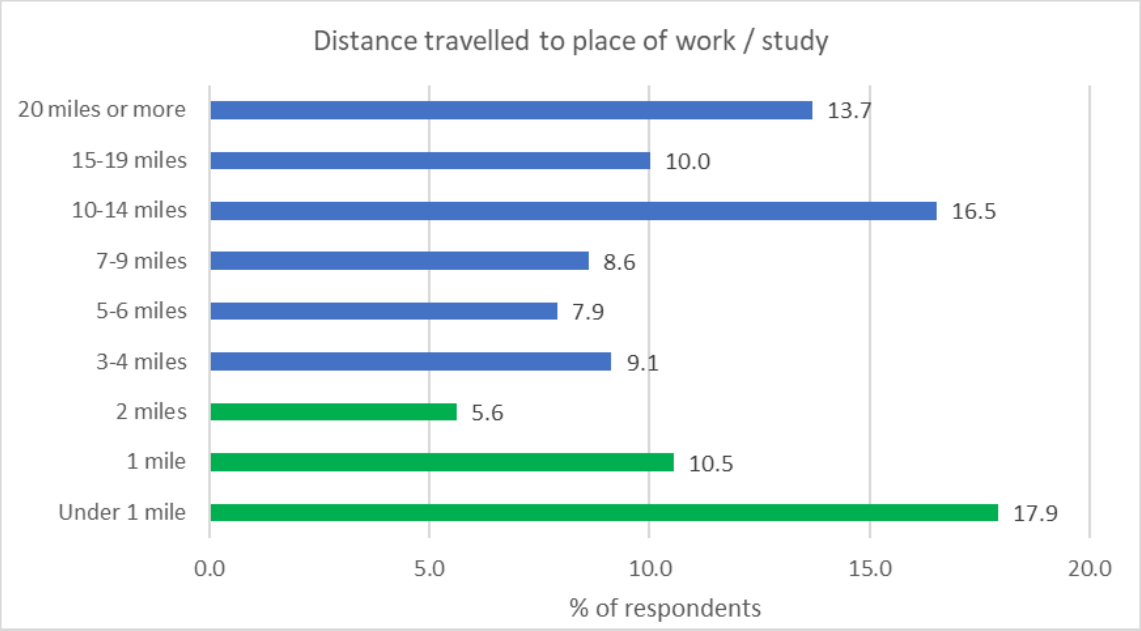

Figure 4, Distance travelled by participants to their place of work or study

Non-commute journeys

Participants were asked about the frequency of their journeys to other destinations, such as going to the shops or visiting friends (Table 5). Again, car/van (travelling alone) is the most common mode with 62% of respondents, and sharing lifts is also prevalent (36%). Most (59%) respondents use active travel for non-commute journeys and 20% use public or shared transport. Compared to commute journeys, participants use a wider range of travel modes for non-commute journeys in a typical week. Across the entire sample, there are almost twice as many non-commute journeys per week as there are commute journeys, which likely reflects the high proportion who are retired or have hybrid/home-working arrangements.

Table 5, Participants' number of non-commute journeys per week using different travel modes

Travel mode	Frequency	% of respondents	Mean no. of journeys per week*	Mode no. of journeys per week*	Standard deviation
On foot	437	51	5.8	2	6.861
Bicycle (including electric bike)	65	8	3.7	2	3.954
Scooter (including electric scooter)	8	1	6.5	2	11.563
Motorbike	20	2	3.6	1	3.591
Car / van (travelling alone)	535	62	4.9	2	4.123
Car / van (sharing lifts with others)	313	36	4.2	2	3.779
Car club (e.g. Co Cars)	7	1	5.3	2	4.821
Bus	110	13	2.8	2	2.450
Train	54	6	2.0	2	1.253
Other	12	1	2.8	1	2.261
N/A - I tend to stay at home	40	5			

* The question was phrased so that travelling there and back would count as two journeys

Modal shift

Participants were asked about their willingness to use a range of travel modes which vary in their carbon intensity, as shown in the sustainable travel hierarchy (Figure 5). The survey also explored participants' readiness for lifestyle changes which would reduce the need to travel.

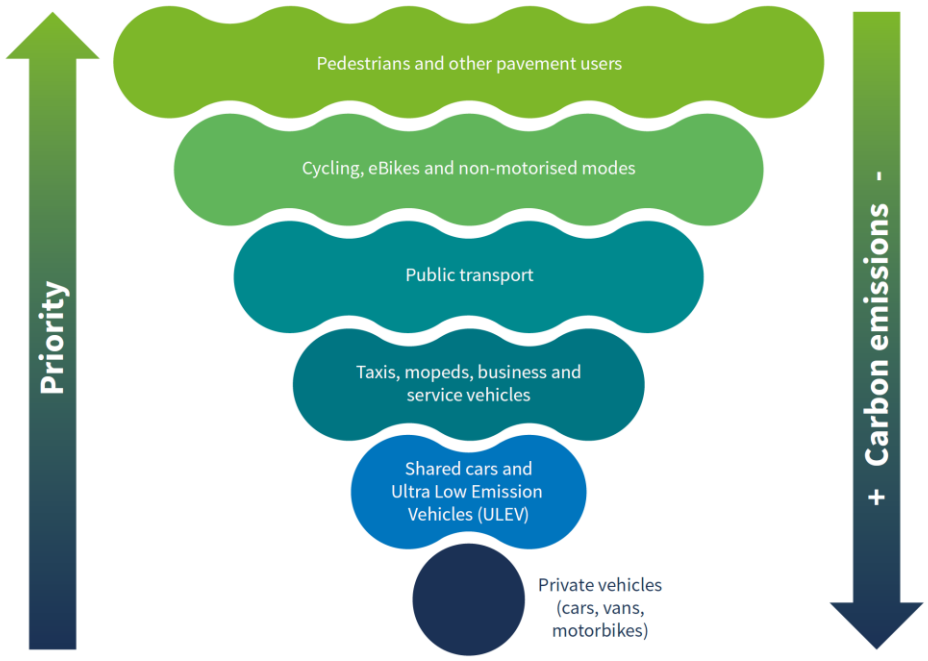

Figure 5, the sustainable travel hierarchy, duplicated from the Council's 'Local Transport Plan to 2030'

Public transport

Participants were asked about their willingness to use public transport as a main mode of travel (Figure 6). This question included a 'can't do this' option to identify individuals who do not consider public transport to be feasible for their situation. This could be because of a practical constraint (e.g., there is no bus service in their area) or a personal constraint (e.g., they are unable to use public transport because of a health condition). This is distinct from 'don't want to/won't do this', which represents an active decision to *not* change travel mode, even though it may be a realistic option for their situation.

In addition to the 15.2% of participants who regularly use public transport, 6.1% are in the process of using it more, and a further 15.6% are thinking about it. However, one in five participants do not want to switch to public transport.

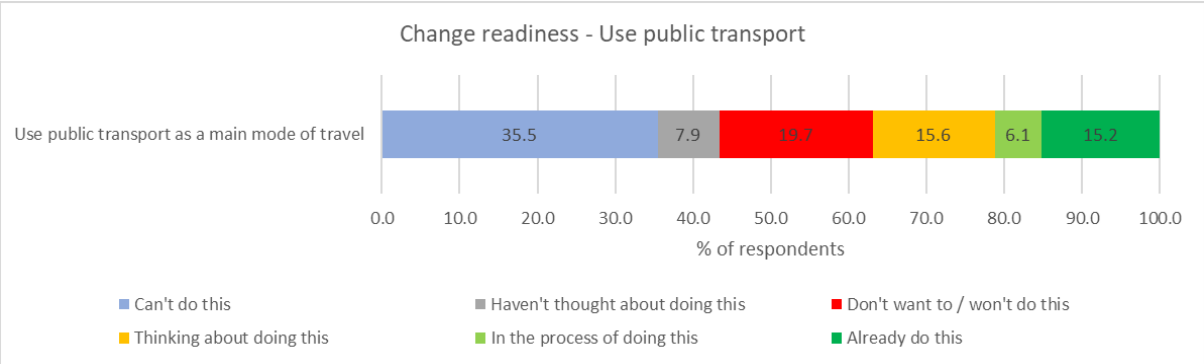

Figure 6, Participants' willingness to use public transport as a main mode of travel

Participants who indicated a low propensity to use public transport (i.e., they selected one of the following options: can't do this/won't do this/thinking about doing this, n=589) were presented with five potential barriers and asked to what extent each barrier has prevented them from using public transport as a main mode of travel (Figure 7). Inconvenience and the infrequency of service are the most important barriers. Access to information about local public transport is not viewed as a barrier. However, 15.4% of participants indicated that using public transport was not feasible due to a long-standing illness, injury or disability.

Participants who have access to a car tend to perceive these barriers as more of a deterrent, but the sample size for those without a car was too small to make useful statistical inferences. Women consider unreliability to be more of a barrier than men[19]. People who live in rural villages and towns regard the infrequency of public transport to be a barrier, compared to urban residents who emphasise cost as a barrier[20]. There was no difference based on other grouping variables such as age, income or climate concern.

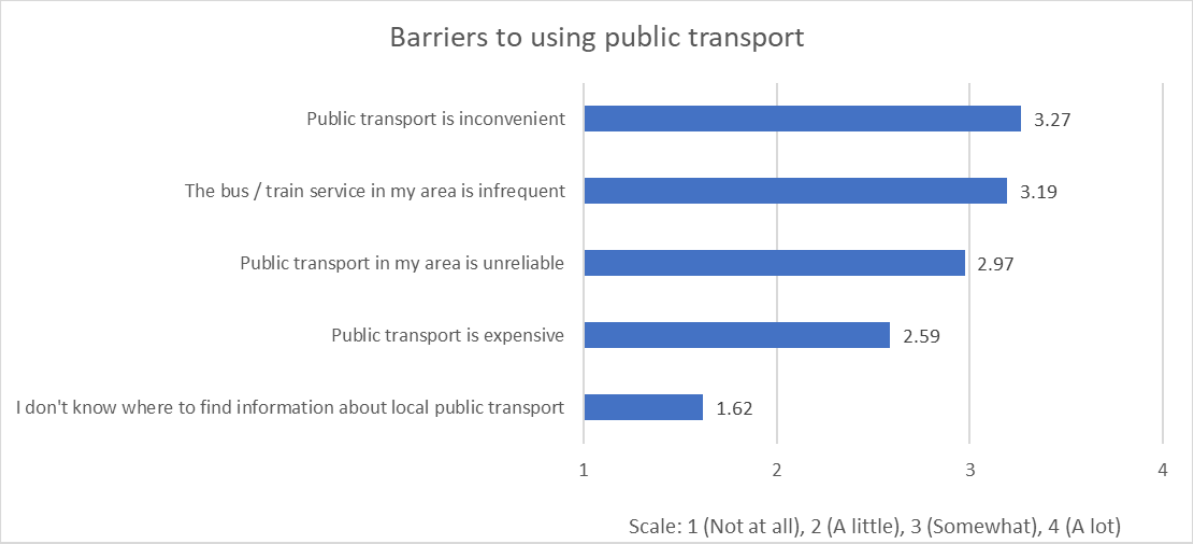

Figure 7, Means scores for the relative importance of five barriers which prevent participants from using public transport

[19] An independent samples t-test revealed women consider unreliability to be more of a barrier to using public transport (3.04 ± 1.04) compared to men (2.80 ± 1.14), a statistically significant difference of .24 (95% CI, .025 to .445), $t(272) = 2.198$, $p = .029$

[20] One-way ANOVA tests revealed:

1) People who live in rural village areas (3.47 ± .87) and rural town areas (3.27 ± 1.00) identify the infrequency of public transport to be a barrier, relative to people who live in urban areas (2.97 ± 1.08), Welch's $F(2, 344.878) = 12.812$, $p = .001$. Games-Howell post hoc analysis revealed that the difference in perception between urban residents to rural village residents (.50, 95% CI (.27 to .73)) was statistically significant ($p = .001$), as well as the difference in perception between urban residents to rural town residents (.30, 95% CI (.05 to .56)), $p = .013$

2) People who live in urban areas identified cost as a barrier to using public transport (2.75 ± 1.09), relative to people who live in rural village areas (2.42 ± 1.12), a statistically significant difference of .33 (95% CI, .05 to .61), Welch's $F(2, 313.540) = 4.610$, $p = .011$. No statistically significant difference in perception was observed between people who live in rural village areas and rural town areas.

Active travel

Participants were asked about their willingness to walk or cycle as a main mode of travel, along with two related questions about their use of e-bikes (Figure 8). As with public transport, a 'can't do this' option was included to reflect practical or personal constraints. A high proportion of participants (37.7%) stated they can't walk or cycle as a main mode of travel. Nevertheless, over 45% use or are considering active travel modes. Only 7.0% of participants own an electric bike but this is notably higher than the UK average of 2%[21]. Moreover, one in five participants are thinking about, or in the process of, buying an e-bike and this is consistent with strong UK growth projections for e-bike sales[22]. Only 1.4% of participants hire e-bikes, although the public e-bike hire scheme (Beryl bikes) was only available in Falmouth and Penryn when the survey was launched in November 2022.

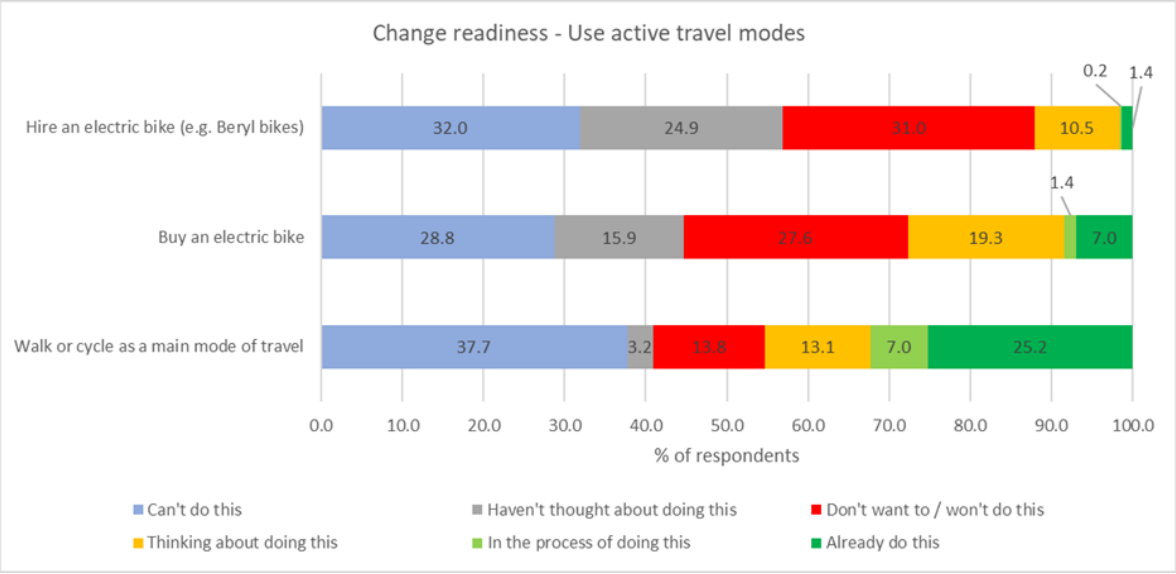

Figure 8, Participants' willingness to walk or cycle as a main mode of travel

Participants who indicated a low propensity to walk or cycle as a main mode of transport (n=701) were asked about four potential barriers (Figure 9). The high mean scores (>3) indicate that concerns about road safety, long journey distances and a lack of walking/cycling infrastructure are all significant barriers to a wider uptake of active travel in Cornwall. One in five (21.4%) participants stated that walking or cycling was not feasible due to a long-standing illness, injury or disability.

Women perceive all four barriers to be more of a deterrent to their uptake of active travel, compared to men. Older people (aged 60+) and those on low incomes feel they have less cycling confidence. Participants who have access to a car emphasise distance as a key barrier. People with high climate concern (very or extremely worried) identify road safety and a lack of active travel

[21] YouGov (2022). Global – Are e-bikes the future of urban mobility? (yougov.com)
[22] Mintel (2022). UK Cycling Market Report - Market Size, Forecast & Growth (mintel.com)

infrastructure to be important barriers[23]. Finally, people living in rural villages and towns consider distance and a lack of active travel infrastructure to be deterrents, compared to urban residents[24].

[23] Independent samples t-tests revealed:
1) Women perceive road safety to be more of a barrier to active travel (3.37 ± .96) than men (2.94 ± 1.16), a statistically significant difference of .43 (95% CI, .236 to .620), $t(288) = 4.385$, $p = .001$
2) Women perceive distance to be more of a barrier to active travel (3.25 ± 1.05) than men (2.95 ± 1.15), a statistically significant difference of .30 (95% CI, .117 to .485), $t(634) = 3.212$, $p = .001$
3) Women perceive a lack of active travel infrastructure to be more of a barrier (3.10 ± 1.07) than men (2.80 ± 1.18), a statistically significant difference of .31 (95% CI, .106 to .509), $t(314) = 3.003$, $p = .003$
4) Women perceive a lack of cycling confidence/competence to be more of barrier to active travel (2.61 ± 1.24) than men (1.82 ± 1.14), a statistically significant difference of .79 (95% CI, .586 to .998), $t(369) = 7.548$, $p = .001$
5) People aged 60 or over perceive a lack of cycling confidence/competence to be more of barrier to active travel (2.55 ± 1.32) than younger people (2.29 ± 1.24), a statistically significant difference of .26 (95% CI, .047 to .478), $t(430) = 2.394$, $p = .017$
6) Low income households (a combined household income of less than £26,000 per year, before tax deductions) perceive a lack of cycling confidence/competence to be more of barrier to active travel (2.49 ± 1.26) than those on higher incomes (2.26 ± 1.27), a statistically significant difference of .23 (95% CI, .005 to .456), $t(529) = 2.009$, $p = .045$
7) People who own or have access to a car perceive distance to be more of a barrier to active travel (3.21 ± 1.07) than those without a car (2.70 ± 1.14), a statistically significant difference of .51 (95% CI, .215 to .806), $t(652) = 3.395$, $p = .001$
8) People with high climate concern (very or extremely worried) perceive a lack of active travel infrastructure to be more of a barrier (3.15 ± 1.06) than those with lower climate concern (2.80 ± 1.18), a statistically significant difference of .35 (95% CI, .165 to .533), $t(457) = 3.720$, $p = .001$
9) People with high climate concern (very or extremely worried) perceive road safety to be more of a barrier to active travel (3.34 ± .979) than those with lower climate concern (3.09 ± 1.12), a statistically significant difference of .25 (95% CI, .076 to .420), $t(462) = 2.838$, $p = .005$
[24] One-way ANOVA tests revealed:
1) People who live in rural village areas (3.17 ± 1.10) and rural town areas (3.12 ± 1.05) identify the lack of active travel infrastructure to be a barrier, relative to people who live in urban areas (2.86 ± 1.15), Welch's $F(2, 383.095) = 4.919$, $p = .008$. Games-Howell post hoc analysis revealed that the difference in perception from urban residents to rural village residents (.31, 95% CI (.05 to .56)) was statistically significant ($p = .012$), as well as the difference in perception from urban residents to rural town residents (.26, 95% CI (.00 to .51)), $p = .045$
2) People who live in rural village areas (3.28 ± .98) and rural town areas (3.32 ± 1.01) identify long journey distances to be a barrier to active travel, relative to people who live in urban areas (2.99 ± 1.16), Welch's $F(2, 410.553) = 6.418$, $p = .002$. Games-Howell post hoc analysis revealed that the difference in perception from urban residents to rural village residents (.29, 95% CI (.05 to .52)) was statistically significant ($p = .011$), as well as the difference in perception from urban residents to rural town residents (.33, 95% CI (.09 to .57)), $p = .004$

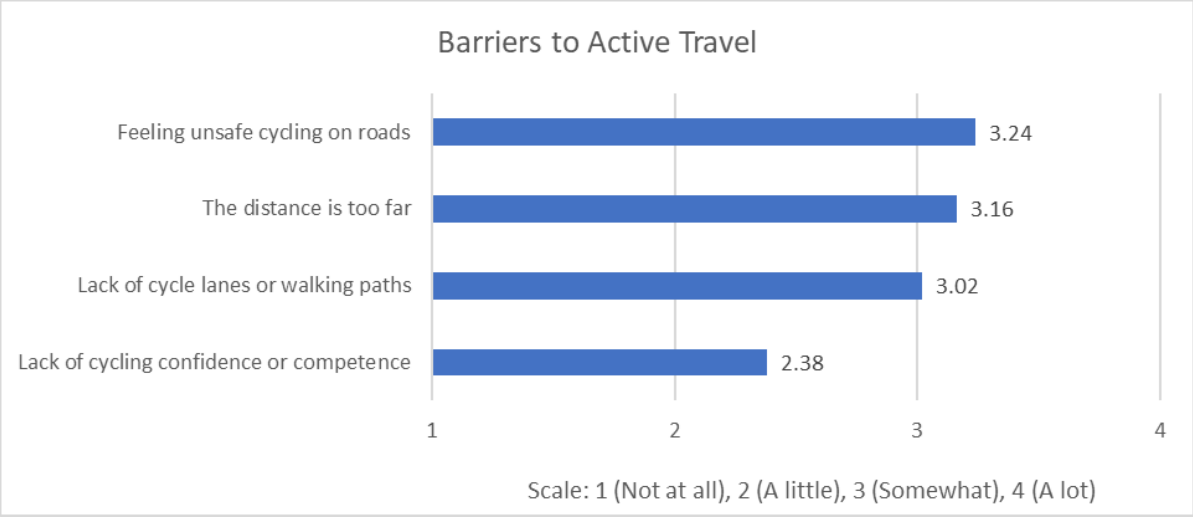

Figure 9, Means scores for the relative importance of four barriers which prevent participants from using active travel

Electric cars

Participants were asked about their willingness to buy an electric car (Figure 10). Few (6.5%) participants own an electric car, although again this is slightly higher than the UK average (4.5%)[25]. A sizeable proportion (31.8%) are thinking about buying one, but nearly a third of participants stated they 'can't do this'.

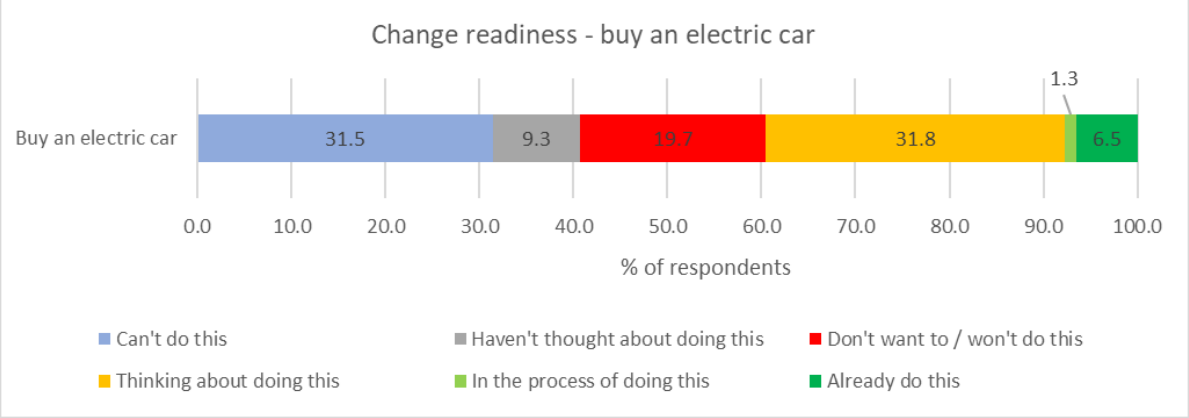

Figure 10, Participants' willingness to buy an electric car

Participants who indicated a low propensity to buy an electric car (n=641) were asked about two potential barriers (Figure 11). The high mean scores (>3) suggest the cost of electric vehicles (EV) and a lack of charging infrastructure are both regarded as significant barriers. A recent Government report highlighted 'EV charging deserts' in remote areas as a major deterrent to EV uptake[26] and it would seem this concern is shared by the survey respondents. In this Cornwall sample, high income households perceive the cost of an EV to be less of a barrier, whereas women consider both cost and

[25] UK Government (2022). Vehicle licensing statistics data tables - GOV.UK (www.gov.uk)
[26] UK Government (2021). Summary: Building a comprehensive and competitive electric vehicle charging sector that works for all drivers. Final report - GOV.UK (www.gov.uk)

a lack of charging points to be deterrents[27]. There was no difference based on other grouping variables such as age, location or climate concern.

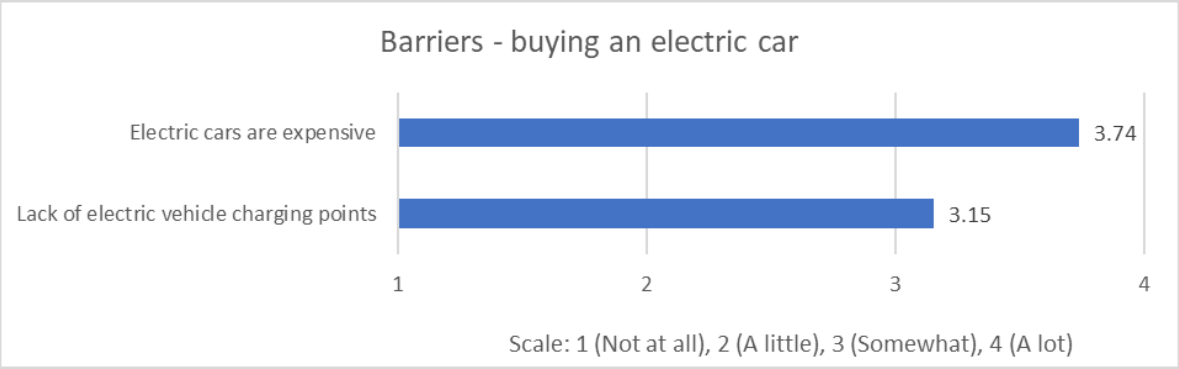

Figure 11, Means scores for the relative importance of two barriers which prevent participants from buying an electric car

Reducing car use and working from home

Participants were asked about four options for changing how they use their car (Figure 12). Some options are relatively minor behaviour changes (e.g., share lifts with others) whereas others may require a significant lifestyle change (e.g., live without a car). The impact of the COVID-19 pandemic is apparent as a high proportion (39.6%) already work from home where possible. The majority of respondents indicated they can't live without a car (53.9%) which likely reflects the challenges of living in a rural area, as well as personal factors. One in seven respondents is thinking about sharing lifts with others and so there is space for encouraging behaviour change within this segment.

[27] Independent-samples t-tests revealed:
1) Households with a combined income of £48,000 or more (per year, before tax deductions) consider EV cost to be less of a barrier (3.64 ± .77) compared to households with a lower income (3.78 ± .62), a statistically significant difference of -.14 (95% CI, -.277 to -.005), $t(230) = -2.037$, $p = .043$
2) Women consider EV cost to be more of a barrier (3.77 ± .61) compared to men (3.63 ± .79), a statistically significant difference of .14 (95% CI, .011 to .274), $t(255) = 2.127$, $p = .034$
3) Women consider a lack of EV charging infrastructure to be more of a barrier (3.23 ± 1.02) compared to men (3.03 ± 1.13), a statistically significant difference of .20 (95% CI, .010 to .391), $t(573) = 2.069$, $p = .039$

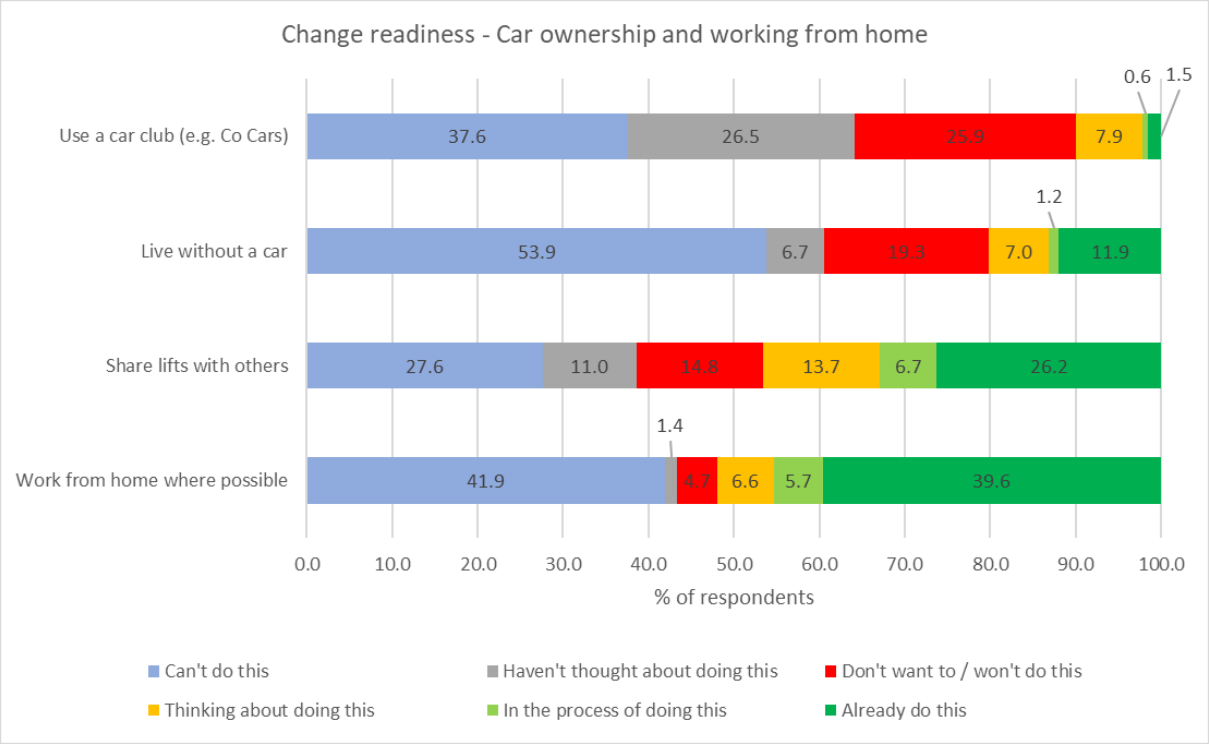

Figure 12, Participants' willingness to reduce car use or ownership, or work from home

Holiday travel

Holiday travel, depending on the mode used, can have a significant carbon footprint[28]. The decision of how to travel, and where to travel to, represents an opportunity to cut emissions because these are infrequent deliberative decisions and so are less influenced by habit than other types of journey. Participants were asked about their holiday destinations in 2022 (Table 6). A third of respondents chose to remain in the UK for their holiday(s) and a third did not go on holiday at all, which may indicate cautious spending as the cost of living increased (discussed in section 3).

Table 6, Participants' holiday destinations in 2022

Travel mode	Frequency	% of respondents
To one or more UK destinations	289	33.6
To one or more overseas destinations	108	12.6
To both UK and overseas destinations	147	17.1
Not been on holiday in 2022	315	36.7

Those who did go on holiday (n=544) were asked how they travelled to their holiday destination(s). Table 7 shows car, flight and train were the most common modes.

[28] Ivanova, D. et al. (2020). Quantifying the potential for climate change mitigation of consumption options. *Environmental Research Letters*, 15(9), 093001.

Table 7, Travel mode used for holidays

Travel mode*	Frequency	% of respondents
Car	410	47.7
Flight	211	24.6
Train	155	18.0
Ferry	68	7.9
Bus	49	5.7
Campervan or motorhome	16	1.9
Bicycle	4	0.5
Cruise	4	0.5
Car share or minibus hire	4	0.5
Own sailing boat	3	0.3
Walking	1	0.1
Motorcycle	1	0.1
Taxi	1	0.1

* Participants could select multiple modes for their holiday journey(s)

Change readiness – holiday travel

Participants were then asked about their willingness to use low-carbon travel modes for their holidays (Figure 13). A sizeable proportion of respondents (32.6% - 44.7%) already use or are considering low-carbon travel modes. However, around 27% of participants don't want to and a further 11.9% - 13.9% haven't considered it.

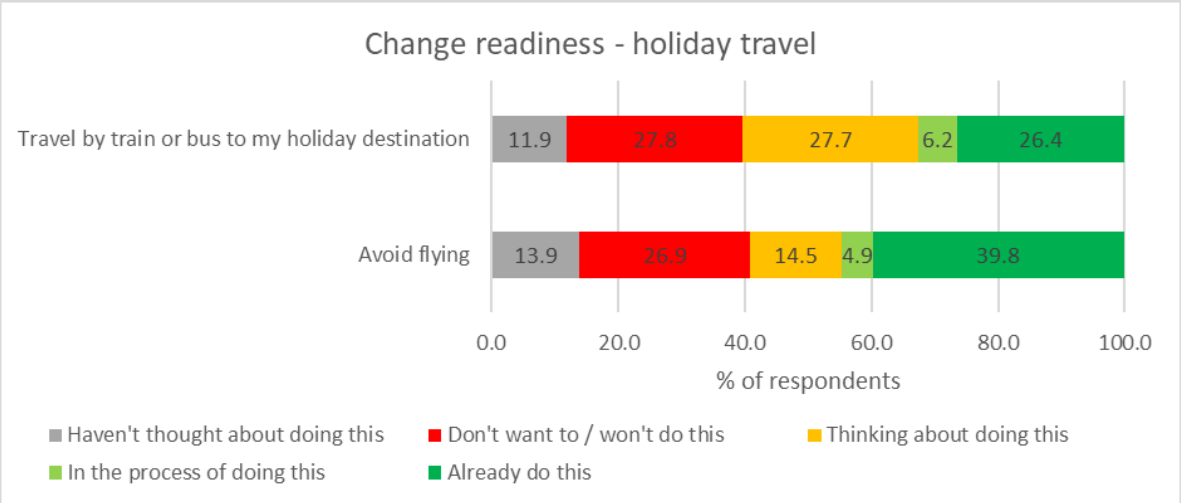

Figure 13, Participants' willingness to change how they travel for holidays

Avoiding flying is the most effective way of cutting emissions, although car travel can also have a large carbon footprint. Using the example of a journey from London to Glasgow (399 miles), travelling by bus or train emits approximately one-third of the emissions as travelling by car or plane[29].

Holiday travel poses a particular challenge because broad public awareness of the high carbon footprint of flying has not translated into behaviour change. Despite increasing public support for cutting aviation emissions though policy measures, people are less willing to alter their personal behaviour with respect to flights, viewing it as a sacrifice or inconsistent with their self-identity[30]. Social pressure (e.g., provide justification for flying) and marketing approaches (e.g., is a holiday abroad actually more fun than a holiday in the UK?) are two possible approaches for overcoming this barrier.

2.2 Household energy use

Participants were asked about: 1) their energy use in the home, 2) their readiness to engage in energy-saving behaviours, and 3) their willingness to install energy efficiency or renewable energy home improvements. Half of the sample were asked these questions (n=430).

Heating the home

The survey included two questions on home heating. Two-thirds of participants' homes are heated to between 17°C and 20°C on cold days (Figure 14). Households with children tend to heat their homes slightly warmer, but there was no difference based on other grouping variables such as low income, older age, disability or climate concern[31].

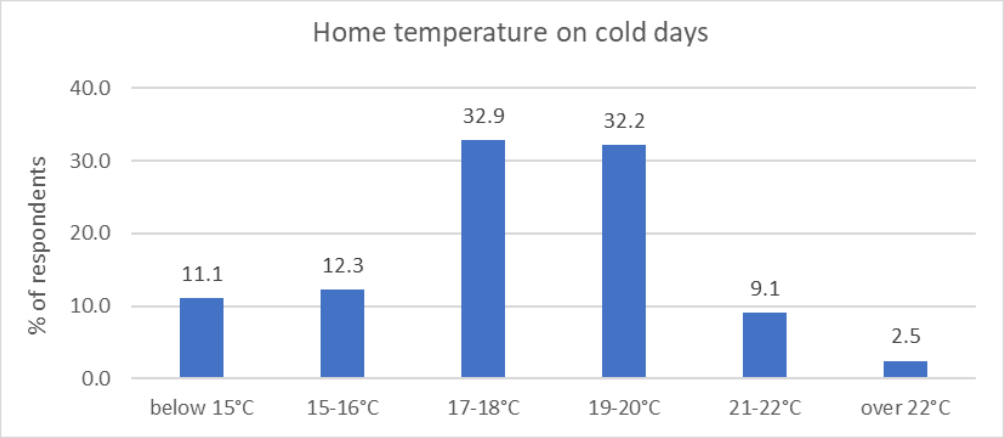

Figure 14, Home temperature on cold days

[29] UK Government (2022). Journey emissions comparisons: Methodology and guidance - GOV.UK (www.gov.uk)

[30] Gössling, S. and Dolnicar, S. 2023. A review of air travel behavior and climate change. *WIREs Climate Change*, 14(1), e802. https://doi.org/10.1002/wcc.802

[31] A Mann-Whitney U test revealed families (with children under 18 living at home) heat their homes statistically significantly warmer (mean rank = 221.41) than households without children living at home (mean rank = 187.51), $U = 18250$, $z = 2.760$, $p = .006$

Participants were then asked how they heat their home[32]. Figure 15 reveals the use of wood and oil as heating fuels are notably more common in Cornwall than other parts of the UK[33]. Approximately half of Cornish homes are not connected to the gas grid.

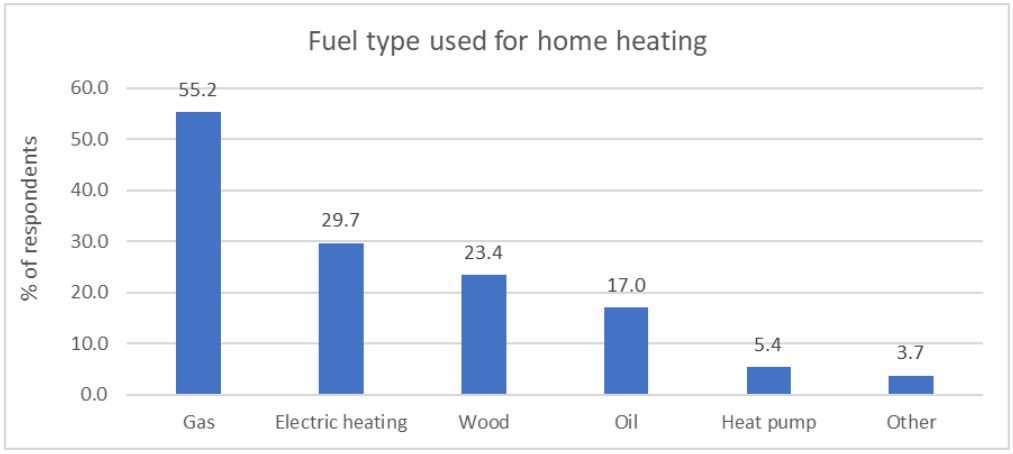

Figure 15, Fuel type used for heating the home (respondents could select multiple options if they have more than one type of heating system)

Energy use in the home

Over three-quarters of respondents indicated that they always turn off lights and appliances, or turn them off most of the time, when not in use (Figure 16). Households on low incomes report more frequent energy-saving behaviours[34]. There was no observed difference between those with a high or low level of climate concern.

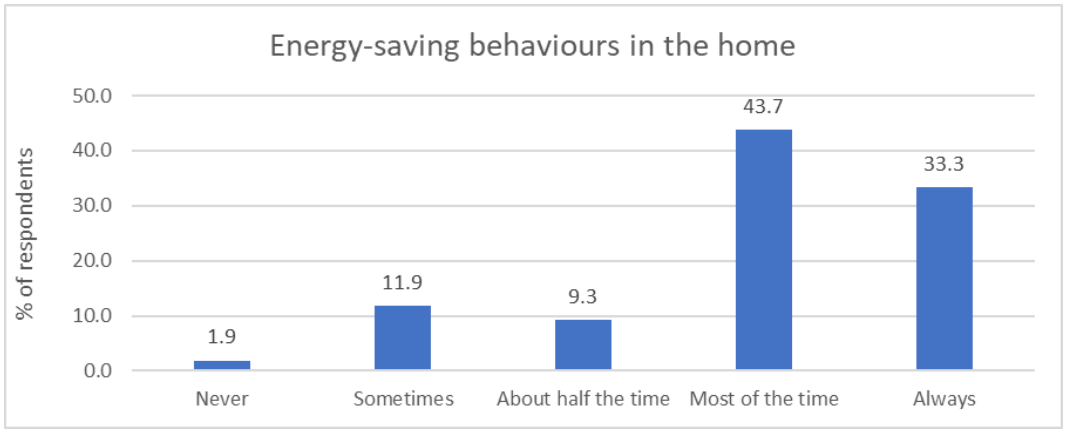

Figure 16, Frequency of energy-saving behaviours in the home

[32] All 859 survey participants were asked how they heat their home, rather than half of the survey sample
[33] Office for National Statistics (2021). Energy efficiency of housing in England and Wales - Office for National Statistics (ons.gov.uk). See also: Statista (2022). UK: heating methods survey 2022 | Statista
[34] A Mann-Whitney U test revealed low income households (a combined household income of less than £26,000 per year, before tax deductions) reported turning off lights and appliances statistically significantly more frequently (mean rank = 204.91) than households on higher incomes (mean rank = 180.82), U = 15470, z = -2.253, p = .024

Change readiness - energy-saving behaviours

Participants were asked about their willingness to engage in five behaviours which have a significant potential to reduce household emissions, and which require a lower financial cost compared to many other pro-environmental behaviours. Figure 17 shows a high level of change readiness for buying energy-efficient light bulbs and appliances, and for limiting heating in the home. However, a high proportion have not thought about switching to a renewable energy supplier (20.0%) or installing low-flow fittings to taps and showers (25.6%).

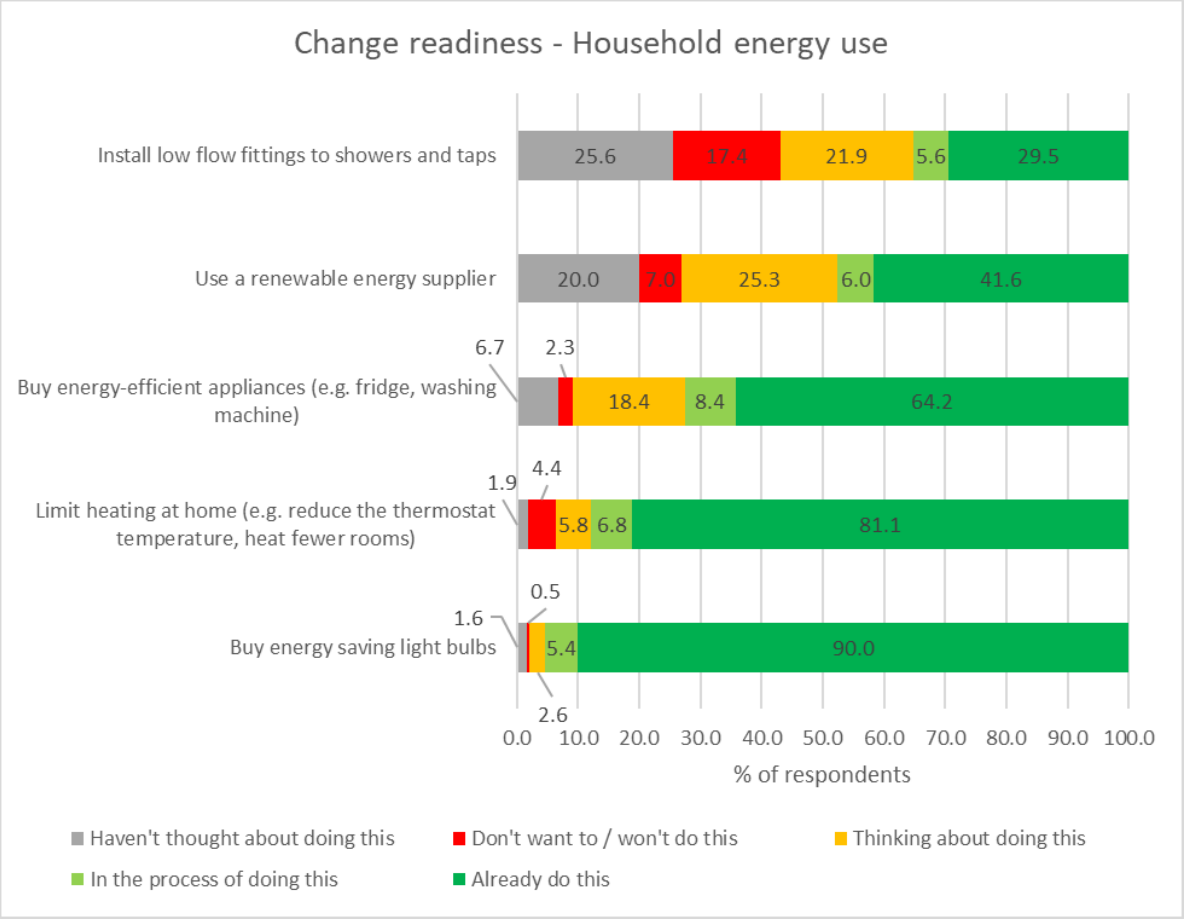

Figure 17, Participants' willingness to engage in energy-saving behaviours in the home

Energy efficiency and renewable energy home improvements

Participants who own their home or live in a family-owned home (n=333, or 77.4% of the half sample completing this survey section) were asked about their willingness to install home improvements which would increase energy efficiency or provide renewable energy. These improvements entail a large financial investment, but households can subsequently expect a reduction in energy bills, together with a lower carbon footprint. This question included a 'can't do this' option to identify households who are not permitted to modify their home because of planning regulations, and to differentiate them from households who may be deterred by financial constraints (i.e., the improvements are permitted, but participants decide they cannot afford it or they do not wish to invest).

For energy efficiency improvements, nearly 80% of participants already have, or are in the process of installing, double/triple glazing and loft insulation (Figure 18). Over half have cavity wall or solid wall insulation. The proportion of participants who do not want to install a heat pump is high (26.4%), which could indicate uncertainty about a relatively new technology. Perhaps more surprising is the lack of willingness to install 'tried and tested' home improvements such as solar panels (18.6%) and solar water heaters (16.6%), both of which have seen cost reductions in recent years. A further observation is the large proportion of participants who have not thought about installing a heat pump (26.4%) or solar water heater (33.7%). This suggests many residents may be unaware of some renewable energy technologies.

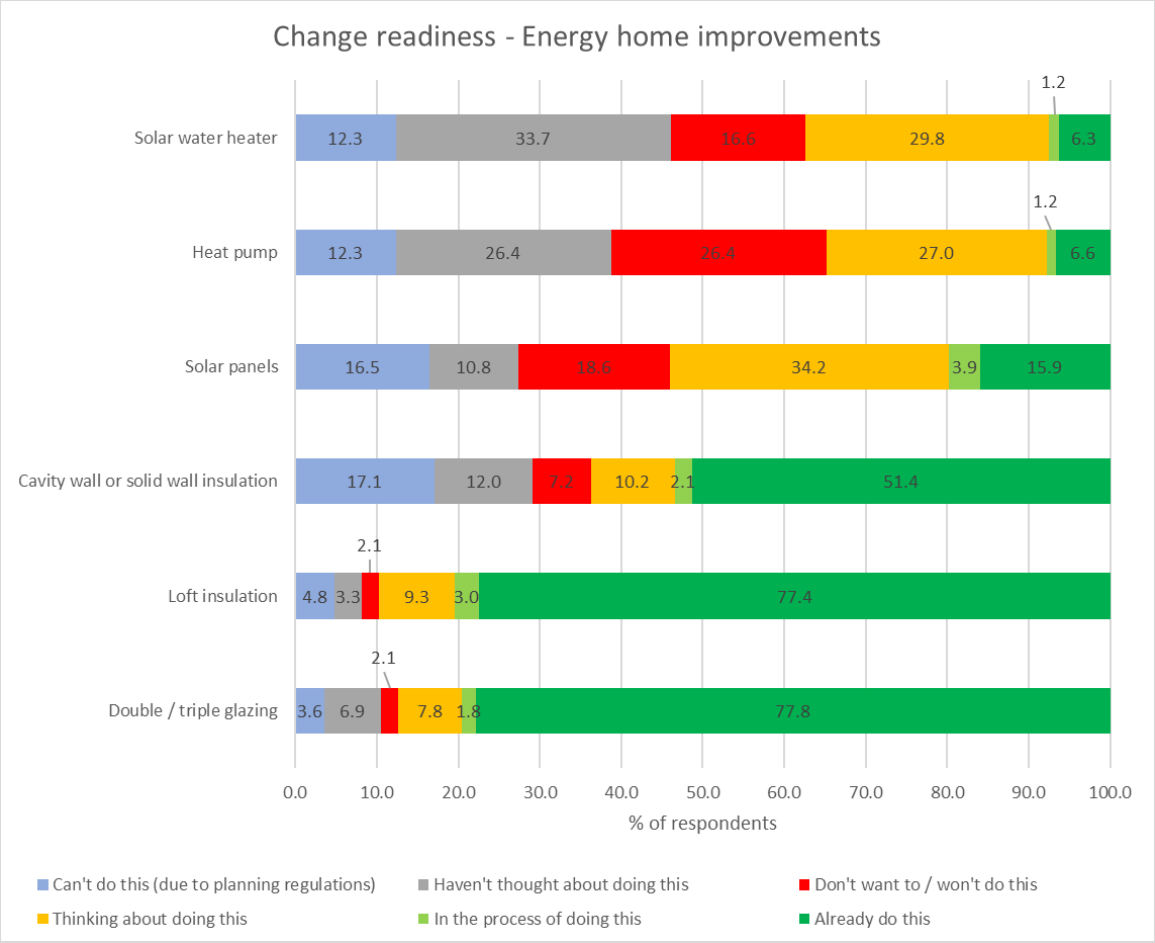

Figure 18, Participants' willingness to install energy efficiency or renewable energy home improvements

2.3 Material consumption and recycling

The remaining half of the survey sample (n=429) were asked about: 1) products they buy, 2) their willingness to reduce, reuse or repair, 3) their recycling behaviour, and 4) their food choices (see section 2.4). Participants were asked to consider the items and food they buy for their entire household, rather than purchases for themselves only.

Shopping behaviours

In terms of monthly expenditure on clothes and footwear, the majority of participants typically spend between £1 and £50 (Figure 19). A high proportion (19.3%) reported they do not usually spend any money at all on clothes and footwear, which likely reflects the current cost of living situation. Low income households spend less on clothes and footwear, whereas families with children living at home spend more[35]. There was no difference based on other grouping variables such as age, gender or climate concern.

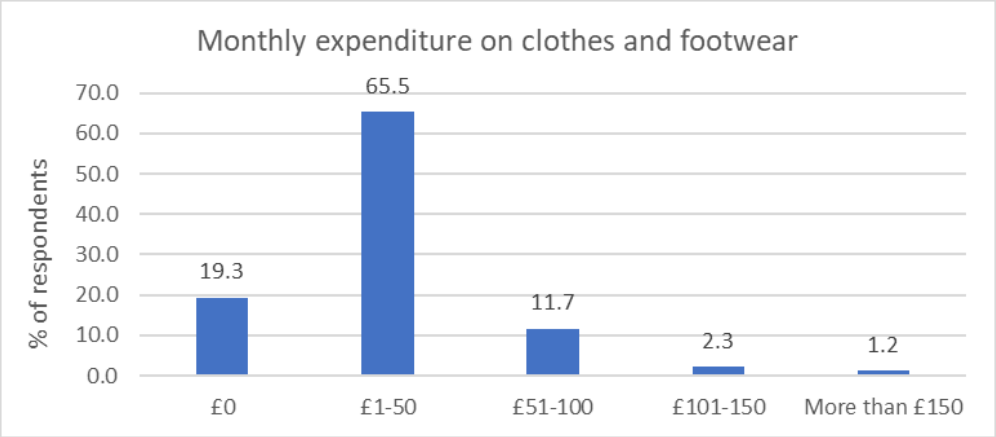

Figure 19, Typical monthly expenditure on clothes and footwear

Table 8 shows the percentage of participants who have purchased new, relatively expensive household items in the last 12 months. One in five respondents have bought a new mobile phone or tablet, whereas over half have not bought any of the listed items in the past year.

Table 8, Percentage of participants who have bought household items new in the last 12 months

Item	Frequency	% of respondents
TV or sound system	46	10.7
Laptop or PC	56	13.1
Mobile phone or tablet	97	22.6
Large item of furniture	61	14.2
Washing machine, dishwasher, tumble dryer or fridge freezer	89	20.7
I haven't bought any of these items	219	51.0

[35] Mann-Whitney U tests revealed:
1) Low income households (a combined household income of less than £26,000 per year, before tax deductions) reported spending statistically significantly less on clothes and footwear in a typical month (mean rank = 163.47) than households with a higher income (mean rank = 206.63), U = 20883, z = 4.380, p = .001
2) Families (with children under 18 living at home) reported spending statistically significantly more on clothes and footwear in a typical month (mean rank = 243.54) than households without children living at home (mean rank = 189.36), U = 20684, z = 4.870 p = .001

Change readiness - Reduce, re-use, repair

Participants were asked about their willingness to engage in six pro-environmental behaviours, four of which would reduce their overall level of material consumption, and the remaining two relate to ethical sourcing of goods and services (Figure 20). Repairing, repurposing and buying second hand are already common behaviours, although between 9.8% - 14.7% of participants reported 'thinking about doing this' and so there is space to encourage these behaviours further. A sizeable proportion 'haven't thought about' (31.9%) or 'don't want to' (21.4%) borrow or rent items. This may reflect a lack of toy swap shops or 'library of things'[36] initiatives in Cornwall. One possibility is to adapt the existing mobile library model to facilitate access to borrowing schemes in rural areas. Nearly three-quarters of respondents consider environmental attributes when they buy products and nearly a third take ethical indicators into account when making financial investments.

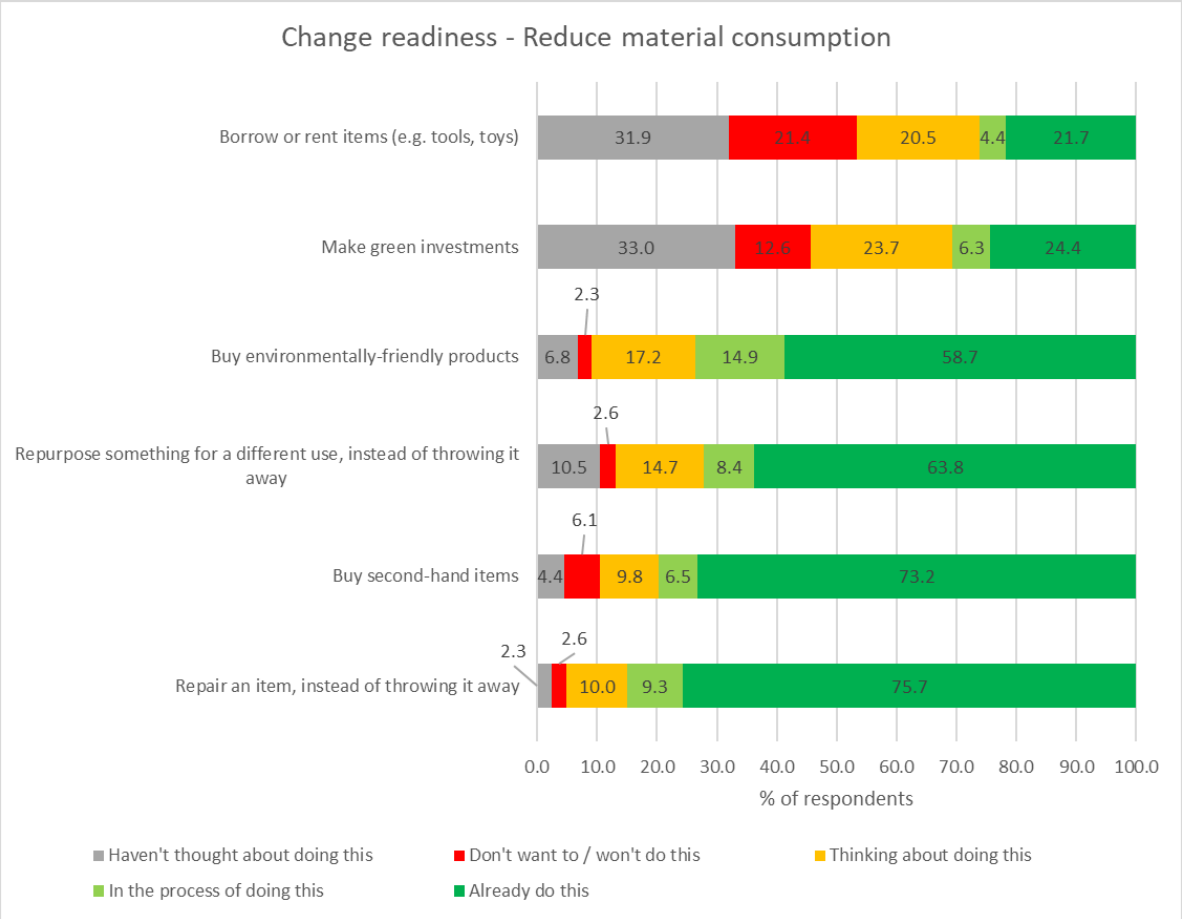

Figure 20, Participants' willingness to reduce material consumption or choose ethical alternatives

Recycling behaviour

Figure 21 shows the majority of participants regularly recycle most categories of household waste. Food waste is the notable exception and this can be partially attributed to the lack of a food waste collection service in some areas in Cornwall (see participants' qualitative feedback, section 5.2). There is a slight disparity in the recycling of different categories of household waste – more

[36] See: Library of Things | Borrow useful Things for your home, projects and adventures

respondents recycle paper, cardboard and plastic, compared to glass, tins and cans. Assuming all of these types of waste are collected by the same recycling lorry, the raises a question of why some respondents choose to recycle some items but not others. It could be due to the additional effort required to clean glass, tins and cans, although this behaviour was not explored in the survey.

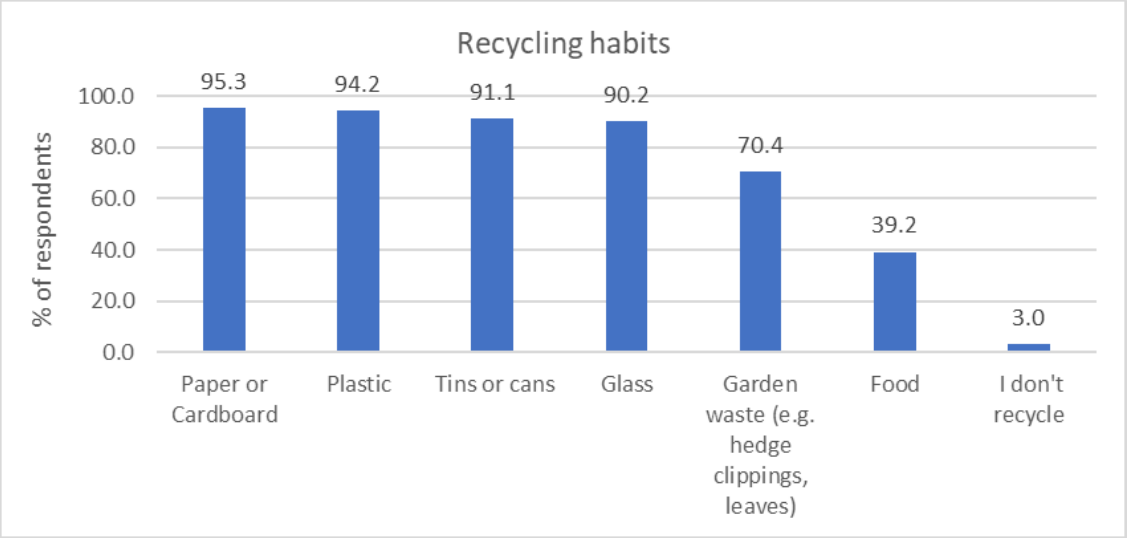

Figure 21, Recycling behaviour for different categories of household waste

2.4 Food choices

The fourth consumption domain explored in the survey was food behaviours. Participants (n=429) were asked: *'How many days in a typical week is your diet 'meat-free'? (i.e., you do not eat any meat or fish)'*. Figure 22 shows 1-2 meat-free days per week was the most common response (26.3%). One in three respondents regularly eat meat (meat-free days = 'never' or 'less than once a week') and 15.6% do not eat any meat at all in a typical week (this last segment would include vegetarian and vegan respondents). Women, people with high climate concern, and people educated to degree level tend to eat meat less frequently. There was no difference based on other grouping variables such as age, income, or households with children[37].

[37] Mann-Whitney U tests revealed:
1) Women have statistically significantly more meat-free days per week (mean rank = 223.07) than men (mean rank = 182.26), U = 15605, z = -3.315, p = .001
2) People with an undergraduate or postgraduate degree have statistically significantly more meat-free days per week (mean rank = 236.05) than those with other academic qualifications (mean rank = 185.98), U = 16672, z = -4.309, p = .001
2) People with high climate concern (very or extremely worried) have statistically significantly more meat-free days per week (mean rank = 255.60) than those with lower climate concern (not at all/not very/somewhat worried) (mean rank = 157.33), U = 12053, z = -8.260, p = .001

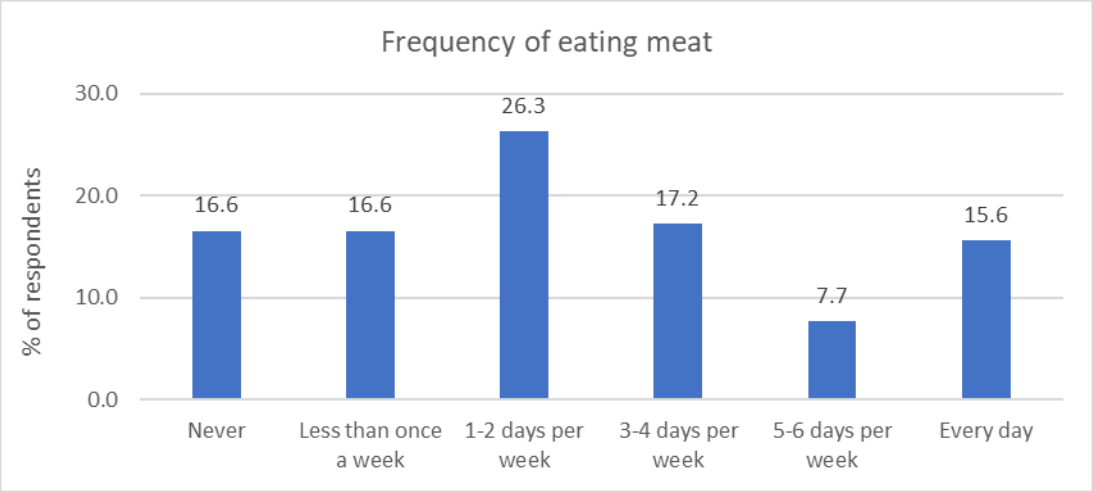

Figure 22, Participants' number of meat free days in a typical week

Change readiness - diet and food waste

In terms of change readiness, three food-related actions were explored (Figure 23). A 'not applicable' option was included to reflect dietary preferences or requirements, such as vegetarian or lactose-free. Most participants actively try to avoid food waste (83.6%) and previous research has found this can be motivated by money-saving or the widely held opinion that wasting food is morally wrong[38]. Over half of the respondents reported reducing their red meat consumption and this aligns with several recent UK studies which find more people are choosing to eat a flexitarian diet[39]. There is notably less willingness to reduce dairy consumption in this sample, with 41.4% stating they 'don't want to/won't do this'. Nevertheless, over a third of participants have cut back on dairy, or are in the process of doing so. Again, this reflects a wider trend of switching to plant-based alternatives[40].

[38] Aschemann-Witzel, J. (2016). Waste not, want not, emit less. *Science*, 352, 408-409.
Also: O'Neill, C. et al. (2021). Thou shalt not waste: Unpacking consumption of local food. *Sustainable Production and Consumption*, 29, 851-861.

[39] For example: YouGov (2019). *Is the Future of Food Flexitarian? Analysis of Brits' Dietary Habits and Attitudes to Meat Consumption*. Is the future of food flexitarian? | YouGov
Also: Food Standards Agency (2017 & 2019). *Food and You: Waves 4, 5*. Cardiff: Food Standards Agency. Food and You | Food Standards Agency

[40] Mintel (2019). A quarter of Brits use plant-based milk (mintel.com)

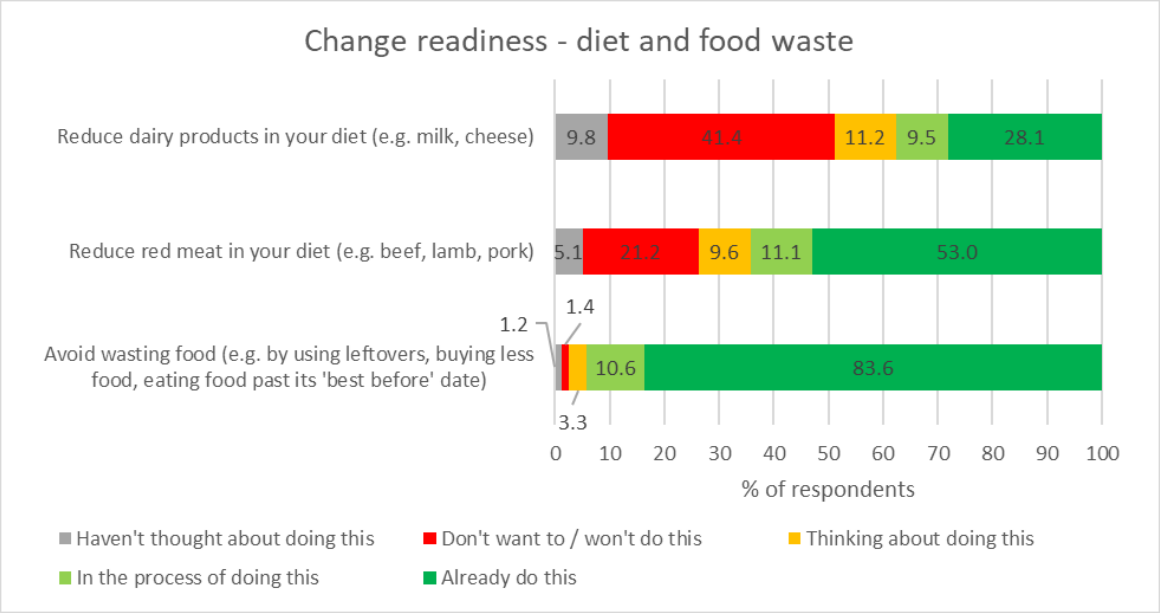

Figure 23, Participants' willingness to change their diet or reduce food waste

3 Responses to the rising cost of living

The recent rise in the cost of essential goods and services is a challenge which affects all households. Increased living costs, together with ongoing uncertainty about further price inflation, can cause anxiety and will likely affect most household economy decisions. Survey participants were therefore asked: *'How worried are you about the current 'cost of living crisis' (rising cost of home energy, petrol/diesel, food, and other goods)?'*. Nearly two-thirds of participants indicated they are either 'very worried' or 'extremely worried' (Figure 24). This high level of concern is comparable with, and perhaps even greater than, reported concern at the national level[41].

Not surprisingly, those on low incomes reported a greater level of concern than those with a higher income. Families with children living at home and younger people (aged 26 or under) also reported greater levels of concern[42].

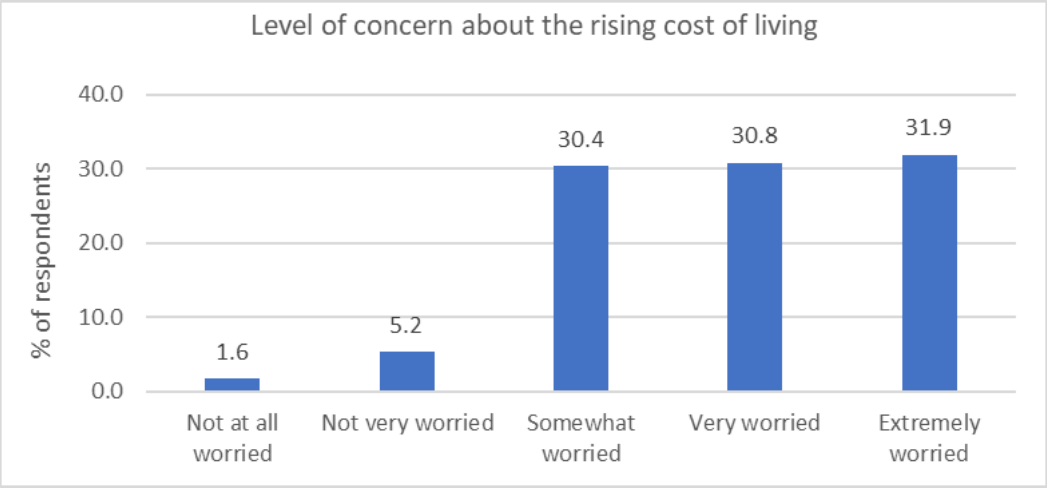

Figure 24, Level of concern about the rising cost of living

The survey then investigated whether the rising cost of living has resulted in tangible changes in consumption behaviour in the last six months (from April to November 2022). Figure 25 shows most participants (93.6%) have adapted their behaviour in some way. The most common actions can be

[41] Office for National Statistics (2022). Worries about the rising costs of living, Great Britain - Office for National Statistics (ons.gov.uk). The timing of the ONS survey (conducted in April-May 2022) and the question scale differ slightly from the one used in this survey of Cornwall residents.

[42] Mann-Whitney U tests revealed:
1) Low income households' (a combined household income of less than £26,000 per year, before tax deductions) level of concern about the cost of living crisis (mean rank = 432.27) was statistically significantly higher than households with a higher income (mean rank = 345.41), U = 53641, z = -5.612, p = .001
2) Families' (with children under 18 living at home) level of concern about the cost of living crisis (mean rank = 471.57) was statistically significantly higher than households without children living at home (mean rank = 389.59), U = 80678, z = 4.622 p = .001
3) Young people's level of concern about the cost of living crisis (mean rank = 497.35) was statistically significantly higher than those in older age groups (mean rank = 416.18), U = 22199, z = -2.811 p = .005

compared with national level data on responses to the rising cost of living[43]. Relative to the national sample, a higher proportion of the Cornwall sample have reduced their household energy use (80.9%, compared to 60% at the national level), reduced spending on non-essential items (73.0%, compared to 69%), and avoided unnecessary car journeys (50.3%, compared to 37%). These comparisons are made with the caveat that differences in sample profiles and question wording can affect responses.

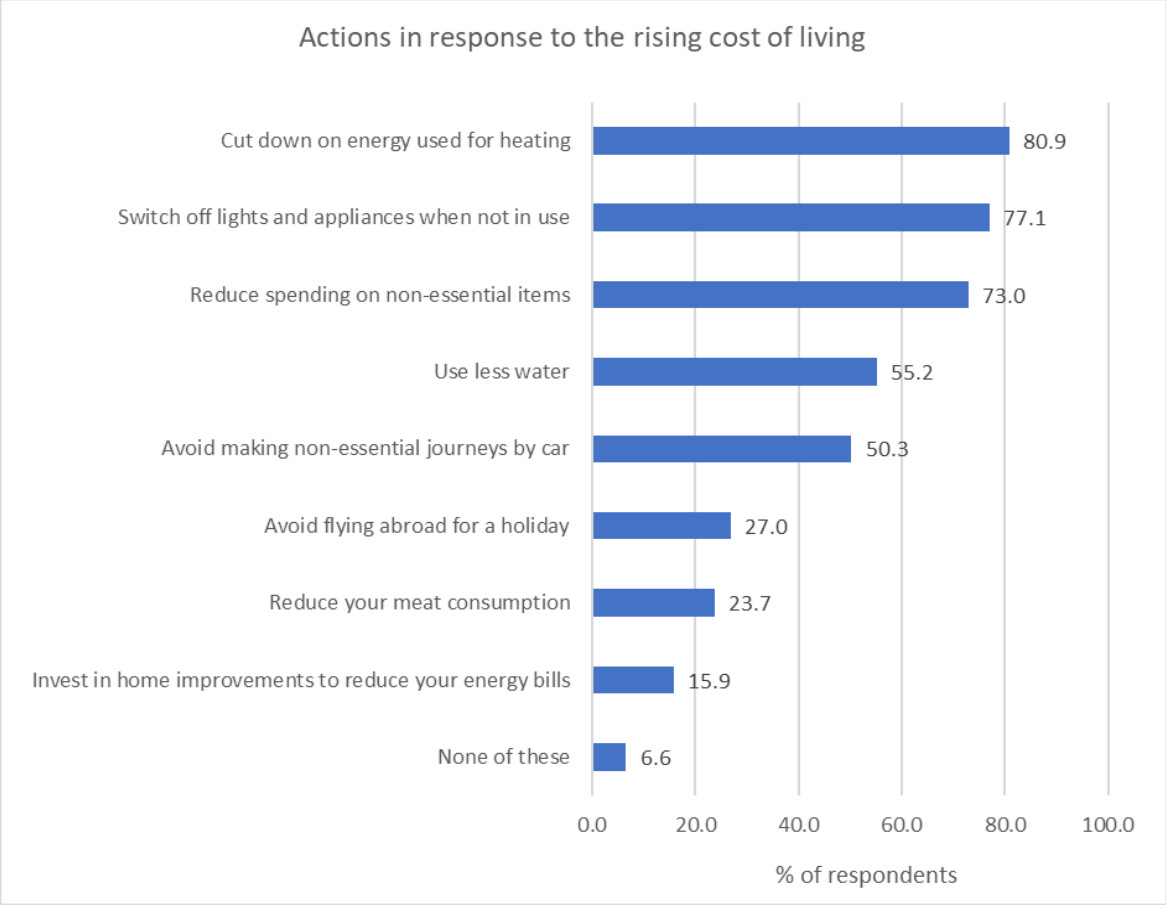

Figure 25, Participants' actions in response to the rising cost of living in 2022

All of the actions presented in Figure 25 have clear implications for emission reduction in the short term. Investing in home improvements to reduce energy bills will also have a longer term impact. The remaining actions require the formation of new habits to reduce emissions in the longer term. Habitual behaviours develop through the repetition of actions in a stable context which produce successful outcomes[44]. In this instance, the primary goal is to save money but many respondents will also consider cutting their carbon footprints to be a successful outcome. Given that we are now in the second year of high inflation[45], some people may now be accustomed to switching off appliances

[43] Office for National Statistics (2023). Cost of living latest insights - Office for National Statistics (ons.gov.uk). These insights are from 25 January to 5 February 2023; ONS carry out public opinion surveys and so their insights are updated regularly

[44] Nash, N. et al. (2020). Rapid Review of 'Moments of Change' and Food-Related Behaviours | Food Standards Agency

[45] Institute for Government (2022). Cost of living crisis | Institute for Government

or making fewer car journeys. If an initially goal-driven behaviour becomes part of everyday routine, it no longer requires a conscious cognitive process to enact it[46]. The opportunity for continued emission reduction depends on whether these cost-cutting/energy-saving measures simply become 'something that you do', rather than a reaction to high inflation.

People in the UK perceive the cost of living and climate change to be among the most important issues facing the UK today (along with the NHS and the economy)[47]. This survey explored perceptions on the priority for policy makers by asking participants to what extent they agree or disagree with three statements which relate to the cost of living and climate change (Figure 26). The first two statements essentially ask the same question (with the emphasis reversed to cross-check responses). The mean scores for both statements are fairly close to 3 ('neither agree nor disagree'), which suggests the participants could not clearly prioritise one issue over the other.

The third statement elicited an interesting finding as the majority of participants agree (41.8%) or strongly agree (30.9%) that measures to tackle the cost of living crisis can also be beneficial in tackling climate change. Accepting that a 'win-win' statement is inherently easier for people to agree with, any potential synergy in policy measures using a co-benefits approach is worth exploring, not only to provide multiple policy outcomes but also to generate greater public support. For example, most people are supportive of policies that reduce carbon emissions *and* heating costs, such as using building regulations to improve energy efficiency, or providing subsidies for home insulation[48].

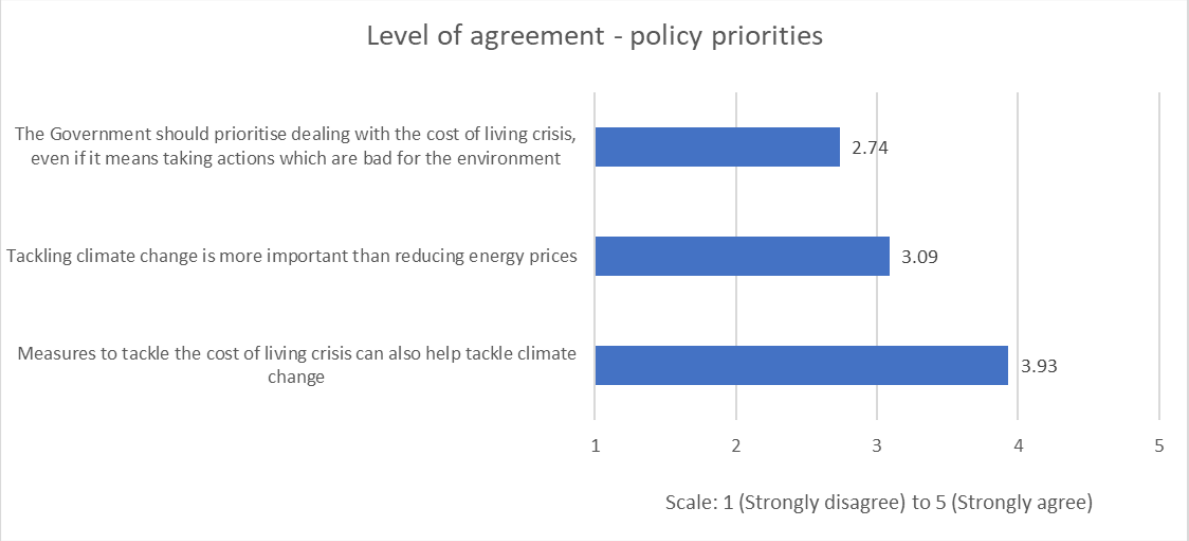

Figure 26, Means scores for participants' level of agreement on policy priorities – cost of living vs climate action

[46] Gardner, N. and Rebar, A. L. (2019). Habit Formation and Behavior Change | Oxford Research Encyclopedia of Psychology

[47] Office for National Statistics (2023). Public opinions and social trends, Great Britain - Office for National Statistics

[48] Demski, C. et al. (2022). Public worry about climate change and energy security in the cost-of-living crisis. CAST Briefing 17. CAST-Briefing-17.pdf

4 Perceptions and experiences of climate change

The survey included a set of questions to explore: 1) the participants' perceptions of climate risk, 2) their personal experience of climate impacts in Cornwall, 3) their understanding of the carbon intensity of different behaviours, and 4) who they believe has the most responsibility for addressing climate change.

Level of climate concern

Over 60% of participants stated they are very or extremely worried about climate change (Figure 27). This level of concern is similar to the findings of the CAST survey of Council staff (Phase 1, 2021), but notably higher than a recent national level study which found 46% of people are very or extremely worried[49]. In the Cornwall sample, women reported higher levels of concern then men[50]. Participants educated to degree level are more concerned than those with other qualifications.

Levels of concern about localised air pollution are much lower, with only 21.5% of respondents stating they are very or extremely worried about this issue. This aligns with previous research that also identified a limited public awareness of air pollution and the health implications[51]. In the Cornwall sample, people with a disability or health condition were not more concerned about air pollution than those without a health condition. People living in urban areas were not more concerned than those living in rural areas. However, families with children living at home did report greater levels of concern[52].

[49] Demski, C. et al. (2022). Public worry about climate change and energy security in the cost-of-living crisis. CAST Briefing 17. CAST-Briefing-17.pdf

[50] Mann-Whitney U tests revealed:
1) Women's level of climate concern (mean rank = 431.84) was statistically significantly higher than men's (mean rank = 390.47), U = 66242, z = -2.354, p = .019
2) People with an undergraduate or postgraduate degree had a statistically significantly higher level of climate concern (mean rank = 470.79) than those with other academic qualifications (mean rank = 364.81), U = 65361, z = -6.591, p = .001

[51] Kelly, F. J. and Fussell, J. C. (2015). Air pollution and public health: emerging hazards and improved understanding of risk. *Environmental Geochemistry and Health*, 37, 631–649. https://doi.org/10.1007/s10653-015-9720-1

[52] A Mann-Whitney U test revealed families' (with children under 18 living at home) level of concern about air pollution (mean rank = 448.86) was statistically significantly higher than households without children living at home (mean rank = 397.51), U = 75344, z = 2.862 p = .004

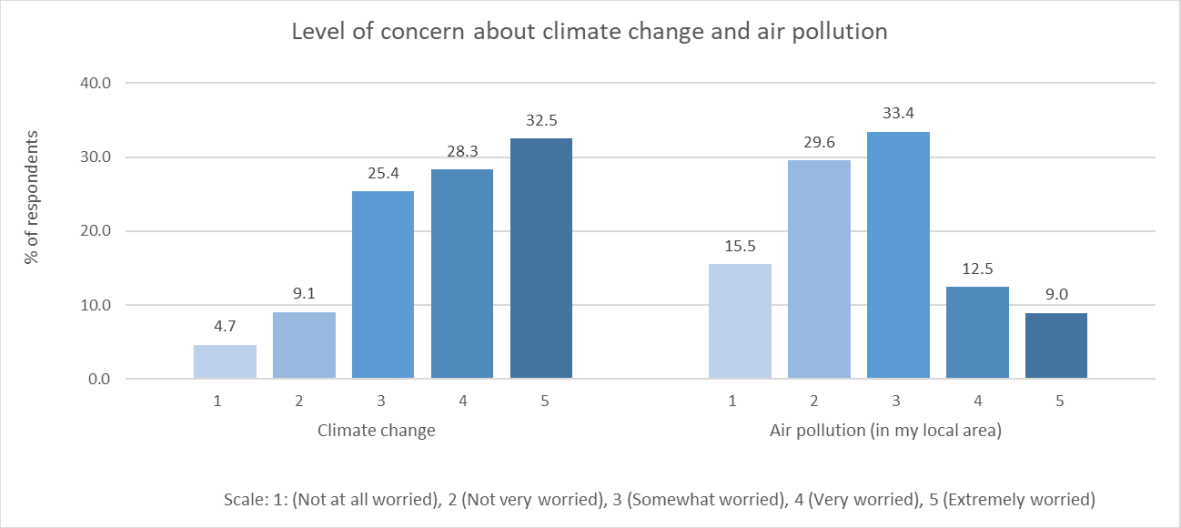

Figure 27, Participants' level of concern about climate change and localised air pollution

The majority of participants (73.3%) believe addressing climate change requires a high or extremely high level of urgency (Figure 28). This is markedly higher than the level of urgency observed at the national level (55%)[53].

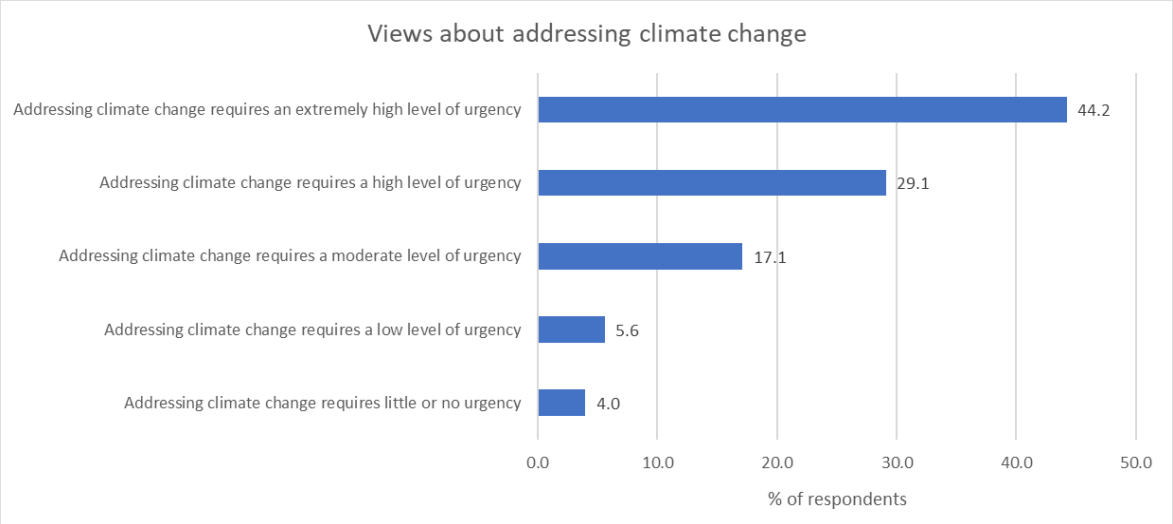

Figure 28, Participants' perceived level of urgency to address climate change

Climate impacts in Cornwall

To investigate perceptions of urgency in more detail, participants were asked when, if at all, they think people in Cornwall will start feeling the effects of climate change (Figure 29). The majority believe Cornwall is already experiencing a wide range of climate impacts, or will experience them within the next 10 years. However, between 2.7% - 5.4% of respondents believe Cornwall will never experience these impacts.

[53] Steenjes, K. et al. (2021). Public perceptions of climate change and policy action in the UK, China, Sweden and Brazil. CAST Briefing 10. 01112021-Briefing-10-final.pdf (cast.ac.uk)

2022 was the warmest year on record for the UK; this country, along with much of Europe, experienced drought and prolonged heat waves during the summer. It is quite possible this recent experience of extreme temperatures has convinced some participants that climate change is a current event, rather than a future one. The perceived temporal distances in Figure 29 are certainly less than those observed in previous studies[54].

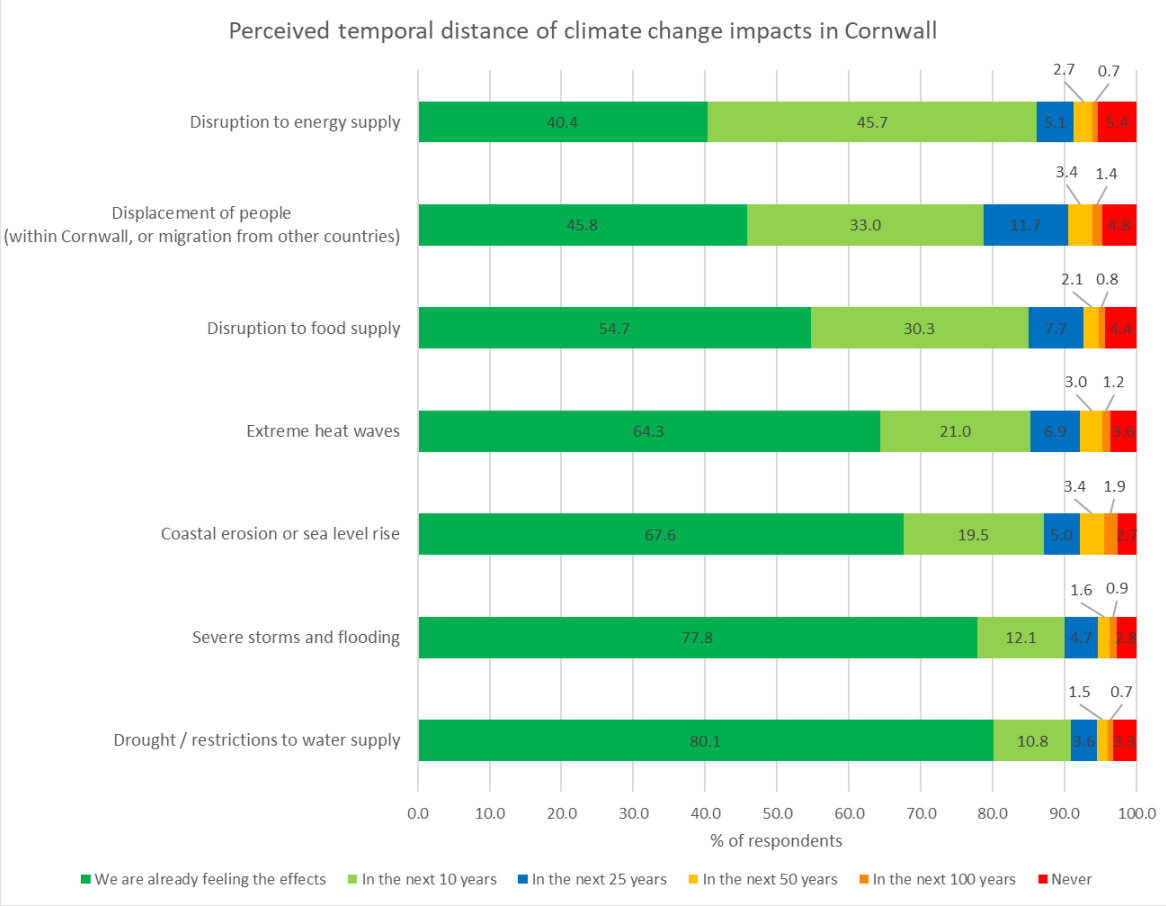

Figure 29, Participants' perceptions of when Cornwall will experience the impacts of climate change

Given that many participants believe Cornwall is already feeling the effects of climate change, we would expect some respondents to have personal experience of climate impacts and this is in fact the case. Table 9 shows one in four has experienced storm damage to their home and one in twenty has experienced flooding or wildfires. Such events invariably pose a safety risk to those affected individuals.

What is particularly concerning is the high proportion who have suffered with their health, either due to extreme heat (12.1%) or air pollution (7.8%). There has been increasing focus on the implications of climate change for public health, including in the UK context[55]. Some people are

[54] For example: Spence, A. et al. (2012). The Psychological Distance of Climate Change. *Risk Analysis*, 32(6), 957-972. https://doi.org/10.1111/j.1539-6924.2011.01695.x. This study is 10 years old, and 54% participants believed Britain is already experiencing the effects of climate change, or will experience them within the next 10 years. In Figure 29, a much higher proportion, 78.8 - 90.9%, believe climate change is a current event.

[55] UK Government (2022). Climate and health: applying All Our Health - GOV.UK (www.gov.uk)

more vulnerable to adverse health impacts related to climate change, such as older people, those with pre-existing medical conditions, or people with limited mobility[56]. There are also strong associations between social deprivation, the area where people live and exposure to air pollution[57]. In short, the health impacts of climate change and the associated drivers such as high traffic congestion are unevenly distributed among the population and can be exacerbated by existing social inequalities.

Table 9, Participants' personal experience of climate impacts in Cornwall

Climate impact	Frequency	% of respondents
Flooding of my home (river or coastal)	39	4.5
Health suffering due to extreme heat	104	12.1
Wildfires threatening the area where I live	47	5.5
Storms damaging my home	216	25.1
Health suffering due to air pollution	67	7.8
Coastal erosion near my home	133	15.5
None of these	483	56.2

Participants who have experienced at least one of the above climate impacts (n=375) were then asked about their response to this experience. They were presented with three actions and asked to what extent this experience caused them to alter their behaviour. Figure 30 shows an increased level of concern about climate change was the most common response. Some have also changed their behaviour to cut their carbon footprint. Adaptation measures to specific climate impacts are the least common response.

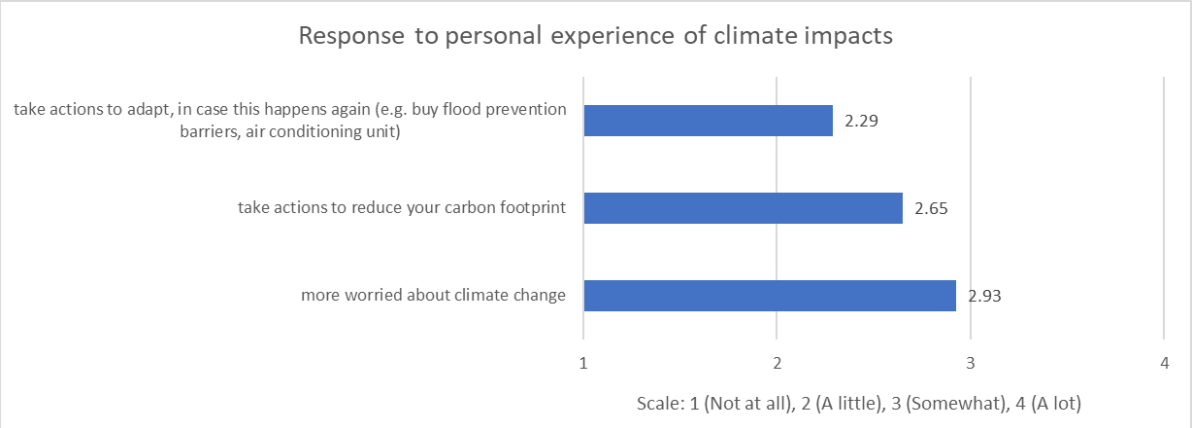

Figure 30, Mean scores of the extent of participants' responses to their experience of climate impacts

[56] Paavola, J. (2017). Health impacts of climate change and health and social inequalities in the UK. *Environmental Health,* 16 (Suppl. 1), 113. https://doi.org/10.1186/s12940-017-0328-z

[57] Fecht, D. et al. (2015). Associations between air pollution and socioeconomic characteristics, ethnicity and age profile of neighbourhoods in England and the Netherlands. *Environmental Pollution*, 198, 201-221. https://doi.org/10.1016/j.envpol.2014.12.014

Participants' understanding of low-carbon behaviours

Participants were asked to evaluate how much several low-carbon behaviours would contribute to cutting the carbon footprint of the average person living in the UK (Figure 31). Participants correctly identified avoiding flying as one of the most effective actions to cut carbon footprints, but they significantly overestimated the per capita emission reduction of recycling and avoiding buying plastic[58]. The behaviours which participants thought contributed the least to cutting emissions were avoiding red meat and avoiding dairy. This underestimation of the high carbon intensity of meat production and overestimation of waste behaviours were also observed in the CAST survey of Council staff and in previous studies of the UK public[59]. In the Cornwall sample, participants educated to degree level and those with a high level of climate concern tended to estimate higher carbon footprints for each action.

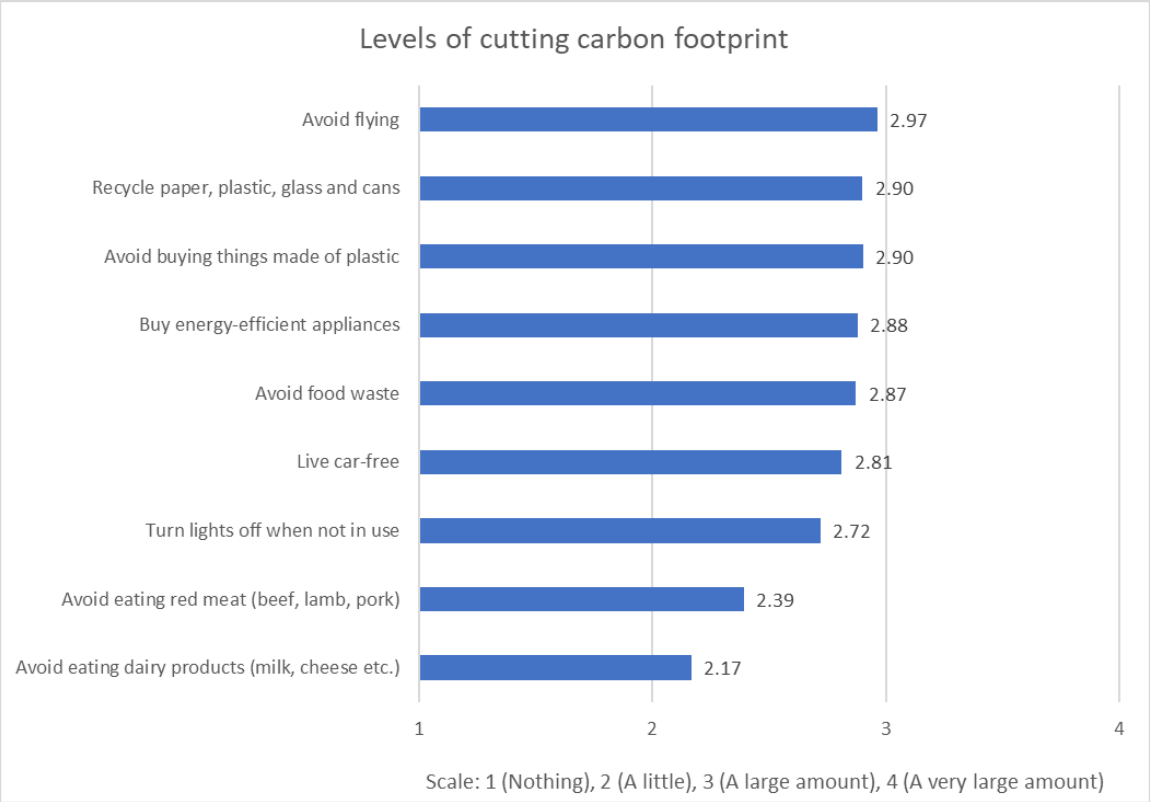

Figure 31, Mean scores of participants' evaluation of the emission reduction of nine low-carbon behaviours

[58] Ivanova, D. et al. (2020). Quantifying the potential for climate change mitigation of consumption options. *Environmental Research Letters*, 15(9),093001.

[59] Steenjes, K. et al. (2021). Public perceptions of climate change and policy action in the UK, China, Sweden and Brazil. CAST Briefing 10. 01112021-Briefing-10-final.pdf (cast.ac.uk)

Responsibility to address climate change

Participants were asked to rank four groups or authorities in terms of their relative responsibility for reducing the risk of climate change. Figure 32 shows the ranked order; the national Government is perceived to have the most responsibility, with 61.7% of respondents placing the Government in 1st position. Businesses and industries are ranked second, the Council third, and individuals and households are considered to have the least responsibility, with 55.7% of participants placing them in last position. However, it is notable that one in seven respondents (14.4%) believe individuals and households actually have the most responsibility[60]. This participant group would likely be particularly receptive to behavioural interventions aimed at reducing carbon footprints and so could form an 'early adopter' segment for such interventions.

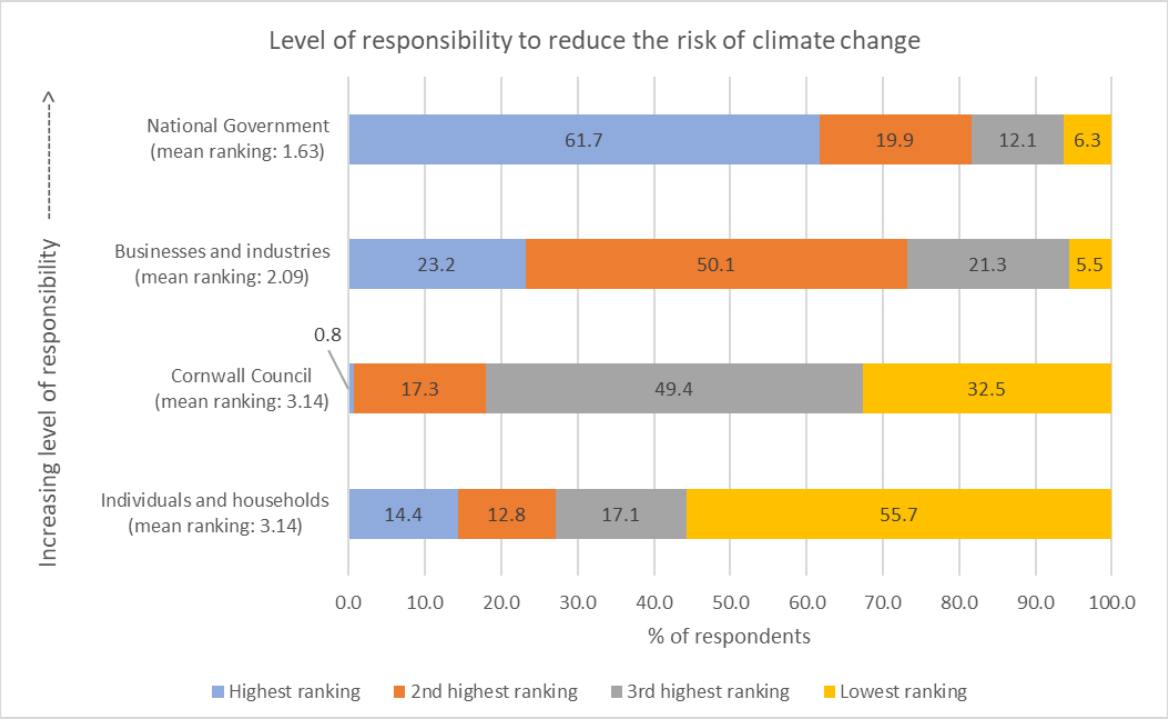

Figure 32, Participants' views on the level of responsibility that the Government, businesses, Cornwall Council and individuals have to reduce the risk of climate change

[60] 'Cornwall Council' and 'Individuals and households' have an identical mean ranking of 3.14. This is due to the high proportion of participants who rank individuals and households in 1st position, thus markedly reducing the mean for individuals and households.

5 Public opinion on the Council's climate action

This section explores the participants' views on the Council's role in tackling climate change. Quantitative findings on the level of support for several policy measures are presented, along with qualitative data on recommendations for the Council and specific areas of concern.

5.1 Level of support for the Council's climate policies

Participants were asked to indicate their level of agreement regarding whether the Council is taking enough action on climate change. The question was framed in the context of limited Council resources, by emphasising that more action on climate change would mean less action or resources for other priorities such as education or adult social care. Figure 33 shows a fairly equal distribution of responses, which would suggest opinion is evenly divided. A sizeable proportion do not have a particular view, choosing 'neither agree nor disagree' (45.9%).

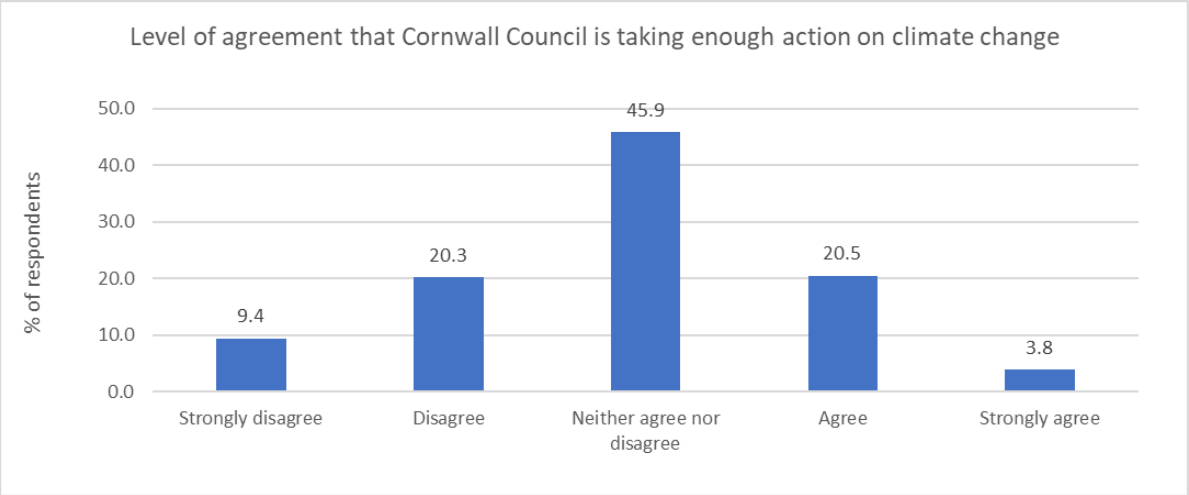

Figure 33, Perceptions of Cornwall Council's current level of action on climate change

Participants were then asked to indicate their level of support for 11 policy measures to help tackle climate change. Six of these policies relate to travel, two of them concern planning regulations, two focus on renewable energy and one pertains to public food catering. Some of the policies fall directly within the Council's remit, whereas others are administered at the national Government level.

Participants' views on the travel policies are presented in Figure 34. Subsidised public transport is the most popular policy, with over 80% support. There is also a high level of support (55.7% - 62.2%) for low speed zones, low traffic neighbourhoods and low emissions zones, although one in four participants oppose low emissions zones. From these findings we can infer that the majority of respondents would like to see a reprioritisation away from cars in favour of pedestrians by increasing road safety, improving air quality, and creating more traffic-free space. This aligns with the key findings of a recent Department for Transport study[61]. The least favoured policy in Figure 34, by some margin, is car parking restrictions in town centres and workplaces.

[61] Logan, T. et al. (2021). Public attitudes towards traffic, road use and low-traffic neighbourhoods - GOV.UK (www.gov.uk)

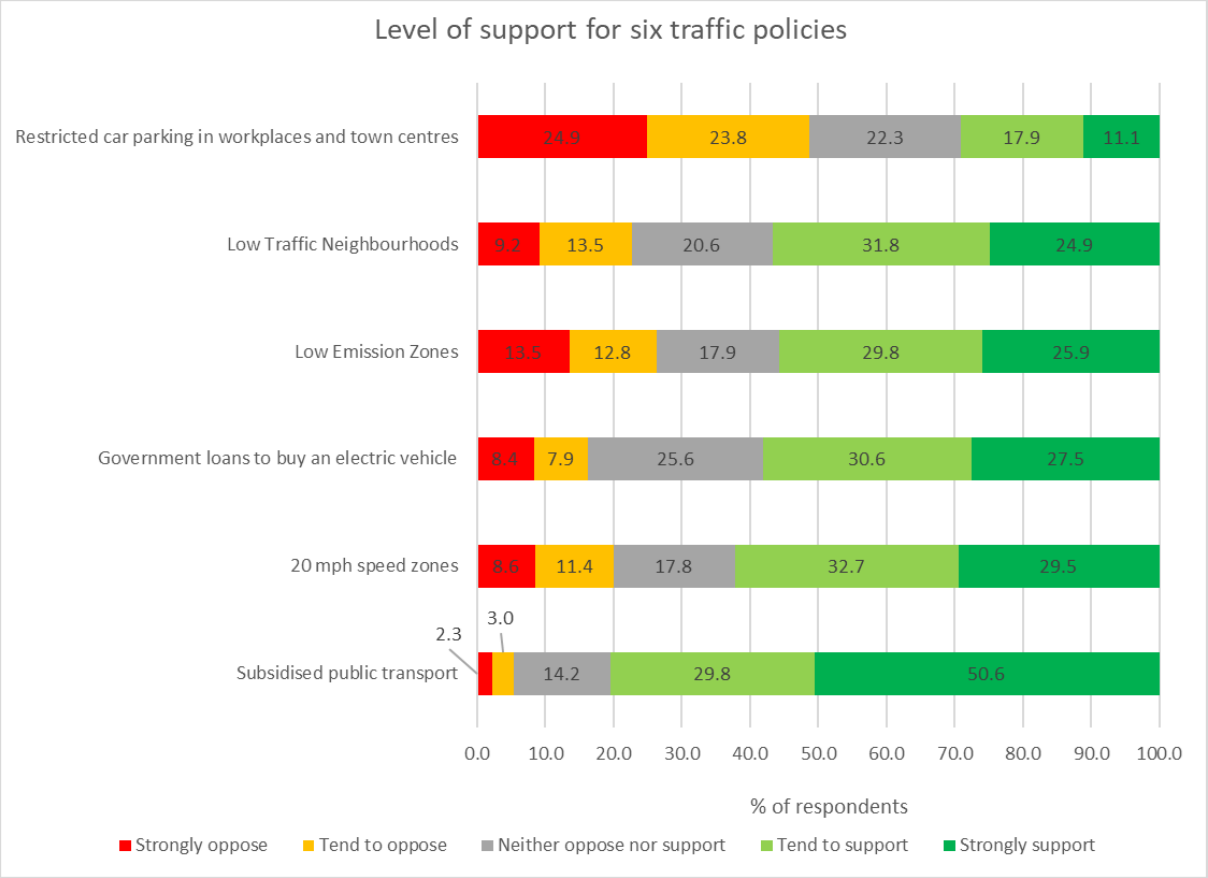

Figure 34, Participants' level of support for, or opposition to, six traffic policies

Participants' views on the remaining five policies are shown in Figure 35. Raising the environmental standards of building regulations is the most popular policy, with 87.8% support, and this was also a prominent theme identified in the qualitative feedback (see section 5.2). Around three-quarters of respondents support increasing renewable energy infrastructure in Cornwall, with only one in ten participants opposing new solar and onshore wind developments. Finally, the majority approve of more vegetarian options in public catering and requiring housing developers to provide better access to active travel and public transport.

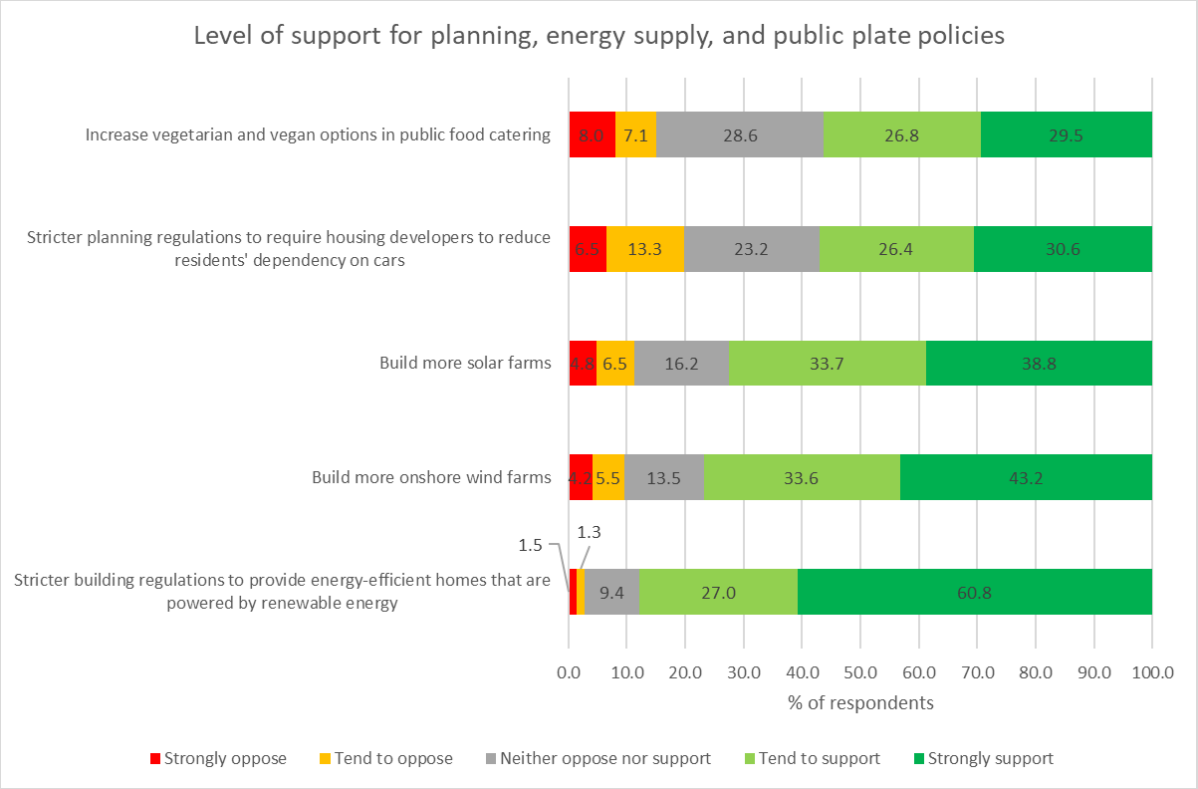

Figure 35, Participants' level of support for, or opposition to, five policies relating to planning, energy, and public food catering

5.2 Qualitative findings – residents' suggestions for Council climate action

The survey included one open-ended question - participants were invited to give their views on the most important actions Cornwall Council should take to help tackle climate change. Of the 859 completed survey responses, 678 participants provided qualitative feedback. The qualitative findings are grouped into ten overarching topics[62]. Some participants' responses refer to a broad theme or action but do not provide any explanatory detail and these are indicated by: (not specific).

This qualitative data is insightful for two reasons. First, this is the participants' opportunity to articulate their opinions to the Council in their own words. Their suggestions were varied and encompass multiple policy areas, particularly around the Council's role in travel, energy supply, planning regulations and recycling. Second, this data provides a greater level of detail on some key themes explored in previous survey questions. For example, there are nine distinct sub-themes under the general topic of public transport provision (see Table 10). Consistent with the previous survey responses, and with the wider evidence base[63], there is strong support for 'pull' measures (i.e., actions that improve and incentivise low-carbon alternatives) and few examples of 'push' measures (i.e., actions that restrict or penalise high-carbon options).

[62] Any themes discussed by less than five participants are not presented here, in the interests of brevity

[63] See: The Climate Assembly UK - The Path to Net Zero (2020) https://www.climateassembly.uk/report. Also see, recent polling: Ipsos and CAST - Net Zero Living (2022) https://www.ipsos.com/sites/default/files/ct/publication/documents/2022-06/net-zero-living-ipsos-cast-2022.pdf

Table 10, Public transport provision

Theme	Example quote	Prevalence
Improve public transport (not specific)	"Better public transport"	112
Cheaper public transport	"Good cheaper, subsidised bus service"	52
More reliable public transport	"More reliable public transport to make it a more viable option for people when travelling"	27
More frequent public transport	"To be able to use public transport for work there would need to be more buses, more often"	25
Increase connectivity and services to remote areas	"Increasing number of places served by public transport, as my main reason for using car is because destination not served by public transport"	25
Convert bus fleet to electric vehicles	"All buses should be electric"	12
Expand public transport schedule (early mornings, evenings and weekends)	"I cannot get to it from my work at all by bus because the first bus is too late and the last bus too early. I would use buses if they could get me places"	9
Provide shared mobility options and encourage car sharing	"Subsidised bike share scheme. Beryl bikes are far too expensive"	6
Reduce public transport journey duration	"Improve public transport so that commuting is an option between main towns on direct fast services"	5

Table 11, Traffic and travel policies

Theme	Example quote	Prevalence
Improve active travel infrastructure	"Create actual cycle paths off the road network. Create footpaths where there are none to link up villages"	40
Improve electric vehicle charging infrastructure	"Invest in many more car charging points (e.g. Ubricity streetlight chargers for those without driveways)"	29
Discourage or disincentivise car use	"Discourage use of cars as primary mode of transport"	24
Incentivise purchase of electric vehicles	"More financial incentives to run electric vehicles"	16
Create Low Traffic Neighbourhoods	"More pedestrian only areas in town centres"	9
Opposition to constructing new roads	"Stop building any more roads in the county"	8
Create Low Speed Zones	"Increase traffic-free/reduced speed zones"	8
Tackle poor air quality	"Introduce a ban on drivers running engines while stationary (especially outside schools and hospitals)"	7
Impose more parking restrictions	"Impose parking tariffs for on-street parking which actually reflect the hidden costs that ICE vehicles cause"	5

Table 12, Renewable energy infrastructure

Theme	Example quote	Prevalence
Increase renewable energy (not specific)	"Increase renewable energy production"	40
Increase wind energy generation	"Allow onshore wind in suitable places"	33
Incentivise purchase of solar panels and/or heat pumps for homes	"Provide financial help for people to install solar panels and remove any blocks to this"	29
Increase wave or tidal energy generation	"Look at wave power, we are surrounded by water, it should be used!"	15
Install solar panels on Council and/or commercial buildings	"Ensure that all public buildings are fitted with solar panels, ensure all large commercial buildings are fitted with solar panels, e.g. supermarkets"	13
Increase or invest in solar energy (without reference to domestic or commercial properties)	"Encourage building of solar and wind farms on poor land"	13
Facilitate community energy projects	"Remove regulatory barriers to enable creation of low-carbon community energy hubs"	7
Opposition to solar farms on agricultural land	"Solar farms out of fields and on to rooftops"	5

Table 13, Reduce energy demand

Theme	Example quote	Prevalence
Support or incentivise insulation and retrofit of homes	"Subsidising households to improve energy efficiency through appropriate insulation, double glazing on doors and windows"	75
Increase energy efficiency (not specific)	"Be more energy efficient"	8
Increase energy efficiency of public buildings or Council housing	"Provide council rental properties with efficient heating appliances"	8
Reduce street lighting during off-peak hours	"Turn street lighting off in the middle of the night"	7

Table 14, Planning regulations (town planning and building regulations)

Theme	Example quote	Prevalence
Require high energy efficiency standards for new builds	"100% refusal of all planning permissions unless buildings are fully insulated and have solar panels on roof tops and are maximum energy efficiency ratings in the building materials"	32
Require solar panels and heat pumps for new builds	"Planning permission dependent on solar panels and heat pumps on ALL new builds"	29
Reduce car dependency through planning regulations	"Radically changing the planning system to ensure that new developments are active travel friendly"	16
Avoid green belt development	"Stop allowing new builds that destroy woodland and reduce availability of agricultural land"	15
Improve planning regulations (not specific)	"Better planning of new housing"	10
Avoid or limit new housing development	"Stop building houses, make the ones we have available for local people"	7
Build affordable or social housing	"You can't even find private rented in the county at an affordable rent"	7

Table 15, Council in-house actions

Theme	Example quote	Prevalence
Council should lead by example	"Lead by example by reducing car journeys to offices by their staff where possible"	51
Implement climate change adaptation measures	"Work with the environment agency to implement flood protection and costal erosion protection"	16
Increase tree planting	"Plant trees, manage verges and other land to capture carbon and promote biodiversity"	13
Convert Council vehicle fleet to electric vehicles	"Start switching council fleet to electric vehicles, include all contractors"	10
Embed climate action in all policy decision-making	"Includes net zero protocols within every decision made by Cornwall Council"	6
Ensure inclusivity in all climate decisions	"Encourage renewable energy and efficient housing whilst protecting disabled car reliant persons"	6
Provide low-carbon food options in public catering facilities	"Promote more vegetarian options in schools, public events and public places"	5
Reduce the number of Council staff	"Slim down the council and reduce staff and buildings"	5

Table 16, Recycling

Theme	Example quote	Prevalence
Council should improve recycling facilities and collection	"Better refuse and recycling bin set-ups to encourage more people to recycle more"	57
Encourage or enforce residents to recycle responsibly	"Make it a mandatory requirement for all households to recycle"	20
Implement collection of food waste	"Roll out food waste collections (but encourage composting)"	19
More frequent recycling collections	"Cornwall Council should really collect people's home recycling every week instead of once every two weeks"	14
Provide recycling facilities in public areas	"Put recycle bins in car parks and by beaches"	6
Less frequent rubbish collection (non-recyclable waste)	"Weekly recycling, fortnightly general waste"	5

Table 17, Engagement with residents

Theme	Example quote	Prevalence
Promote education and awareness of climate challenges and recommended actions	"Instigate a public education campaign on how serious the climate emergency is, yet giving hope that there is still time to address it"	42
Encourage dietary shift	"Reduce dependency on animal agriculture, promoting a plant-based planet supporting diet"	11
Encourage buying local and supporting small businesses	"Supporting local businesses so we don't have to travel long distances to shop"	10
Encourage home working	"Reduce travel to London and other cities, meetings can be carried out online. Staff to continue to work from home"	5
Facilitate re-use, repair, share initiatives	"Repair cafés, tool hire, selling of items from the dump/recycling depot"	5

Table 18, Engagement with businesses, community groups, national Government

Theme	Example quote	Prevalence
Engage with/enforce businesses to reduce their emissions	"Get much tougher on industry, businesses and individuals who do not comply with standards as regards reducing their environmental impact"	31
Lobby central Government for policy change or funding	"Do more to put pressure on national govt to change things like planning laws so that they don't have to water down their own regulations"	17
Prevent water pollution	"SW water needs monitoring and fining for pumping sewage into rivers and the sea"	10
Support community decision making	"Consider citizens assembly to decide how the council should escalate its actions on the climate emergency"	9
Encourage sustainable farming practices	"Encourage regenerative farming/growing practices"	9
Facilitate community food-growing	"Make land available for growers working to organic principles, e.g. CSAs - which could do so much to support local food security"	8

Table 19, Tourism

Theme	Example quote	Prevalence
Limit second homes	"Limit airbnbs / 2nd homes - which encourage more house building which has a big carbon footprint"	28
Reduce emissions from tourist travel and activities	"Ensure that all visitor attractions in Cornwall are accessible by public transport (currently not the case for Eden Project…)"	10
Limit overall numbers of tourists	"Limit tourism, limit car use by tourists"	8
Tax tourists for use of local services	"Introduce a levy against all visitors and holiday makers collectable through the hotel, holiday let, and campsite operators. Money to be used for climate change projects to protect the environment"	7

Table 20, Opposition to Council climate action

Theme	Example quote	Prevalence
Climate change scepticism	“Anthropogenic climate change is a scam perpetuated by those with vested interests”	16
Council has no remit to act on climate change	“The council has no remit to do anything to tackle climate change. It should just provide services and not take any ethical stance”	15
Council should focus on other priorities	“Not sure, in the current situation, that climate change is, or should be, a priority, since its effects are likely to be some, even several, years away, while more pressing & urgent problems - NHS, homelessness, food & fuel poverty - need immediate attention”	5

Table 21, Other themes

Theme	Example quote	Prevalence
Opposition to Council support of Newquay airport	“Stop funding Newquay airport”	25
Opposition to Council support of Newquay spaceport	“Stop investing in Spaceport immediately”	23
Enhance biodiversity	“Increase biodiversity and prevent habit loss/ destruction. These are more important and urgent than simply 'climate change', and will in time feed into this”	15
Discourage or ban plastics	“Ban single use plastic”	11

6 Key findings and recommendations

The final section summarises key findings from the survey and presents some recommendations for encouraging behaviour change among residents.

6.1 Key findings

Current consumption behaviours:

- Car is the dominant mode of travel, particularly for commuting. However, active travel is also prevalent, particularly for non-commute journeys.
- Most participants already engage in energy saving behaviours at home.
- The majority of respondents eat meat frequently.

Change readiness:

- There is strong interest in active travel and moderate interest in using public transport. However, a large proportion of participants emphasise practical and personal constraints to modal shift.
- Many home-owners have made energy efficiency improvements. Relatively few have invested in domestic renewable energy, although around one-third are considering doing so.
- People reported high levels of repair, re-use, re-purpose, and recycle.

Cost of living crisis:

- Participants are very concerned about the rising cost of living, particularly families with dependent children, younger people, and those on low incomes.
- Most have adapted their consumption behaviour to save money and these actions also cut carbon footprints. However, long-term emission reduction is contingent on habit formation.
- Tackling the cost of living crisis is not seen as a priority over taking action on climate change.

Climate perceptions:

- Most participants expressed a high level of climate concern and they believe Cornwall is already experiencing multiple impacts related to climate change.
- They attribute greater responsibility for addressing climate change to the Government and to businesses, than to the Council or to individuals.
- Participants' understanding of the carbon intensity of different behaviours is mixed; they overestimate the emission reduction associated with recycling and underestimate the impact of dietary choice.

Council climate policies:

- People are ambivalent about whether the Council is taking enough action on climate change.
- However, they identify a clear role for the Council in terms of enabling low-carbon travel, developing renewable energy infrastructure, and using planning regulations as a tool to raise environmental standards for new housing.

- People are supportive of policies that cut carbon emissions and reduce costs, such as incentivising home insulation or solar panel installation.
- There is broad public support for travel policies which reduce emissions but also improve the health and wellbeing of people in Cornwall, such as increasing road safety and creating more traffic-free neighbourhoods.

Comparing change readiness across consumption domains

Figure 36 collates the findings for residents' willingness to engage in low-carbon behaviours from all four consumption domains. The red text indicates travel behaviours, the blue text refers to household energy use, the brown text relates to material consumption and the green text denotes food choices. Travel behaviours are positioned closer to the top of Figure 36 and this reveals a lower level of change readiness, relative to behaviours in other consumption domains. However, the position of the two shared mobility options (e-bikes, car clubs) is likely determined by a lack of availability in many locations, rather than a reluctance to use them. A further observation is the low willingness to invest in domestic renewable energy (e.g., install a heat pump), compared to energy efficiency measures which are more widely adopted (e.g., install loft insulation).

As discussed in previous sections, people's willingness to engage in low-carbon behaviours can be affected by various factors including cost, awareness, or personal constraints. Interventions to encourage behaviour change should therefore acknowledge the context and the limitations faced by some individuals. Nevertheless, Figure 36 highlights some key areas where residents may benefit from Council support in order to reduce their carbon footprints.

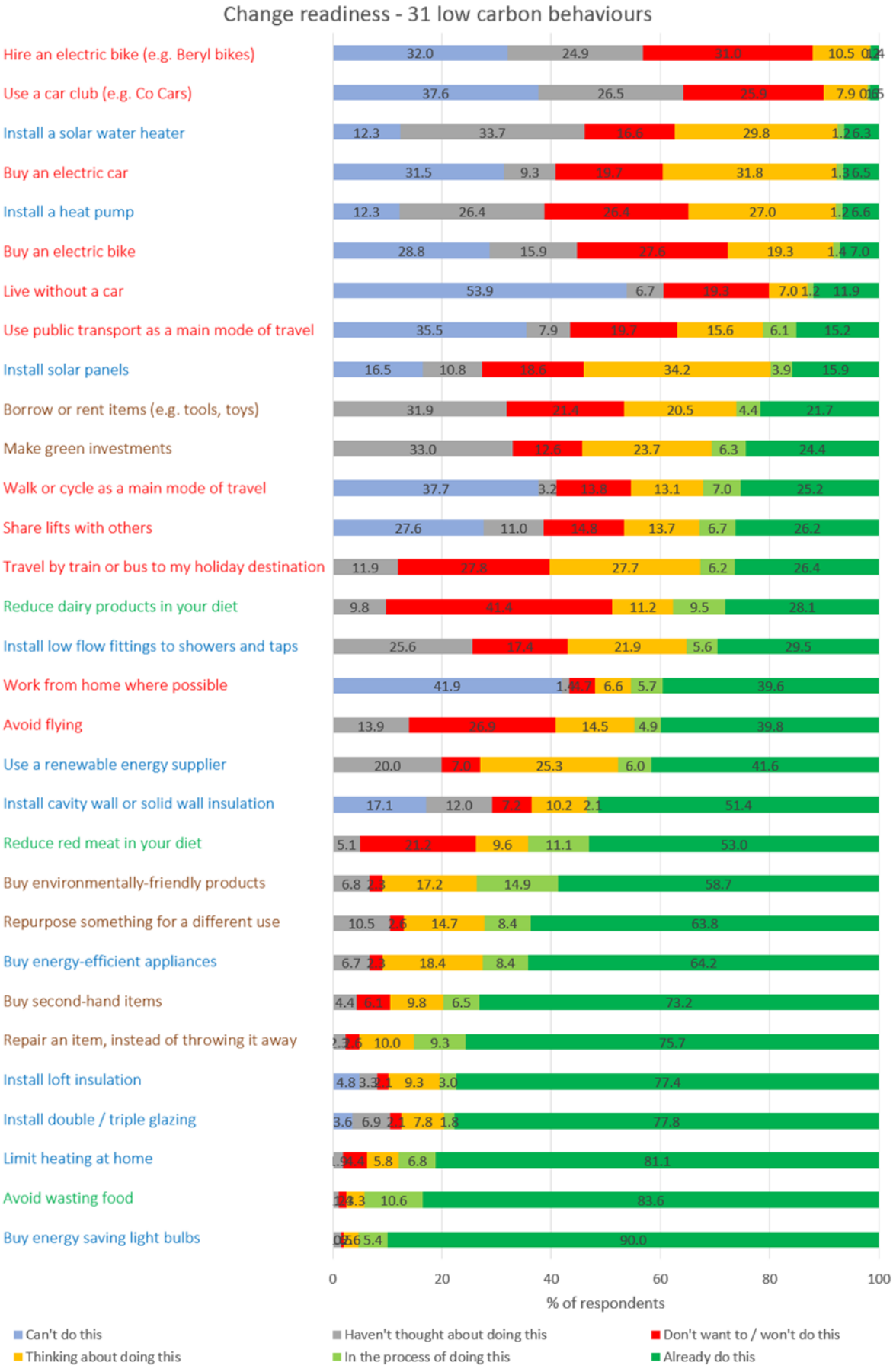

Figure 36, Participants' willingness to engage in 31 low-carbon behaviours, across four consumption domains

6.2 Recommendations

Awareness raising:

- Build on strong climate concern amongst residents to raise awareness of the range of measures that can be taken (including renewable energy and water efficiency measures, rental and sharing economy services, green investments), and what support is available to adopt/implement these measures. This can be done in collaboration with local journalists who spotlight residents taking climate action, thereby creating relevant, inspiring, solution-focused climate narratives[64].
- Highlight 'win-wins', particularly the economic benefits of action. Most people are already saving energy and cutting consumption due to the rising cost of living, and agree that tackling climate change and the cost of living are compatible. People are therefore likely to be receptive to advice framed around the financial benefits of climate action. Critically, this should highlight efficiency measures (e.g., retrofit, domestic renewables) that would lock in energy savings in the long-term, whereas curtailment measures (e.g., turning down thermostats) are likely to diminish when economic conditions are more favourable.
- Address misperceptions about the efficacy of different low-carbon behaviours. Specifically, highlight the impact of dietary choices to reduce carbon footprints, combined with an emphasis on the associated health benefits. Health is considered a stronger motivation for shifting towards more sustainable diets than environmental concern[65] and a 'healthy lifestyle' framing may also encounter less resistance among high meat consumers.
- Promoting the Council's existing work on climate may help address ambivalence about whether the Council is doing enough in this area. Highly visible activities such as the Council's tree planting programme provide clear reference points. Some respondents did acknowledge the Council's climate action in their qualitative feedback and encouraged further engagement with the public and with businesses to foster low-carbon practices.

Focus on transport:

- This accounts for the largest proportion of people's carbon footprint and is the area where most support is needed to change behaviour (see Figure 36).
- Encouragingly, there is already greater adoption of e-mobility than elsewhere in the UK, and wide support for expanding EV and e-bike provision. Although not all barriers to EV/e-bike adoption can be addressed by the Council, the 32% of residents thinking of buying an EV and the 20% thinking about buying an e-bike could be supported through local initiatives. For example, positive stories of change following new e-bike users' adoption of the Beryl Bike scheme could help sway those who are undecided.

[64] See, for example: https://adamcorner.uk/2022/11/23/the-local-storytelling-exchange/
Also: De Meyer, K. et al. (2021). Transforming the stories we tell about climate change: from 'issue' to 'action'. *Environ. Res. Lett.,* 16, 015002. https://iopscience.iop.org/article/10.1088/1748-9326/abcd5a/pdf

[65] EAT Forum (2020). Diets for a Better Future - Scientific Report - EAT Knowledge (eatforum.org); Also see: Agnew, M. et al. (2021). Lifestyles in public health, marketing and pro-environmental research NAVIGATE-Deliverable-3.4_incl-appendices.pdf (navigate-h2020.eu)

- For shorter trips, our findings indicate there is strong potential to shift from cars to active modes, although there is a need to address safety concerns and lack of confidence (particularly amongst women).
- Since car use is more entrenched for commuting trips, this suggests a need to work with employers to facilitate employee modal shift through both push and pull measures (e.g., car-share schemes, reducing workplace car parking, workplace parking levies).
- A minority travel overseas on holiday, and most avoid or are considering avoiding flying, so promoting local and UK tourism may be effective, particularly during the current economic crisis.

Enable wider lifestyle change:

- Consistent with behaviour change theory (e.g., the COM-B model), low-carbon behaviour change requires removing barriers to change and making alternatives easy, attractive and normal.
- As well as facilitating low-carbon travel, other areas of lifestyle change that residents need support for include food waste separation and collection, community repair cafés, and wider availability of plant-based food options (e.g., in Council-funded catering).
- Behaviour change requires both 'sticks' and 'carrots'. While residents naturally prefer 'pull' policies, they also recognise the need for some restrictions and support measures such as stricter planning regulations to reduce car dependency, or increasing energy efficiency standards of new homes. The Council should work with developers to lock in low-carbon travel and energy habits from the outset of new home ownership.

Target groups most at risk and 'moments of change'

- There is low adoption of adaptation measures. However, certain groups are more at risk of climate impacts, such as heat stress or flooding. Adaptation support and education should be directed to these groups through trusted messengers (e.g., health professionals, community groups).
- Adaptation messaging should be targeted to times when there is particularly high public awareness of and concern about climate impacts. This might include working with water companies to promote adoption of water efficiency measures during periods of drought or heatwaves.
- Other 'moments of change' in which to foster low-carbon choices include moving house, retiring, or starting a new job, when travel and consumption habits are disrupted. Providing information and incentives to change behaviour during these times is likely to be more effective than when habits are strong and resistant to change.

Appendix – survey questions

Block 1: Intro and consent

Q100

Information about this study

What is this study about?

We are researchers at the University of Bath working with Cornwall Council to understand what is important to people living in Cornwall and what influences their lifestyles and habits.

What does it involve?

The study involves completing **an online survey that will take about 15 minutes**. You will be asked questions about your current everyday behaviours around travel / diet / products you buy / household energy use, and your attitudes towards climate change.

At the end of the survey, we will ask whether you would be interested in participating in a paid group discussion at a later date.

Who can take part?

Anyone (aged 16+) who currently lives in Cornwall.

What are the benefits and risks of taking part?

The information you provide will be very useful for the research team and Cornwall Council to understand the views of people living in Cornwall. You have the option of being entered into a **prize draw to win one of ten £50 gift vouchers**. There are no risks associated with participating.

This research has been reviewed and approved by the University's Department of Psychology Research Ethics Committee (reference: 22 - 127).

Do I have to take part?

Taking part in this study is entirely voluntary. You are free to withdraw at any time until you have completed the survey. You can withdraw by simply closing your browser. The data collected is anonymous and cannot be traced back to you, and so once you complete the survey, we are unable to identify and remove your data.

What happens to all the information?

All the information you provide is confidential and will be stored on a secure drive at the University of Bath (encrypted and password-protected). Only the research team will have access to your data. Anonymised data will be archived indefinitely in the UK Data Archive and may be used by the Council or other researchers in future studies. The University of Bath privacy notice can be found here.

If you choose to enter the prize draw, or you would like to take part in the group discussion, we will ask for your email address. Your contact details will be stored separately from your survey data, so your responses cannot be identified. Email addresses will be permanently deleted within 14 days of the study completion.

What do I do if I have any questions?

Please contact the research team at the University of Bath for further information: Mark Wilson (mw2640@bath.ac.uk) or Lorraine Whitmarsh (lw2253@bath.ac.uk).

Or if you have any concerns about this study, please contact the Department of Psychology Research Ethics Committee: (psychology-ethics@bath.ac.uk; +44 (0)1225 384714).

Department of Psychology
University of Bath
Claverton Down
Bath, BA2 7AY

How can I take part?

Please click the arrow below

Page Break

Q170

Consent Form

Please indicate that you have read and understood the following statements:

1. I understand the nature and purpose of the procedures involved in this study. These have been communicated to me on the information sheet on the previous page.

2. I understand that my participation in this study is entirely voluntary. I can withdraw from the study by closing the browser. Once I complete the survey, my data is anonymised and can no longer be withdrawn from the study.

3. I understand and acknowledge that this study is designed to promote scientific knowledge and may be used by Cornwall Council to inform policy and delivery.

4. I understand that if I decide to enter the prize draw, I will be asked to provide an email address. My email address is not linked to my anonymised survey data, so I cannot be identified, and it will be permanently deleted within 14 days of the study completion.

5. I understand that the University of Bath may use the data collected for this project in a future research project but that the conditions on this form under which I have provided the data will still apply. Anonymised data stored on the UK Data Archive may be used by the Council or other researchers in future studies.

6. I understand that the personal data will be processed in accordance with current UK data protection legislation. The University of Bath privacy notice can be found here.

7. I understand that I am free to discuss any concerns I may have with the research team: Mark Wilson (mw2640@bath.ac.uk) or Lorraine Whitmarsh (lw2253@bath.ac.uk).
If they are unable to resolve your concern or you wish to make a complaint, please contact the Department of Psychology Research Ethics Committee: (psychology-ethics@bath.ac.uk; +44 (0)1225 384714). The PREC reference number for this study is: 22 127.

I have read the above statements and consent to take part:

- ○ I **CONSENT** to take part in the survey (1)
- ○ I **DO NOT CONSENT** to take part in the survey (2)

Q171 I confirm I am aged 16 or older and I currently live in Cornwall:

- ○ Yes (1)
- ○ No (2)

Q103 I commit to giving my full attention when answering the survey questions:

- ○ Yes (1)
- ○ No (2)

Block 2: Travel

Q108

About how you travel

These questions are about how you commute to work and other travel you do (e.g. for shopping, holidays).

Q111 In a typical week, how many journeys per week do you make to / from your place of work or education (i.e. **commuting**) using the following modes of transport?

	Number of commute journeys per week *(travelling there and back would count as <u>two</u> journeys)* (1)
On foot (Q111_1)	
Bicycle (including electric bike) (Q111_2)	
Scooter (including electric scooter) (Q111_3)	
Motorbike (Q111_4)	
Car / van (travelling alone) (Q111_5)	
Car / van (sharing lifts with others) (Q111_6)	
Car club (e.g. Co Cars) (Q111_7)	
Bus (Q111_8)	
Train (Q111_9)	

Other (please specify) (Q111_10)	
N/A - I didn't work or I worked entirely from home *(just write 1 in the box)* (Q111_11)	

Q213 Approximately how far (in miles) is your home to your place of work / study?

_____

Page Break

Q112 In a typical week, how many journeys per week do you make to / from other destinations (e.g. to the shops, visiting friends) using the following modes of transport?

	Number of non-work journeys per week *(travelling there and back would count as <u>two</u> journeys)* (1)
On foot (Q112_1)	
Bicycle (including electric bike) (Q112_2)	
Scooter (including electric scooter) (Q112_3)	
Motorbike (Q112_4)	
Car / van (travelling alone) (Q112_5)	
Car / van (sharing lifts with others) (Q112_6)	
Car club (e.g. Co Cars) (Q112_7)	
Bus (Q112_8)	
Train (Q112_9)	

Other (please specify) (Q112_10)	
N/A - I tend to stay at home *(just write 1 in the box)* (Q112_11)	

Page Break

Q19 How willing would you be to do the following?

	Already do this (5)	In the process of doing this (4)	Thinking about doing this (3)	Don't want to / won't do this (2)	Haven't thought about doing this (1)	Can't do this (33)
Use public transport as a main mode of travel (Q19_1)	○	○	○	○	○	○
Walk or cycle as a main mode of travel (Q19_2)	○	○	○	○	○	○
Hire an electric bike (e.g. Beryl bikes) (Q19_3)	○	○	○	○	○	○
Buy an electric bike (Q19_4)	○	○	○	○	○	○

Page Break

Q207 How willing would you be to do the following?

	Already do this (5)	In the process of doing this (4)	Thinking about doing this (3)	Don't want to / won't do this (2)	Haven't thought about doing this (1)	Can't do this (33)
Share lifts with others (Q207_5)	○	○	○	○	○	○
Use a car club (e.g. Co Cars) (Q207_6)	○	○	○	○	○	○
Live without a car (Q207_7)	○	○	○	○	○	○
Buy an electric car (Q207_8)	○	○	○	○	○	○
Work from home where possible (Q207_9)	○	○	○	○	○	○

Page Break

Display This Question:

If How willing would you be to do the following? = Use public transport as a main mode of travel [Thinking about doing this]

Or How willing would you be to do the following? = Use public transport as a main mode of travel [Don't want to / won't do this]

Or How willing would you be to do the following? = Use public transport as a main mode of travel [Can't do this]

Q187 To what extent have the following prevented you from using public transport as a main mode of travel?

	Not at all (1)	A little (2)	Somewhat (3)	A lot (4)	Not applicable (99)
Public transport in my area is unreliable (Q187_1)	○	○	○	○	○
The bus / train service in my area is infrequent (Q187_2)	○	○	○	○	○
Public transport is expensive (Q187_3)	○	○	○	○	○
Public transport is inconvenient (Q187_4)	○	○	○	○	○
I don't know where to find information about local public transport (Q187_5)	○	○	○	○	○
Not feasible due to long-standing illness, injury or disability (Q187_6)	○	○	○	○	○

Display This Question:

If How willing would you be to do the following? = Walk or cycle as a main mode of travel [Thinking about doing this]

Or How willing would you be to do the following? = Walk or cycle as a main mode of travel [Don't want to / won't do this]

Or How willing would you be to do the following? = Buy an electric bike [Thinking about doing this]

Or How willing would you be to do the following? = Buy an electric bike [Don't want to / won't do this]

Or How willing would you be to do the following? = Hire an electric bike (e.g. Beryl bikes) [Thinking about doing this]

Or How willing would you be to do the following? = Hire an electric bike (e.g. Beryl bikes) [Don't want to / won't do this]

Or How willing would you be to do the following? = Walk or cycle as a main mode of travel [Can't do this]

Q186 To what extent have the following prevented you from walking or cycling as a main mode of travel?

	Not at all (1)	A little (2)	Somewhat (3)	A lot (4)	Not applicable (99)
Lack of cycle lanes or walking paths (Q186_1)	○	○	○	○	○
Feeling unsafe cycling on roads (Q186_2)	○	○	○	○	○
Lack of cycling confidence or competence (Q186_3)	○	○	○	○	○
The distance is too far (Q186_4)	○	○	○	○	○
Not feasible due to long-standing illness, injury or disability (Q186_5)	○	○	○	○	○

Display This Question:

If How willing would you be to do the following? = Buy an electric car [Thinking about doing this]

Or How willing would you be to do the following? = Buy an electric car [Don't want to / won't do this]

Or How willing would you be to do the following? = Buy an electric car [Can't do this]

Q155 To what extent have the following prevented you from buying an electric car?

	Not at all (1)	A little (2)	Somewhat (3)	A lot (4)	Not applicable (99)
Lack of electric vehicle charging points (Q155_1)	○	○	○	○	○
Electric cars are expensive (Q155_2)	○	○	○	○	○

Page Break

Q11 Have you been away on holiday **this year**?

- ○ Yes - to one or more UK destinations (1)
- ○ Yes - to one or more overseas destinations (2)
- ○ Yes - to both UK and overseas destinations (3)
- ○ No (4)

Display This Question:

If Have you been away on holiday this year? = Yes - to one or more UK destinations

Or Have you been away on holiday this year? = Yes - to one or more overseas destinations

Or Have you been away on holiday this year? = Yes - to both UK and overseas destinations

Q12 How did you travel to your holiday destination(s)?
Please select all that apply

- ☐ Car (1)
- ☐ Bus (2)
- ☐ Train (3)
- ☐ Ferry (4)
- ☐ Flight (5)
- ☐ Other (please specify) (6) _____

Page Break

Q141 How willing would you be to do the following?

	Already do this (5)	In the process of doing this (4)	Thinking about doing this (3)	Don't want to / won't do this (2)	Haven't thought about doing this (1)	Not applicable (99)
Avoid flying (Q141_1)	○	○	○	○	○	○
Travel by train or bus to my holiday destination (Q141_2)	○	○	○	○	○	○

Block 3: Home energy use
Presented to 50% of survey respondents

Q96 **About your energy use**

Now, a few questions about your energy use behaviours at home.

Q117 How often do you turn off your lights and appliances when not in use (instead of leaving them on standby)?

- ○ Never (1)
- ○ Sometimes (2)
- ○ About half the time (3)
- ○ Most of the time (4)
- ○ Always (5)

Q118 Roughly what temperature is your home heated to on cold days?

- ○ below 15°C (1)
- ○ 15-16°C (2)
- ○ 17-18°C (3)
- ○ 19-20°C (4)
- ○ 21-22°C (5)
- ○ over 22°C (6)
- ○ Don't know (55)

Q200 How willing would you be to do the following?

	Already do this (5)	In the process of doing this (4)	Thinking about doing this (3)	Don't want to / won't do this (2)	Haven't thought about doing this (1)
Buy energy saving light bulbs (Q200_1)	○	○	○	○	○
Buy energy-efficient appliances (e.g. fridge, washing machine) (Q200_2)	○	○	○	○	○
Use a renewable energy supplier (Q200_3)	○	○	○	○	○
Limit heating at home (e.g. reduce the thermostat temperature, heat fewer rooms) (Q200_4)	○	○	○	○	○
Install low flow fittings to showers and taps (Q200_5)	○	○	○	○	○

Page Break

Q143 Do you own or rent your home?

- ○ Own my home (either with a mortgage, or outright), or live in family-owned home (1)
- ○ Rent my home (2)

Page Break

Display This Question:

If Do you own or rent your home? = Own my home (either with a mortgage, or outright), or live in family-owned home

Q32 How willing would you be to install these energy efficiency improvements in your home?

	Already did this (5)	In the process of doing this (4)	Thinking about doing this (3)	Don't want to / won't do this (2)	Haven't thought about doing this (1)	Can't do this (due to planning regulations) (33)
Loft insulation (Q32_1)	○	○	○	○	○	○
Cavity wall or solid wall insulation (Q32_2)	○	○	○	○	○	○
Double / triple glazing (Q32_3)	○	○	○	○	○	○
Heat pump (Q32_4)	○	○	○	○	○	○
Solar panels (Q32_5)	○	○	○	○	○	○
Solar water heater (Q32_6)	○	○	○	○	○	○

Block 4: Material consumption and diet
Presented to 50% of survey respondents

Q97 **What you eat and buy**

Now, a few questions about your food and shopping behaviours. Please think about the food and other items you buy for your **household** ***(e.g. including for yourself AND your family).***

Q122 In a typical month, how much do you spend on clothes and footwear?

- ○ £0 (1)
- ○ £1-50 (2)
- ○ £51-100 (3)
- ○ £101-150 (4)
- ○ More than £150 (5)

Q89 In the last 12 months, have you bought any of these household items **new**? *Please select all that apply*

- [ ] TV or sound system (1)
- [ ] Laptop or PC (2)
- [ ] Mobile phone or tablet (3)
- [ ] Large item of furniture (4)
- [ ] Washing machine, dishwasher, tumble dryer or fridge freezer (5)
- [ ] ⊗ I haven't bought any of these items (6)

Q85 How willing would you be to do the following?

	Already do this (5)	In the process of doing this (4)	Thinking about doing this (3)	Don't want to / won't do this (2)	Haven't thought about doing this (1)
Repurpose something for a different use, instead of throwing it away (Q85_1)	○	○	○	○	○
Repair an item, instead of throwing it away (Q85_2)	○	○	○	○	○
Borrow or rent items (e.g. tools, toys) (Q85_3)	○	○	○	○	○
Buy second-hand items (Q85_4)	○	○	○	○	○
Buy environmentally-friendly products (Q85_5)	○	○	○	○	○
Make green investments (Q85_6)	○	○	○	○	○

Page Break

Q128 How many days in a typical week is your diet 'meat-free'?
(i.e. you do not eat any meat or fish)

- ○ Never (1)
- ○ Less than once a week (2)
- ○ 1-2 days per week (3)
- ○ 3-4 days per week (4)
- ○ 5-6 days per week (5)
- ○ Every day (6)

Q211 How willing would you be to do the following?

	Already do this (5)	In the process of doing this (4)	Thinking about doing this (3)	Don't want to / won't do this (2)	Haven't thought about doing this (1)	Not applicable (99)
Reduce red meat in your diet (e.g. beef, lamb, pork) (Q211_1)	○	○	○	○	○	○
Reduce dairy products in your diet (e.g. milk, cheese) (Q211_2)	○	○	○	○	○	○
Avoid wasting food (e.g. by using leftovers, buying less food, eating food past its 'best before' date) (Q211_3)	○	○	○	○	○	○

Page Break

Q88 Which of the following do you regularly recycle and/or compost?
Please select all that apply

- ☐ Food (1)
- ☐ Paper or Cardboard (2)
- ☐ Tins or cans (3)
- ☐ Glass (4)
- ☐ Plastic (5)
- ☐ Garden waste (e.g. hedge clippings, leaves) (6)
- ☐ ⊗ I don't recycle (7)

Q212 Do you own or rent your home?

- ○ Own my home (either with a mortgage, or outright), or live in family-owned home (1)
- ○ Rent my home (2)

Block 5: Climate change perceptions

Q98 **Climate change**

You're doing great! The next few questions are about your views on climate change.

Q136 How worried are you about the following issues?

	Not at all worried (1)	Not very worried (2)	Somewhat worried (3)	Very worried (4)	Extremely worried (5)
Climate change (Q136_1)	○	○	○	○	○
Air pollution (in my local area) (Q136_2)	○	○	○	○	○

Q139 Which of these statements best describes your views?

Addressing climate change requires...

- ○ little or no urgency (1)
- ○ a low level of urgency (2)
- ○ a moderate level of urgency (3)
- ○ a high level of urgency (4)
- ○ an extremely high level of urgency (5)

Q189 When, if at all, do you think people in Cornwall will start feeling the effects of climate change listed below?

	We are already feeling the effects (1)	In the next 10 years (2)	In the next 25 years (3)	In the next 50 years (4)	In the next 100 years (5)	Never (6)
Extreme heat waves (Q189_1)	○	○	○	○	○	○
Drought / restrictions to water supply (Q189_2)	○	○	○	○	○	○
Severe storms and flooding (Q189_3)	○	○	○	○	○	○
Coastal erosion or sea level rise (Q189_4)	○	○	○	○	○	○
Disruption to energy supply (Q189_5)	○	○	○	○	○	○
Disruption to food supply (Q189_6)	○	○	○	○	○	○
Displacement of people (within Cornwall, or migration from other countries) (Q189_7)	○	○	○	○	○	○

Page Break

Q156 Have you personally experienced any of the following?
Please select all that apply

- ☐ Flooding of my home (river or coastal) (1)
- ☐ Health suffering due to extreme heat (2)
- ☐ Wildfires threatening the area where I live (3)
- ☐ Storms damaging my home (4)
- ☐ Health suffering due to air pollution (5)
- ☐ Coastal erosion near my home (6)
- ☐ ⊗ None of these (7)

Display This Question:

If Have you personally experienced any of the following?Please select all that apply = Flooding of my home (river or coastal)

Or Have you personally experienced any of the following?Please select all that apply = Health suffering due to extreme heat

Or Have you personally experienced any of the following?Please select all that apply = Wildfires threatening the area where I live

Or Have you personally experienced any of the following?Please select all that apply = Storms damaging my home

Or Have you personally experienced any of the following?Please select all that apply = Health suffering due to air pollution

Or Have you personally experienced any of the following?Please select all that apply = Coastal erosion near my home

Q167 To what extent, if at all, did this experience make you...?

	Not at all (1)	A little (2)	Somewhat (3)	A lot (4)
more worried about climate change (Q167_1)	○	○	○	○
take actions to reduce your carbon footprint (Q167_2)	○	○	○	○
take actions to adapt, in case this happens again (e.g. buy flood prevention barriers, air conditioning unit) (Q167_3)	○	○	○	○

Page Break

Q135 How much do you think each of the following would contribute to reducing the carbon footprint of the average person living in the UK?

	Nothing (1)	A little (2)	A large amount (3)	A very large amount (4)
Avoid eating red meat (beef, lamb, pork) (Q135_1)	○	○	○	○
Avoid eating dairy products (milk, cheese etc.) (Q135_2)	○	○	○	○
Live car-free (Q135_3)	○	○	○	○
Avoid flying (Q135_4)	○	○	○	○
Avoid food waste (Q135_5)	○	○	○	○
Turn lights off when not in use (Q135_6)	○	○	○	○
Recycle paper, plastic, glass and cans (Q135_7)	○	○	○	○
Buy energy-efficient appliances (Q135_8)	○	○	○	○
Avoid buying things made of plastic (Q135_9)	○	○	○	○

Page Break

Q146 Who, in your view, has the most responsibility to reduce the risk of climate change?

Please rank the four options by moving each one up or down into the correct position - 1 has the most responsibility and 4 has the least responsibility.

_____ Individuals and households (1)
_____ Businesses and industries (2)
_____ Cornwall Council (3)
_____ National Government (4)

Page Break

Q150 To what extent would you support or oppose the following policy measures to help tackle climate change?

	Strongly oppose (1)	Tend to oppose (2)	Neither oppose nor support (3)	Tend to support (4)	Strongly support (5)
Low Traffic Neighbourhoods (a small residential area closed off to traffic, for use by pedestrians and cyclists) (Q150_1)	○	○	○	○	○
Low Emission Zones (a zone within a city that polluting vehicles must pay to enter) (Q150_2)	○	○	○	○	○
20 mph speed zones (to protect non-motorised road users and encourage walking and cycling) (Q150_3)	○	○	○	○	○
Restricted car parking in workplaces and town centres (Q150_4)	○	○	○	○	○
Subsidised public transport (Q150_5)	○	○	○	○	○
Government loans to buy an electric vehicle (Q150_6)	○	○	○	○	○

Q198 To what extent would you support or oppose the following policy measures to help tackle climate change?

	Strongly oppose (1)	Tend to oppose (2)	Neither oppose nor support (3)	Tend to support (4)	Strongly support (5)
Increase vegetarian and vegan options in public food catering (e.g. in schools, hospitals) (Q198_7)	○	○	○	○	○
Stricter building regulations to provide energy-efficient homes that are powered by renewable energy (Q198_8)	○	○	○	○	○
Stricter planning regulations to require housing developers to reduce residents' dependency on cars (Q198_9)	○	○	○	○	○
Build more onshore wind farms (Q198_10)	○	○	○	○	○
Build more solar farms (Q198_11)	○	○	○	○	○

Q195 To what extent do you agree or disagree that Cornwall Council is taking enough action on climate change?

(More action on climate change would mean less action / resources for other priorities such as education or adult social care)

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q137 What in your view are the most important actions Cornwall Council should take to help tackle climate change?

_____

Block 6: Cost of living crisis

Q152 **Cost of living**

Almost there! These questions are about the cost of living.

Q214 How worried are you about the current 'cost of living crisis' (rising cost of home energy, petrol/diesel, food, and other goods)?

- ○ Not at all worried (1)
- ○ Not very worried (2)
- ○ Somewhat worried (3)
- ○ Very worried (4)
- ○ Extremely worried (5)

Q164 In the last six months (since April 2022), has the rising cost of living prompted you to do any of the following?
Please select all that apply

- [ ] Avoid making non-essential journeys by car (1)
- [ ] Avoid flying abroad for a holiday (2)
- [ ] Switch off lights and appliances when not in use (3)
- [ ] Cut down on energy used for heating (e.g. turning down the thermostat) (4)
- [ ] Invest in home improvements to reduce your energy bills (e.g. install loft insulation, solar panels etc.) (5)
- [ ] Use less water (6)
- [ ] Reduce spending on non-essential items (7)
- [ ] Reduce your meat consumption (8)
- [ ] ⊗ None of these (9)

Page Break

Q148 To what extent do you agree or disagree with the following statements?

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
The Government should prioritise dealing with the cost of living crisis, even if it means taking actions which are bad for the environment (Q148_1)	○	○	○	○	○
Measures to tackle the cost of living crisis can also help tackle climate change (Q148_2)	○	○	○	○	○
Tackling climate change is more important than reducing energy prices (Q148_3)	○	○	○	○	○

Block 7: Sociodemographic characteristics

Q99 **About you**

Finally, please tell us a bit more about yourself and your living arrangements.

Q77 What kind of property do you live in?

- ○ Detached house (1)
- ○ Semi-detached house (2)
- ○ Terraced house (3)
- ○ Flat or bedsit (4)

Q83 How many bedrooms does your home have?

- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 or more (4)

Page Break

Q79 How do you heat your home?
Please select all that apply

- [ ] Gas (1)
- [ ] Oil (2)
- [ ] Electric heating (3)
- [ ] Heat pump (4)
- [ ] Wood (5)
- [ ] Other (6)

Q1 Do you own or have regular access to a car?

- ○ Yes - an electric or hybrid car (1)
- ○ Yes - a petrol or diesel car (2)
- ○ No (3)

Q304 What is the first half of your postcode (e.g. TR1, PL14)?

_____

Page Break

X→

Q210 How do you self-identify?

- ○ Female (1)
- ○ Male (2)
- ○ Non-binary (3)
- ○ None of the above (if you wish, please specify) (4)

_____

- ○ Prefer not to say (88)

Q301 What is your age (in years)?

_____

Page Break

X→

Q138 What is your ethnic group?
Please choose one option that best describes your ethnic group or background

- White British / White Cornish (1)
- Mixed / Multiple ethnic groups (2)
- Asian / Asian British (3)
- Black / African / Caribbean / Black British (4)
- Minority Ethnic / Roma / Gypsy / Traveller (5)
- Other ethnic group (6)
- Prefer not to say (88)

Q142 Do you have a long-standing illness, injury or disability that limits your normal day-to-day activities?

By 'long-standing' we mean anything that has troubled you over a period of time. 'Normal day-to-day activities' includes things like eating, washing, walking and going shopping.

- Yes
- No
- Prefer not to say

Page Break

Q302 How many adults (aged 18 or older), including you, live in your home?

_____

Q144 How many children (under 18) live in your home?

_____

Q201

○ Prefer not to say (88)

Page Break

Q178 What is the highest level of education you have achieved so far?

- ○ No formal qualifications (1)
- ○ GCSE or O-level (2)
- ○ A-level (3)
- ○ Undergraduate degree (e.g. Bachelor) (4)
- ○ Postgraduate degree (e.g. Master, PhD) (5)
- ○ Vocational qualification (6)
- ○ Other (7)
- ○ Prefer not to say (88)

Q165 Which option best describes your employment status?

- ○ Employed full time (30+ hrs/wk) (1)
- ○ Employed part time (less than 30 hrs/wk) (2)
- ○ Self-employed (3)
- ○ Unemployed (4)
- ○ Looking after home / family (5)
- ○ Studying (6)
- ○ Retired (7)
- ○ Other (8)
- ○ Prefer not to say (88)

Page Break

Q305 Have you experienced any of these life events in the last 6 months (since April 2022)?
Please select all that apply

- ☐ Moved house (1)
- ☐ Started a new job (2)
- ☐ Retired (3)
- ☐ Had a child (4)
- ☐ Started co-habiting with someone (e.g. living together as a couple) (5)
- ☐ Left the parental home (e.g. to start university, relocate for a job etc.) (6)
- ☐ Suffered a serious illness or injury that limits your normal day-to-day activities (7)
- ☐ Become unemployed (8)
- ☐ ⊗ Prefer not to say (88)

Q145 Please indicate the approximate combined income of your **household** (per year, before tax deductions):

- ○ Less than £6,000 (1)
- ○ £6,000 - £12,999 (2)
- ○ £13,000 - £18,999 (3)
- ○ £19,000 - £25,999 (4)
- ○ £26,000 - £31,999 (5)
- ○ £32,000 - £47,999 (6)
- ○ £48,000 - £63,999 (7)
- ○ £64,000 - £95,999 (8)
- ○ More than £96,000 (9)
- ○ Prefer not to say (88)

Block 8: Debrief and focus group opt-in

Q303
Thank you very much for taking part in this study!

Further information
This study is a collaboration between Cornwall Council and researchers at the University of Bath. The aim of the study is to explore Cornwall residents' perceptions of climate change, their current everyday behaviours around travel / diet / products they buy / household energy use, and their intentions or willingness to change those behaviours for low-carbon alternatives. This information will be used to inform potential Cornwall Council policies or interventions to reduce carbon emissions.

If you have any questions about the study, please contact the research team: Mark Wilson (mw2640@bath.ac.uk) or Lorraine Whitmarsh (lw2253@bath.ac.uk). If you have concerns about your participation in this study or you wish to make a complaint, please contact the Department of Psychology Research Ethics Committee: (psychology-ethics@bath.ac.uk; +44 (0)1225 384714). The PREC reference number for this study is: 22 127.

Privacy Notice: Your data will be used only for the purposes set out in the information sheet. Your consent is conditional upon the University complying with its duties and obligations under current UK data protection legislation. The University of Bath privacy notice can be found here.

Please CLICK THE ARROW BELOW to submit your responses

Page Break

Q180 Thank you, your survey responses have been recorded.
On the next page, you can provide your **email address** if you would like to be entered into the **prize draw to win one of ten £50 gift vouchers**. The next page is not linked to your survey responses - your data remains anonymous and separate from your email address.

Are you interested in taking part in (paid) follow-up research?
We are looking for volunteers to participate in a **paid group discussion** about your current travel behaviours and your views on different travel options. This will take place online, via Microsoft Teams, at a time that suits you. It will last up to 60 minutes. As with the survey, the data collected will be confidential and cannot be traced back to individual participants. You will be given **a £20 gift voucher for taking part**. If you are interested or would like more information, please enter your email address on the next page.

Please click the arrow below

Separate survey – Opt-in for focus group and/or incentive

Start of Block: Default Question Block

Q1 1) I would like to be entered into **the prize draw**:

- Yes (1)
- No (2)

Q2 2) I am interested in participating in the **group discussion** and would like to receive further information about it:

- Yes (1)
- No (2)

Q3 If you ticked **YES** to either of these questions, please provide **your email address** (this is kept confidential and separate from your survey responses):

_____

Q4 Your email address will be used only for the above purposes and will be stored on a secure drive at the University of Bath (encrypted and password-protected). Your email address will be permanently deleted within 14 days of: 1) the date of the prize draw, or 2) the date of the final group discussion if you ticked 'yes' to receive more information.

Please click the arrow below

Thank you

Your response has been recorded