

**Which?**

POLICY AND RESEARCH REPORT OCTOBER 2021

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# Supporting consumers in the transition to net zero

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# Executive Summary

This is a crucial year for action to tackle climate change. The UK, like many other countries, is already experiencing more extreme weather patterns as the impacts of global warming become far more real. The UK's Climate Change Committee (CCC) made it clear in its most recent risk assessment that adaptation action has failed to keep pace with the worsening reality of climate risk. Far more ambitious action is therefore needed if the government is to mitigate the impacts and achieve its commitments to reach net zero by 2050. This is also the year that the UK is taking a global lead on climate change as host of the UN Climate Change Conference (COP 26) in Glasgow, providing a real opportunity for meaningful change and policy action.

The CCC has made it clear that the policies required to meet net zero targets will need action much more directly from people, and not solely by the government and businesses. This means that the changes needed will be much more visible in people's everyday consumption choices, whether that's how they travel, heat their homes, choose what to buy or eat. This will require complex and, in some cases, costly changes and the right type of support. It would be all too easy to dispute or delay the need for action - but that is no longer an option given the urgency and gravity of the issue.

To understand the issues facing consumers and identify the priority policy actions that are now needed to support them, Which? undertook a survey of over 3000 people around the UK, representative of the UK population and nations, and hosted a series of expert roundtables to explore some of the barriers facing consumers when making lower impact choices.

## Confusion and lack of support

Our consumer research has found that most people understand the urgent need to act to tackle climate change and many people are already taking action to be more sustainable. However, these actions aren't yet on the scale of what is needed – there's a mismatch between what most people think will have the most impact and the changes experts think are most needed. People are looking to government to do much more to support them.

Choices that would have the greatest impact on households' emissions, such as changing diets, mode of transport or shifting to low carbon heating systems are less commonly acted upon compared to easier and cheaper changes. People are more likely to be trying to reduce household waste, use products in a more energy efficient way or limit their use of single-use plastics, actions that are more within people's direct control, can be immediately acted upon and that have received a lot of media attention.

There's a strong belief that the government and businesses are not doing enough to tackle the barriers to making lower carbon choices, with the devolved governments also faring poorly. Half of people (51%) want the government to be more ambitious and ensure retailers and manufacturers support consumers to do the right thing. Three-quarters think the government's net zero targets will not be met unless this support is forthcoming.

We have focused on four areas – electric vehicles, low carbon heat, low carbon products and food choices – where our review of the evidence has shown change will be crucial to reduce household emissions, and where there is therefore a clear need for greater government and business support for consumers. Consistent barriers include affordability, a lack of knowledge, a lack of accessible and trusted information to guide specific choices and a lack of policy coherence.

Actions in the following areas will go a long way to supporting consumers in making lower impact decisions and choices:

### 1. Low carbon transport - electric vehicles

Transport is the UK's largest source of carbon emissions and road transport is an important contributor. Reducing road travel and incentivising shifts to public transport or active modes of travel - such as walking and cycling, which also offer additional health benefits – can bring significant emissions reductions. Not everyone has a car or needs one, but for those that do, switching to an electric vehicle (EV) at the right time is an important change to make to help reduce emissions. Recognising this, the UK Government has committed to phasing out the sale of new petrol and diesel cars by 2030 and hybrids by 2035.

But our research shows how owning an electric car is not on the agenda for most people. Just two in five (41%) drivers signal some intent to buy an EV, with intention more common among younger people and higher earners. Consumers identify multiple barriers to buying an EV with perceptions of vehicle performance, particularly 'range anxiety' or how far a driver can go on a single charge (44%), the biggest obstacle. Access to charging points when at home or on journeys, how long vehicles take to charge and concerns about increased stress associated with running an EV and planning journeys are also important. A third (34%) of consumers say that it is the upfront costs of an EV and ongoing running costs (14%) that put them off buying one.

While there are some misconceptions about electric cars that need to be dispelled, such as how long a car can travel without needing to recharge, our roundables reinforced some of the fundamental challenges that still need to be addressed for consumers to switch easily to an EV. Which?'s investigations have also highlighted the complexity of the charging system and problems with accessibility – from lack of interoperability to complicated payment methods. It can also currently take up to ten years to recoup the initial cost of buying a new EV, even when current government grants are taken into account.

- A coherent strategy needs to be developed across all of the UK governments and the car industry to support consumers' change to an EV, as part of the wider transition to low carbon transport – and ensure that EVs are an option for all consumers, no matter where they live in the UK, and not just the most affluent. This needs to include:
  - Dispelling misconceptions about the performance of EVs, such as how far it is possible to travel before needing to recharge.
  - Urgent investment in an easily accessible, affordable and joined up charging infrastructure that will keep pace with future demand and support consumers wherever they live in the UK and whether or not they have off-street parking.
  - Making sure that the transition to EVs is fair and equitable, and that they are an affordable option for all consumers.

## 2. Low carbon heat

Direct greenhouse gas emissions from buildings account for 17% of UK emissions, mainly the result of burning fossil fuels for heating. Of the 29 million existing homes across the UK, at least 19 million still need to be made low carbon, low-energy and resilient to a changing climate.<sup>1</sup> Energy efficiency is a vital first step toward decarbonising existing homes, acting as a precursor to replacing gas central heating with lower carbon systems.

The most likely pathway to decarbonising home heating is replacing gas fired central heating (installed in 85% of homes today) with heat pumps. A gas and oil boiler ban will apply in newbuild homes from 2025. The Prime Minister's ten point plan envisages increasing heat pump installation from 30,000 per year to 600,000 per year by 2028. But the CCC has recommended an even higher target of 1.1m heat pumps installed per year by the mid 2030s. Different challenges will be faced in different parts of the UK. In Northern Ireland, for example, around two thirds of homes currently rely on oil boilers and just a third on gas boilers.

Despite the importance of addressing home heating in order to deliver on net zero our research shows that few people view it as a priority for change, relative to other issues.

Consumers identify multiple barriers to moving to low carbon heating but the cost of making changes is the biggest concern by far. Almost three-fifths (56%) of consumers say cost puts them off, with a third (32%) also concerned over the increased running costs of changes. There is also underlying confusion and uncertainty. The low carbon heating market is unfamiliar and perceived to be complex and difficult to navigate.

People are also largely unaware of forthcoming changes to how we heat our homes. Just 13% feel they know a lot or a fair amount about the need to move to a low carbon heating system for the UK to meet its net zero target – and only 16% feel they know a lot or a fair amount about government plans to ban the installation of new gas or oil boilers by the mid 2030s. Given the costs associated with moving to a low carbon heating system, consumers support measures that would make these systems more affordable or which would stimulate the market to make it more competitive and reduce the cost of these systems.

Our expert roundtable also emphasised the importance of a fair heat deal that supports the poorest households whilst making sure that other households have the right balance of incentives and support to encourage change, backed up with the right consumer protection in the short and longer term.

- As one of the most important, as well as most complex areas where change is needed, the governments need to urgently set out a clear strategy for supporting consumers to make their homes more efficient and heating systems low carbon, including:
  - Providing accessible, unbiased guidance on the changes that people need to make to their homes.
  - Putting in place robust consumer protections so that consumers can have confidence in the reliability and safety of these relatively novel, costly products and their installation, including access to skilled, trusted installers – and are able to enforce their consumer rights if anything goes wrong. This includes clamping down on rogue traders and scammers.
  - Expanding the financial support that is available, including predictable and well-advertised grants, low-cost loans and financing and ensuring there are specific support schemes for people who are fuel-poor, in vulnerable circumstances or less able to afford these changes.

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1 The sixth carbon budget, The UK's path to Net Zero, Climate Change Committee, December 2020

Finding the right, long term policy balance between the market and state support will be critical, not least because past failures have discouraged home owners, landlords and tradespeople from responding.

### 3. Low carbon products

How we buy, use and dispose of consumer products is a fundamental issue that needs to be addressed in order to reduce household carbon emissions, as well as reduce other environmental impacts. This has been an increasing policy focus over the past two decades, with a steady expansion of initiatives and in some cases regulation, to support lower impact choices by informing consumers about the energy use of the products they buy, incentivising improvements by manufacturers through ecodesign regulations and making it easier to recycle. While the market has seen a steady improvement in energy efficiency, gaps remain and product longevity, repair options and recycling and reuse rates still need to be tackled.

Over half (56%) of consumers claim they take environmental sustainability into account a great deal or a fair amount when choosing white goods; closer to a third (31%) claim to take sustainability into account when choosing to buy new technology products. However, when asked what specific factors they take into account when choosing either a washing machine or mobile phone, performance and running costs are as, if not more, important.

The extent to which the environmental impact is taken into account also depends on the products. Our research suggests that it is currently a bigger factor when buying a washing machine, compared to a mobile phone for example. Almost eight in ten (77%) consumers identify something which would put them off buying a more sustainable product.

By far the most common barrier, and well ahead of other concerns, is the perception that energy efficient products are too expensive (37%). There also appear to be particular issues with not knowing what or who to trust when it comes to environmental sustainability or not having access to the information necessary to make an informed choice. Nine in ten wanted clear information on how long a product is likely to last (90%) and clear energy labelling of products online and in store (87%). Eight in ten think more information on repairability of products (83%), recyclability (84%) or having a trademark/badge to show a product had been manufactured in a sustainable way (82%) would be beneficial.

Which?'s low carbon products expert roundtable emphasised the importance of building on existing ecodesign regulations to drive improvements and help take the least efficient products off the market. This also needs to take account of emissions generated by products manufactured overseas and the complex nature of supply chains.

The need to change attitudes to 'needing new' was also seen as important. People need to become used to owning products for longer and being more willing to get them repaired, for example. But they should also be able to expect more from manufacturers in terms of how long products will last. There are opportunities to make affordable, second hand, high quality, repaired products more readily available – but that also requires competent and safe repair services to be more affordable and accessible.

- The government needs to deliver on its commitment to be more ambitious in its approach to driving a circular economy, working with the devolved nations. This includes:
  - Delivering on its commitment to go beyond existing ecodesign and energy labelling regulations to help to drive product improvements, longevity and remove the least sustainable products from the market. The regulations should be extended to cover a

- wider range of appliances such as gas hobs, microwaves and kettles and new rules to tackle premature obsolescence need to include technology products, such as mobile phones.
- Further improving labelling, for example, by ensuring energy labelling reflects how consumers actually use products, by including durability information and by exploring other approaches that will help consumers, such as a reparability indicator.
  - Building on the recently adopted right to repair legislation, bringing more products within scope and through measures such as longer warranties, minimum requirements for software updates and longer availability of spare parts in line with the life span of the product to support a more attractive, affordable, accessible and safe route to repairs.

#### 4. Food choices

Agriculture contributes around 12% of UK carbon emissions, with food processing, transport and food waste also adding to the environmental harm caused by the food sector. The global food system is the single biggest contributor to biodiversity loss, deforestation, drought, freshwater pollution and the collapse of aquatic wildlife. Food is the second-biggest contributor to climate change, after the energy industry.

The evidence is increasingly clear about what people should be eating for both a healthy and a more sustainable diet, with a shift from meat and dairy-based diets to include more plant-based foods. But many barriers exist that make it difficult to follow this in practice.

Our research found that consumers' sustainability considerations focus more on where their food comes from and how it is packaged, rather than what it is. Consumers recognise the food they eat contributes to their households' emissions, although most underestimate the extent of its impact and misattribute exactly what about their food choices is bad for the environment.

Over half (57%) say environmental sustainability influences their choice of food and groceries a 'great deal' or a 'fair amount' and nine in ten (91%) do something to try to reduce the impact of their food choices on the environment. The most common action taken by far is recycling food packaging, something seven in ten (69%) consumers do regularly to reduce their environmental impact. This is also the thing consumers think makes the biggest impact on their household's emissions.

In contrast, although reducing meat consumption will be essential to meet net zero, just a fifth (23%) eat meals free from red meat or eat more plant-based foods/drinks (20%) on a regular basis. Three quarters (75%) of consumers identify something which puts them off doing more when it comes to buying more sustainable food. The most commonly perceived barrier by quite a margin is cost, with two fifths of consumers (37%) perceiving more environmentally sustainable choices as more expensive.

Consumers want the government, retailers and food businesses to make it harder for them to choose options that are bad for the environment. When it comes to food retailers and food businesses, consumers support measures to remove plastics from their shelves, improve the availability of sustainable products and make sustainable foods more affordable. Consumers support food retailers and food businesses making changes to their packaging and see a role for the government in requiring clear labelling on food packaging (53%) and putting tighter controls on the claims that can be made on foods (45%).

Food is a devolved issue. Food strategies have been developing at different paces and with a different focus across the nations. In July, Henry Dimbleby published a national food strategy,

largely focused on England, but recognising the devolved interests. This called for ambitious measures to transform the food system so that it is both healthy and sustainable.

- The governments across the UK need to implement a range of measures, including through legislation, to drive sustainable, as well as healthier, food production and support consumers in making lower environmental impact choices. These require a whole food system approach and include:
  - Alignment of objectives across all policies that are relevant for food, including agriculture and trade policy to support consumers in making lower impact choices, including establishing core food standards that will be applied to imports.
  - Financial and other incentives, such as transparent reporting on the balance of foods sold and controls over food marketing, to ensure food businesses produce and promote more sustainable options.
  - Development of dietary guidelines and a government-led, UK-wide labelling scheme to help consumers make lower environmental impact food choices.



### Seven principles to support consumers in the transition to net zero

Our research and roundtables have highlighted seven overarching principles that need to be at the heart of the government's strategy. These are essential for engaging, inspiring and supporting people in making low carbon choices – as well as for ensuring public support for the range of ambitious measures that need to be adopted by policy makers.

#### 1. Joined up policy

Joined up government and joined up policy is essential to deliver the enormous transition to a net zero future at the pace now needed and within the practical constraints of cost and upheaval to people's lives. Whether dealing with fundamental policies, such as the future UK approach to trade - or more specific regulatory issues such as the safety, security and sustainability of consumer products - there needs to be a coordinated approach across government departments and regulators. They must be focused on common priorities and recognise the importance of consumers and their interests.

#### 2. A people-centred approach

The transition from a coal fired to wind powered electricity system has happened with the involvement of a limited number of key players and without directly affecting most companies in the economy, let alone ordinary people. But the next great leaps we need to make are dependent on the buy-in and support of the vast majority of people in the UK. Policy needs to support and motivate them in the way that they need, whether at national or local level, recognising the domino effect that the right policy choices can have on corporate decisions and the choices made by people in their daily lives.

#### 3. An equitable transition

In driving the UK economy and its society fast towards a low carbon future, there needs to be a clear recognition that many people don't have the economic resources to participate in the transition, regardless of how much of a climate change crisis we face. The poorest sections of society cannot be penalised by the net zero transition, whatever the broader, long term societal good - and shouldn't miss out on the opportunities and benefits either (such as more efficient cars, better insulated homes). They need to be supported financially and in terms of practical access to low carbon living solutions.

#### 4. Clear information that people can trust

People need clear and trusted information to support them in making more sustainable choices. They are picking up the signals that the climate crisis is fueling more extensive and dangerous weather events but they struggle to link this consistently with their day-to-day purchasing decisions and have a clear sense of what they can do to make most difference. Where efforts have been made to provide carbon and other sustainability information campaigns or product information – from cars to washing machines, homes and food – the approach can all too often be disconnected. There needs to be a coordinated net zero engagement campaign that acts as an anchor point for consistent consumer engagement, information and labelling around homes, cars, food and products, alongside practical measures that will support people in their everyday choices.

#### 5. Phase out bad choices

The need for a joined up approach to engaging people in decision making on their purchasing decisions can only be done in tandem with a policy and fiscal system that actively 'sunsets' bad, high carbon choices. This is being done with sales of new petrol and diesel cars (2030), hybrids (2035) for example. The poorest performers in any market need to be phased out, applying the principles of an equitable net zero transition. Companies can no longer expect to put high carbon products on the market and expect society to pay for the external costs of the carbon associated with their production, use and disposal.

#### 6. Low carbon and circular

There is rightly an enormous focus on shifting rapidly to a low carbon future but circularity also has to be a priority. Less resource use and less waste are desirable end goals in their own regard but will also help deliver a low carbon future. Putting circularity at the heart of thinking about low carbon consumption will only help with progress. This includes establishing a functioning second-hand EV car market; encouraging the repair of consumer products; preventing food waste; and ensuring that as gas fired central heating systems are removed resources in them are recovered for recycling.

#### 7. Consumer protections fit for our sustainable future

Low carbon choices will require consumers to make complex and often costly decisions and often in evolving, new markets, leaving them vulnerable without adequate consumer protections. People therefore need to be supported by a framework of effective consumer rights and protections. They need to easily access the products and services that are right for them, with reassurance that they will perform effectively and be safe – and that they can trust the professionals and tradespeople who advise them and where needed refit, repair or install. If things should go wrong, they must have a simple, but reliable route to effective redress.

# Introduction

This is a crucial year for action to tackle climate change. The UK is already experiencing more extreme weather patterns as the impacts of global warming become far more real. The UK's Climate Change Committee (CCC) made it clear in its most recent risk assessment that adaptation action has failed to keep pace with the worsening reality of climate risk.<sup>2</sup>

The Intergovernmental Panel on Climate Change<sup>3</sup> even more recently set out a stark warning that climate change is widespread, rapid and intensifying, and some of the changes already set in motion - such as continued sea level rise - are irreversible over hundreds to thousands of years. The world has already warmed 1.1°C above pre-industrial levels and is likely to breach a crucial safe level of 1.5°C of heating in the mid-2030s, with a further 'outer' safety level of 2°C being breached around 30 years from now. The most recent decade (2011–20) was likely the warmest in 125,000 years and concentrations of carbon dioxide in the atmosphere are likely at their highest level in 2 million years. However, strong and sustained reductions in emissions of carbon dioxide and other greenhouse gases will limit climate change. Far more ambitious action is therefore needed if the government is to mitigate the impacts and achieve its commitments to reaching net zero by 2050.

This is also the year that the UK is taking a global lead on driving action to tackle climate change as host of the UN Climate Change Conference COP 26 in Glasgow. This, as well as the urgency of the need for action, is shining a light on government's policy response and proposals. The Prime Minister has published a ten point action plan for tackling climate change and a net zero strategy will be published prior to COP26.

Most of the reductions in UK emissions that have been achieved to date have come from reduced fossil fuel use in the power sector, so have been largely invisible. The CCC has made it clear that future reductions will require much more action directly from people.<sup>4</sup> The policies required to meet net zero targets will therefore need action from consumers – and will be much more visible to our everyday lives, whether that's how we travel, heat our homes or choose what to eat. Fundamental changes are going to be needed to how we choose and interact with products and services over a relatively short time span – and it is essential that the transition is fair and evenly distributed.

*“Only a transition that is perceived as fair and where people, places and communities are well supported will succeed.”*

Committee on Climate Change

Against this backdrop, Which? has conducted new consumer research to understand how aware people are of some of the most important changes that are needed, the main barriers they perceive and the support they feel they need from government and businesses. Through this research, we spoke to people representative of the population across the entire UK and nations to understand their expectations, actions and priorities.

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2 Independent assessment of UK climate risk, Climate Change Committee, June 2021

3 Sixth Assessment Report, Intergovernmental Panel on Climate Change, August 2021

4 The sixth carbon budget, The UK's path to Net Zero, Climate Change Committee, December 2020

We also hosted a series of roundtables with key stakeholders from across the policy landscape to assess progress in areas that are particularly challenging, but key to the government achieving the necessary reductions in emissions: low carbon mobility, with a particular focus on electric vehicles (EVs); the transition to low carbon heating and energy efficiency; and low carbon consumer products with a focus on technology and white goods.

This paper draws on these findings and sets out key considerations for government in the interests of consumers in these areas, as well as the crucial area of changing diets, as it looks towards COP26 and wider ambitions to achieve net zero.

#### Survey methodology

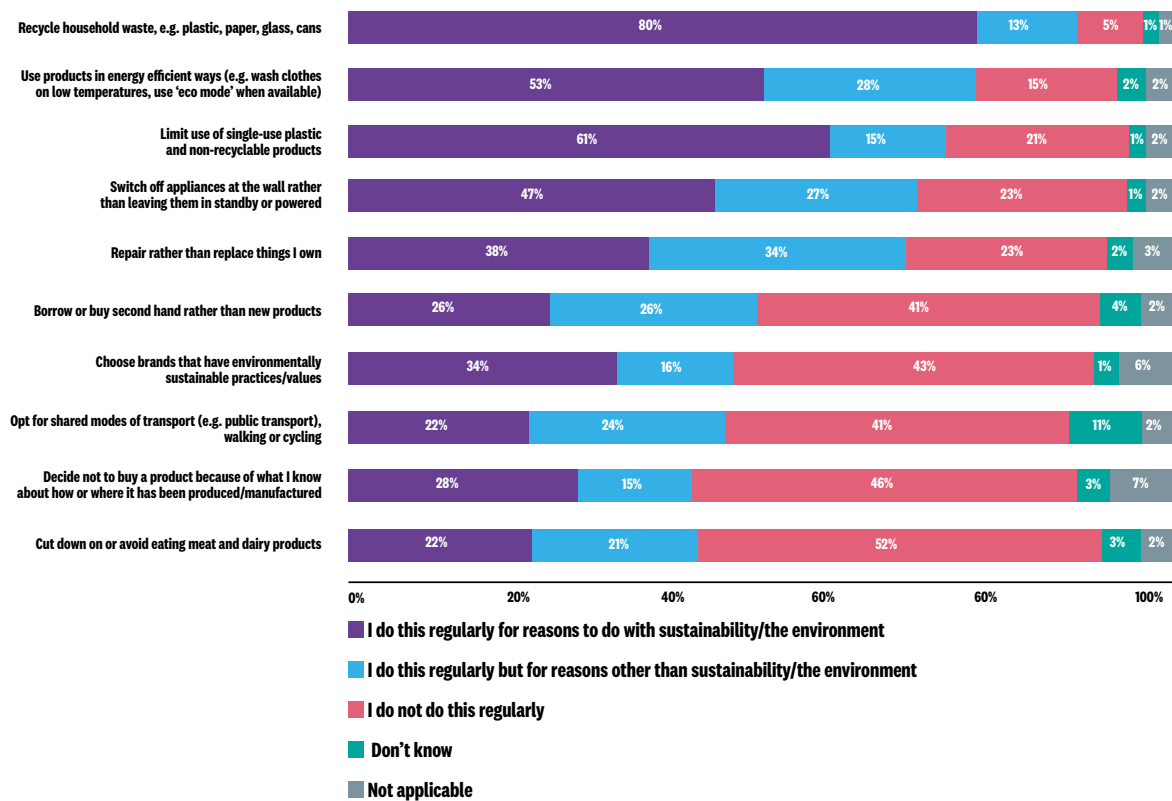
Which? surveyed 3,619 UK adults between the 30th April and 2nd May 2021. This 3,619 sample was made up of 2,000 UK respondents with boosts to achieve c.500 respondents for each devolved nation. Fieldwork was carried out online by Yonder and data have been weighted to be representative of each nation's population by age, gender, social grade (aged 18+); and then weighted by region.

# Consumer understanding and engagement

Our research finds that consumers seem to understand the urgency of the climate crisis with most people taking some action to be more sustainable. People support ambitious targets and meaningful change, but don't always understand what they can most effectively do to reduce their own impact or what is already being done or proposed to support sustainable consumption. There is a mismatch between what people are doing now – and what they should be doing to have the greatest impact. People want more support, direction and help with where to start on what can seem a very complex issue.

Over half of consumers say environmental sustainability influences their choice of how they heat their homes, the food they eat, the goods they buy and how they get around (see chart 1).

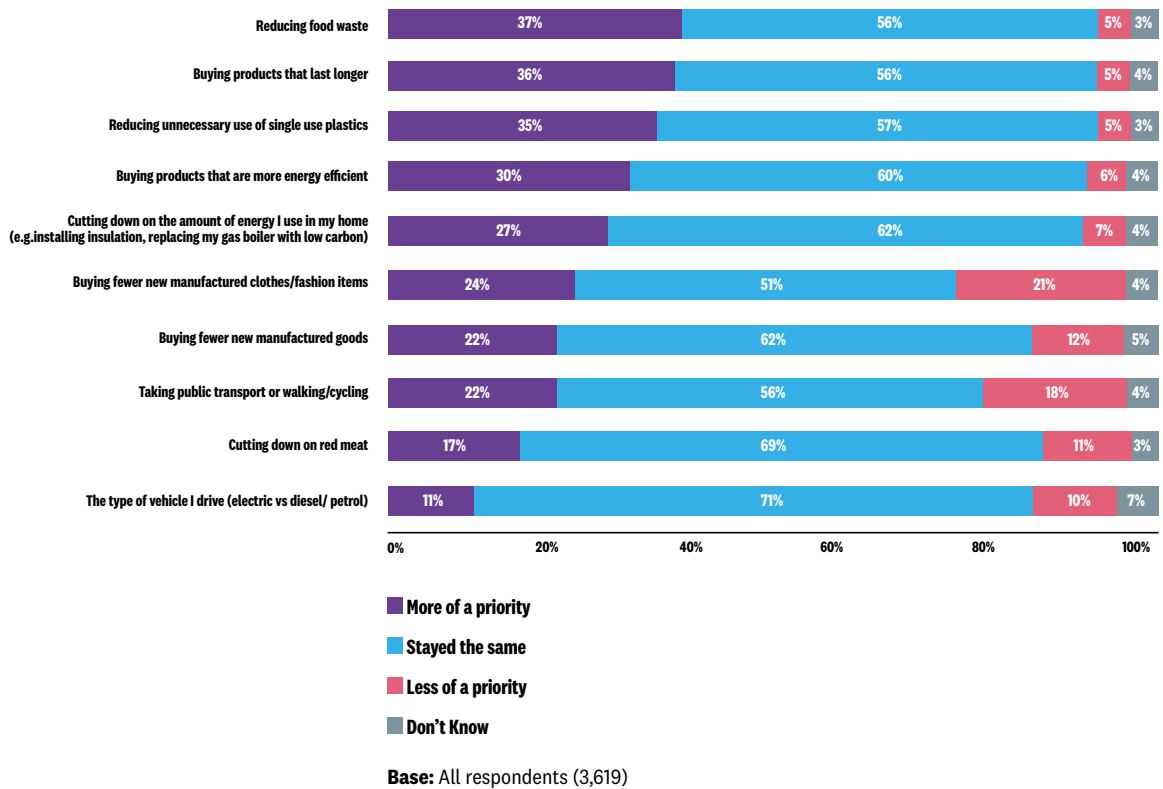
**Chart 1:** Actions taken regularly to reduce consumers' impact on the environment



Base: All respondents (3,619)

Consumers' experiences during the pandemic have also maintained or strengthened their priorities. Three-fifths (62%) say taking more sustainable actions is more of a priority in at least one area (see chart 2). Over a third say reducing food waste, buying more durable products and reducing unnecessary use of single use plastic is more of a priority since the pandemic began.

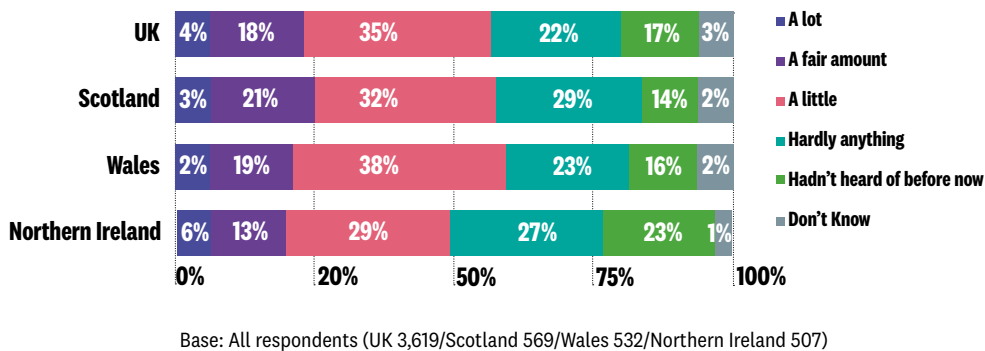
**Chart 2:** Impact of the pandemic on how consumers prioritise sustainable actions



**Limited awareness of government ambitions**

Awareness of the UK governments’ target to reach net zero by 2050 is relatively low. While three-fifths (58%) of people know something about it, just a quarter (23%) say they know ‘a lot’ or ‘a fair amount.’ Around one in five (17%) consumers had not heard about net zero before participating in our research, with almost a quarter (23%) of Northern Irish respondents saying they had not heard of it.

**Chart 3:** Knowledge of the government’s Net Zero target

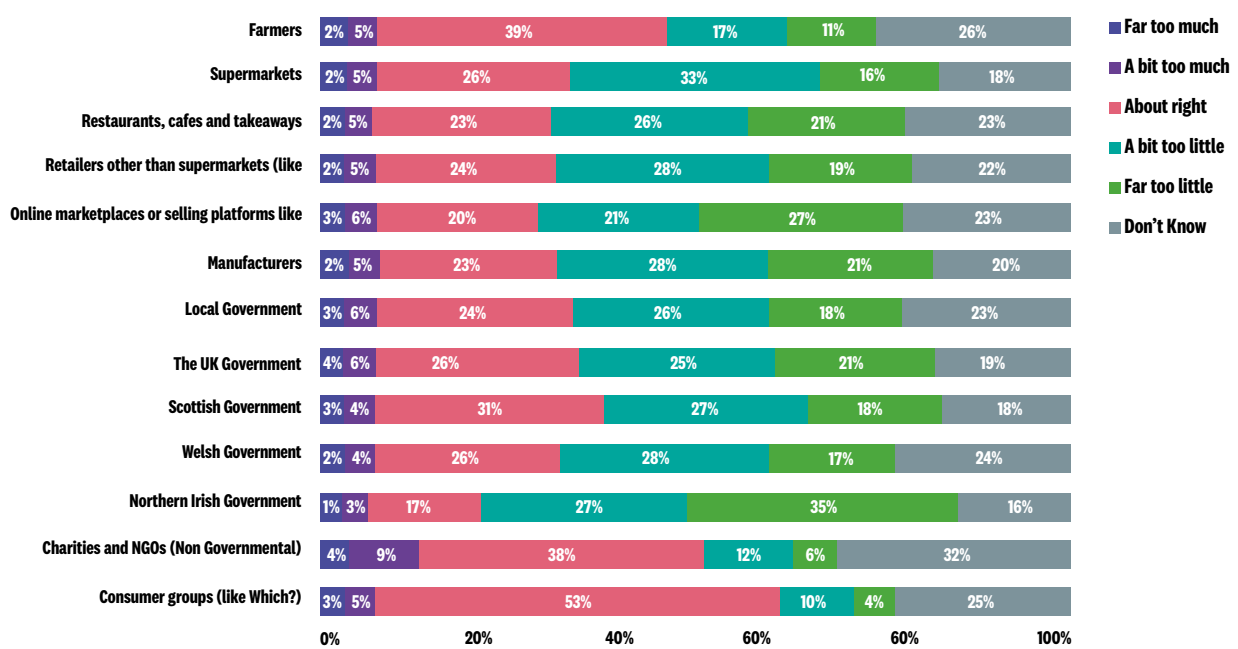


**Too little action**

Paired with this there was a strong belief that not enough is being done. Almost half (46%) think the UK Government is doing too little to support consumers to make more sustainable choices, with the devolved governments faring similarly poorly and, in the case of Northern Ireland, much worse (see chart 3). Private and third sector organisations do little better with only consumer groups perceived by a majority (53%) as doing the right amount when it comes to the environment.

This perception of inaction is informed partly by consumers’ awareness of the government’s net zero targets, just 23% of whom know ‘a lot’ or ‘a fair amount’ about what these are. Those with high awareness are significantly more likely to say the government provides the right amount (30%) of support, compared with 21% of those who have never heard of it.

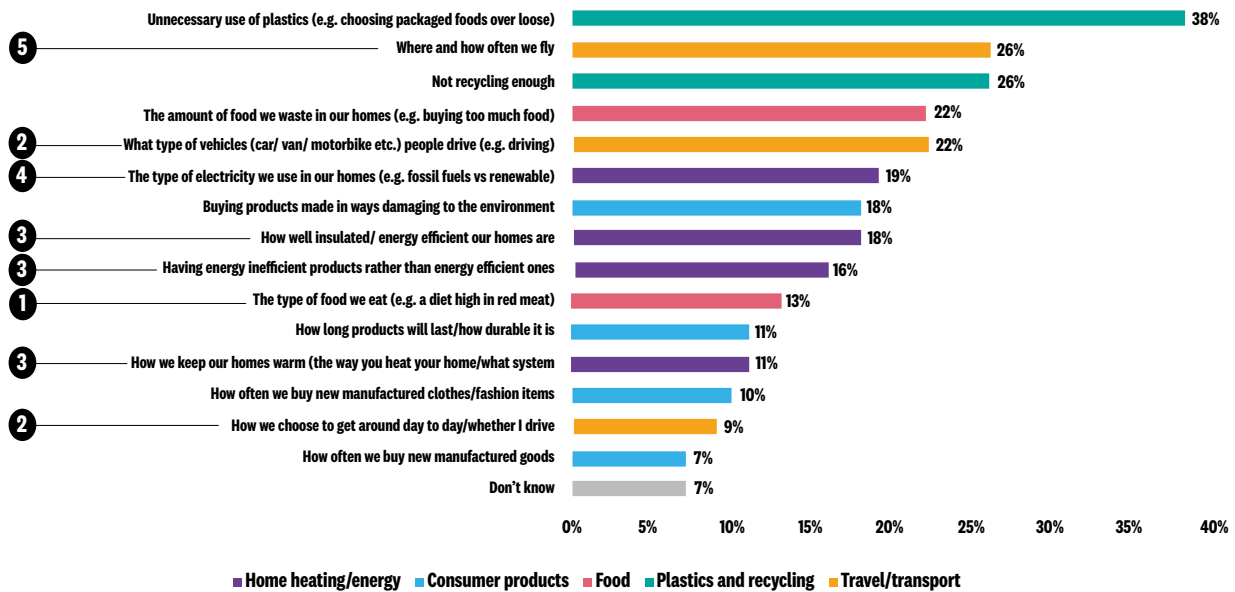
**Chart 4:** Perceived appropriateness of actions taken to support consumers to make more environmentally sustainable choices, by organisation type.



Base: All respondents/respondents in Scotland/Wales/Northern Ireland (3,619/569/532/507)

Paired with this perceived lack of action and support, there is misalignment between consumers’ perceptions of what household level actions have the biggest negative impact on the environment and what the data tells us actually does (see Chart 5). Issues which have received intense media attention, such as plastics and recycling, while important, are typically seen as having a far greater environmental impact than they actually do. In contrast, issues which have a greater negative environmental impact, such as consumers’ dietary choices and choice of home heating feature lower down the list.

**Chart 5:** Consumers perceptions of actions that have the greatest impact on the environment



Sources: Defra: Consumption Emissions 1997-2017 Data Download V2. BEIS 2017 Final Emissions Statistics Report. (Defra, 2020b. BEIS, 2017)

Base: All respondents (3,619)

This lack of awareness may have a real impact on the actions consumers take. While our data shows consumers are willing to and do make pro-environment choices (see chart 1), these actions are typically quite easy to do and fit into their existing lifestyles, but have less of an impact on their households’ emissions. Yet, they are also the ones consumers think make the biggest difference.

Choices which would have the greatest impact on households’ emissions, such as changing diets, mode of transport or home heating systems, are less commonly acted on. While this may be because these actions are harder for consumers to do – they may cost them more time or money or disrupt their current lifestyles – it could also be because they are not aware how great a contribution these things make to their households’ emissions.

**Help me do the right thing, but in a fair way**

Half of UK consumers (51%) want the government to be more ambitious in its plans to achieve net zero by 2050. Three quarters (77%) of consumers think that government targets will not be met if retailers and manufacturers do not support consumers to do the right thing.

*Why wait till 2050 when we see other countries promoting it aggressively and the actions can be seen right now on the ground”*

Female, 37, North West

However, the type of support matters. While there is typically strong support for the government, retailers and manufacturers to introduce measures to make it easier for consumers to be more sustainable there is general discomfort with bans – for instance, on new petrol/diesel vehicles or types of home heating – compared with more supportive measures that would incentivise more environmentally sustainable choices. There was also a common wish that those least able

to pay should not bear the brunt of costs associated with moving to more sustainable forms of consumption.

*“What will the government do to support poor people who can’t afford to make the changes themselves?”*

Female, 33, East Midlands

*“I would like to know they would implement plans to make this sustainable for low income families”*

Male, 41, Scotland



# Supporting consumers to transition

## Low carbon transport: electric vehicles

Transport is the UK's largest source of carbon emissions and road transport is an important contributor. Reducing road travel and incentivising shifts to public transport or active modes of travel (eg. cycling, walking) can therefore bring significant emissions reductions. Not everyone has a car or needs one, but for those that do, switching to an electric vehicle (EV) at the right time is an important change to help reduce emissions. Recognising this, the UK Government has committed to phasing out the sale of new petrol and diesel cars by 2030 and hybrids by 2035.

The CCC has stressed that for the transition to zero emissions vehicles to have a meaningful impact on the UK's net zero ambitions, battery EVs must comprise almost 50% of new car sales by 2025, with hybrid technology playing a limited role.<sup>5</sup>

In 2019 there were 31.9m cars and 4.2m light goods vehicles in the UK. In March 2021 sales of battery electric cars and plug-in hybrids accounted for a combined 13.9% of the market, up from 7.3% a year earlier, a total 22,000 electric cars and another 17,000 plug-in hybrids.<sup>6</sup>

In its sixth carbon budget, alongside recommending the introduction of a zero-emission vehicle mandate for manufacturers, the CCC stressed that enabling the rapid take-up of EVs across society will be vital to delivering emissions reductions in transport. It recommended strong consumer incentives to purchase zero-emission vehicles (eg. purchase subsidies). It also stressed the need to continue to support the EV charging infrastructure including investment to support on-street and other urban charging solutions for those without off-street parking, and to support charging when travelling to destinations away from home.

A recent Which? report<sup>7</sup> highlighted the problems consumers face with the current charging system, including a lack of universal access and confusing payment systems. Our research has also highlighted how the high upfront costs required to purchase an EV can take as long as ten years to recoup.<sup>8</sup>

In the past year, there has been an increasing focus on the policy and infrastructure changes needed to support a transition to net zero. The Office for Zero Emissions Vehicles (OZEV), a joint BEIS and DfT initiative, has consulted on the consumer experience at electric charge points and the Competition and Markets Authority (CMA) has conducted a market study into the infrastructure, calling for a clear national strategy.<sup>9</sup> Both the Public Accounts Committee<sup>10</sup> and Transport Committee<sup>11</sup> in the House of Commons have been critical of the scale and pace of action and criticised the government for lacking a clear plan for the necessary transition. This is a devolved area of responsibility and different policy approaches are emerging.

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5 <https://committees.parliament.uk/writtenevidence/22876/pdf/>

6 RAC Foundation (<https://www.racfoundation.org/motoring-faqs/mobility>)

7 Shock to the system, Which? magazine, April 2021 pp 12–17

8 Electric car running costs compared, Which? magazine, August 2021 pp.46–49

9 Electric Vehicle Charging market study, Final report, Competition and Markets Authority, July 2021

10 Low emission cars, Public Accounts Committee, May 2021

11 Zero emission vehicles, Transport Committee, July 2021

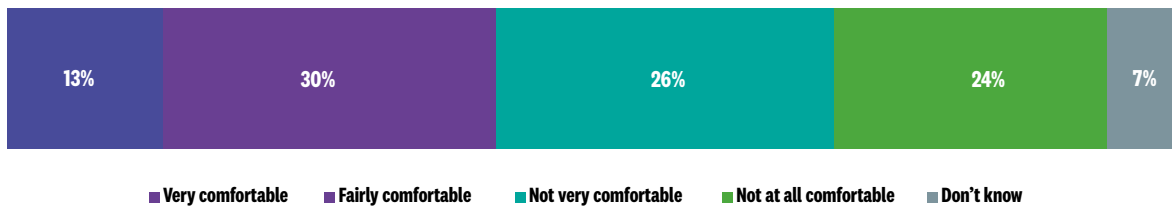
For example, the Scottish Government has invested over £45m in total since 2011 to establish a national public charging network, leading to a greater density of rapid chargepoints in Scotland compared with the rest of the UK.

**Consumer unease**

Our research shows how owning an electric car is not on the agenda for most people, with the perceived performance, upfront costs and concerns about access to charging being major barriers to uptake. Just two in five (41%) drivers signal some intent to buy an EV, with intention more common among younger people and higher earners.

Similarly, while the proportion of people comfortable (44%) and uncomfortable (49%) moving to an EV seems to be in balance, the strength of feeling on the uncomfortable side is substantially more negative (see chart 6). A quarter (24%) of people are very uncomfortable while one in eight (13%) are very comfortable. As with intention to purchase, younger consumers and those who are more affluent are significantly more comfortable switching to a solely EV (see box).

**Chart 6:** Consumers’ comfort with changing to a solely electric vehicle



Q27. How comfortable, if at all, are you with changing to a solely electric vehicle?  
 Base: All respondents except those who do not drive/do not need a car/van/vehicle (2,986)

**Who is more comfortable switching to an electric vehicle?**

Two fifths (44%) of consumers are comfortable switching to a solely electric vehicle. There are big differences, however, by age and income, and location.

**Younger consumers are more comfortable, on average, than older consumers.** Seven in ten (71%) 18-24 year olds and six in ten (61%) 25-39 year olds are comfortable, compared with just four in ten (40%) 40-64 year olds and a quarter (26%) of those aged 65+.

**Higher earners are also more comfortable.** Six in ten (60%) consumers in households earning more than £48,000 are comfortable switching to an EV. In contrast, under half (46%) of those earning £34,001-£48,000 and one in four (40%) of those earning less than £34,000 felt the same.

**Urban dwellers are more comfortable switching to an EV.** Almost half (47%) of respondents from urban areas are comfortable switching to an EV compared with just a third (34%) of those living in rural areas.

**Londoners express the highest comfort with switching to an EV.** Two thirds (66%) of London-based respondents say they are comfortable switching to an EV – the next highest region is the West Midlands at 48%. Londoners’ comfort switching may be linked to the availability and visibility of EVs and charging infrastructure and policy initiatives such as the Low Emission Zone in the capital.

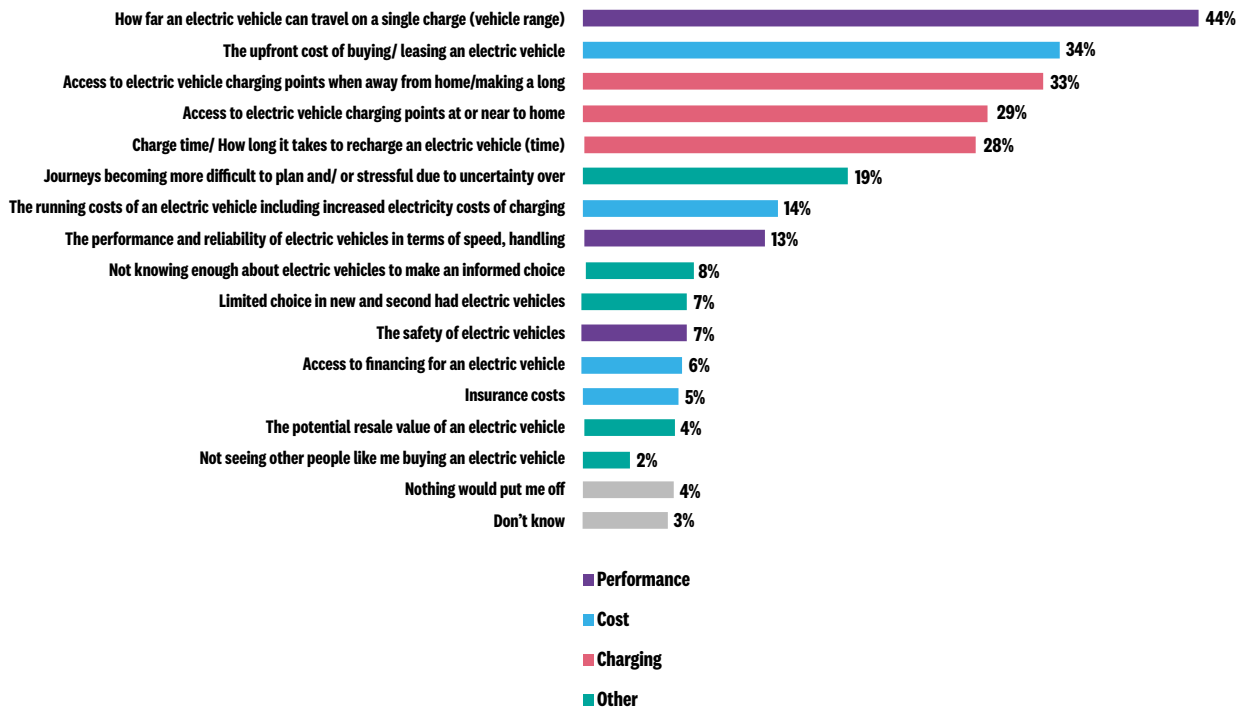
Consumers identify multiple barriers to buying an EV with perceptions of vehicle performance, particularly ‘range anxiety’ or how far a driver can go on a single charge (44%), and the practicalities of EV ownership at the forefront of people’s minds (see chart 7). Access to charging points when at home or on journeys, how long vehicles take to charge and concerns about increased stress associated with running an EV and planning journeys may contribute to consumers’ lack of comfort going electric. Many of these issues are of greater concern for respondents in the devolved nations than in the UK as a whole.

*How will I be able to drive an electric car from Nottinghamshire to Aberdeen overnight as a single female who will be scared to hang about in the dark waiting for it to charge?”*

Female, 56, Scotland

Cost is also a concern. A third (34%) of consumers say the upfront costs of an EV and ongoing running costs (14%) put them off buying one.

**Chart 7:** Perceived barriers to switching to an electric vehicle



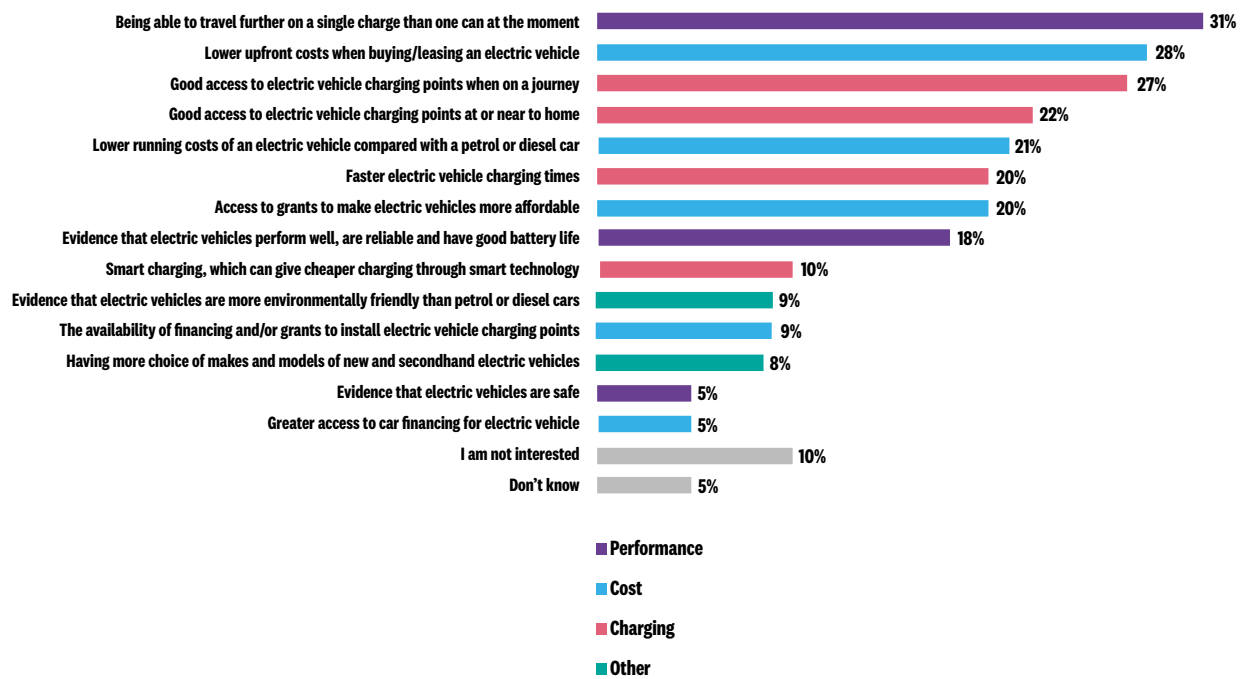
Base: All respondents except those who do not drive/do not need a car/van/vehicle (2,810)

### Inaccurate perceptions

Consumers’ perceptions of what owning an EV may be like may not reflect reality – roundtable attendees challenged some of respondents’ views as outmoded (see below). That said, there is a clear need for more support to go electric among consumers. Most (85%) identify something which would encourage them to go electric, with the relatively consistent levels of support across measures suggesting multiple interventions might help consumers make the switch (see Chart 8).

Consumers are also positive towards the government building more EV charging infrastructure (73%) and investing in innovation in new EV technology to increase battery life and reduce charge times (73%). Support for more assertive measures, such as the ban on new petrol and diesel cars, is modest in comparison (48%) indicating the importance of providing support for consumers to embrace EVs.

**Chart 8:** Things which would encourage consumers to make their next vehicle electric



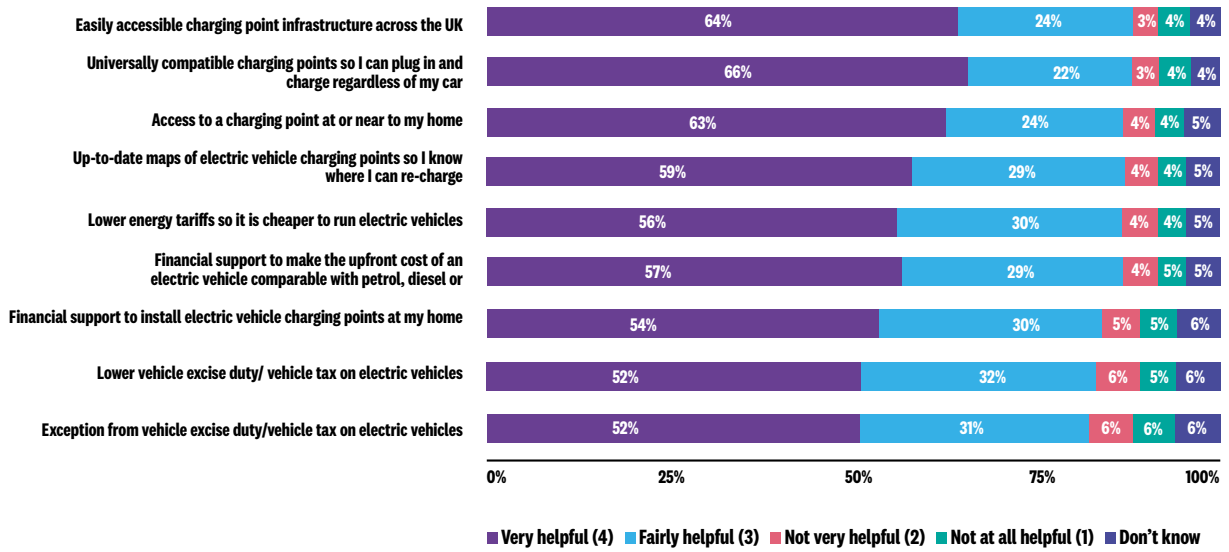
Base: All respondents except those who do not drive/do not need a car/van/vehicle (2,774)

### Rating of supportive measures

Consumers think a range of measures would be helpful for supporting EV ownership (see chart 9). Most perceive making charging EVs a simple process by ensuring charging points are easily accessible and compatible with vehicles regardless of brand as helpful.

Consumers also see making EVs cheaper to buy and run as helpful. Northern Irish consumers, who incidentally have the lowest disposable income of all the UK, are more likely to say financial incentives would encourage them to get an EV.

**Chart 9:** Perceived helpfulness of measures to support electric vehicle ownership



Base: 2,986 excluding non drivers.

### The Which? roundtable on transition to EVs

Which?'s roundtable focusing on EVs was held in June and included experts from a range of backgrounds, including representatives of the car industry, environmental and consumer groups, energy companies, think-tanks and government to discuss progress to date and priorities for action going forward, informed by these survey results.

As with our survey, two main issues dominated the discussion: the affordability of EVs and the charging infrastructure. Transparency about the total cost of ownership of EVs relative to petrol and diesel was emphasised so that people can make more informed decisions. As well as the upfront cost of purchase, this needs to reflect charging, maintenance and resale value.

Range anxiety, because of limited battery charge, has been a common concern for consumers buying EVs. But as the technology has improved, this has become less of an issue – data shows that most of the latest average EVs in fact have a range of at least 200 miles without recharging.<sup>12</sup> As such, there is now a greater need to address “charge anxiety”, an issue reflected in our research, where people are worried about the accessibility and availability of charging points because of the current limitations of the charging network.

Reinforcing Which?'s recent investigations, the charging network is therefore a key issue to be addressed to give people confidence to have an EV. There needs to be enough charging points, but they also have to be the right type in the right places. The need for public on-street charging is particularly important as around 30% of car owners have no off-street parking.

Three principles underpinned the approach that was now needed: adequacy of the charging infrastructure, so that consumers do not see charging as any more difficult than refuelling is today; experience, which includes ease of payment, reliability and pricing transparency; and equity, so that less affluent households don't find themselves disadvantaged when it comes to charging, particularly as charging at home tends to be far cheaper than using public chargers

Local authorities were seen as having an important role in coordinating whole area coverage. The importance of wider benefits also needs to be recognised and incentivise local action, including improved air quality.

Government support for buying new vehicles has played an important role, but more support is needed to ensure that all motorists are able to benefit from EVs. The functioning of the second-hand market will also be a crucial factor and particularly important for consumers on lower incomes. There are specific issues that will need to be addressed in this market to help it develop and become a more viable option, including reassurance for consumers that battery life will be reliable as the technology continues to develop. There is also an important dynamic between company cars and the wider markets. It was pointed out that fifty one per cent of new car sales are company car sales and these will form half the 2nd hand market in around three years' time. Car clubs and car sharing also need to be encouraged and considered as part of the debate.

Clearer information for consumers was also an important theme, with the current situation described as bewildering. Consumers need to be able to access reliable information and advice, including realistic and accurate information about EVs' range and performance. Wider benefits of EV ownership should also be promoted, including performance and satisfaction. In the Which? annual car survey, EVs, after full hybrids, are at the top of the list of the most satisfying cars to own when satisfaction is divided by fuel type. Adoption of EVs can also have wider significance as they can be a 'feeder' into the wider energy transition that is needed across different types of consumption and they therefore can help people understand and make wider changes, for example to their home heating.

### Action needed

- A coherent strategy needs to be developed across all of the UK governments and the car industry to support consumers' change to an EV, as part of the wider transition to low carbon transport – and ensure that EVs are an option for all consumers, no matter where they live in the UK, and not just the most affluent. This needs to include:
  - Dispelling misconceptions about the performance of EVs, such as how far it is possible to travel before needing to recharge.
  - Urgent investment in an easily accessible, affordable and joined up charging infrastructure that will keep pace with future demand and support consumers wherever they live in the UK and whether or not they have off-street parking.
  - Making sure that the transition to electric vehicles is fair and equitable, and that they are an affordable option for all consumers.

<sup>12</sup> Figures from cars assessed in Which? independent tests, under the current test programme (updated in 2017). See how we test [here](#)

## Low carbon heating

Direct greenhouse gas emissions from buildings account for 17% of UK emissions, mainly the result of burning fossil fuels for heating. Of the 29 million existing homes across the UK, at least 19 million still need to be made low carbon, low-energy and resilient to a changing climate.<sup>13</sup>

Energy efficiency is a vital first step toward decarbonising existing homes, making them warmer and cheaper to run, improving health inequalities, tackling fuel poverty and acting as a precursor to replacing gas central heating with lower carbon systems, such as electric heat pumps (see below).

The energy efficiency performance of a building is currently assessed by an Energy Performance Certificate (EPC). These are graded on a scale of A (most efficient) to G (least efficient). To achieve net zero, the CCC has recommended that all buildings achieve EPC C over the next 10 to 15 years. Yet the latest government data has indicated that 16 million homes in England and nearly 19 million homes across the UK have EPC ratings of D or worse.

The most likely pathway to decarbonising home heating is replacing gas fired central heating (installed in 85% of homes today) with heat pumps, and a gas and oil boiler ban will apply in newbuild homes from 2025. Heat pumps are a highly efficient alternative form of electric heating, which coupled with the ongoing rapid decarbonisation of grid electricity, means they have the potential to deliver CO<sub>2</sub> savings of 60–70% compared to conventional electric heating, and 55–65% compared to an A-rated gas boiler. As the grid decarbonises further in coming decades, the carbon savings delivered by heat pumps are expected to increase further towards 90–100% CO<sub>2</sub> emissions reduction by 2050.

Approximately 240,000 heat pumps are operational in the UK in total. This figure is still very low compared to the 26 million fossil fuel (including oil) boilers estimated to be installed in UK buildings and represents less than 1% of all installed heating systems. As a nation we install around 4,500 new gas boilers every day, adding up to 1.6 million per year in both new and existing homes. Each of these will remain in use for 12 to 15 years.<sup>14</sup>

The Prime Minister's ten point plan envisages increasing heat pump installation from 30,000 per year to 600,000 per year by 2028. But the CCC has recommended an even higher target of over 1m heat pumps installed per year by 2030.

Government policy over the last decade to decarbonise domestic heating and improve energy efficiency has largely failed, reaching back to the 2013 Green Deal through to the most recent withdrawal of the Green Homes Grant, despite significant household and installer interest.<sup>15</sup>

However, 2026 will see the Energy Company Obligation (Eco) increased from £640m pa to £1bn to help fuel poor and vulnerable households. Greater support has also been provided to the Homes Upgrade Grant, Local Authority Delivery Scheme and the Social Housing Decarbonisation Fund Demonstrator, whilst the Renewable Heat Incentive for domestic premises has been extended to 2022.

Publication of new heat and building strategies is imminent and depending on the approach in different parts of the UK, these are likely to see issues such as green mortgages, stamp duty rebates, zero interest loans, reducing VAT on energy efficiency, optional salary sacrifices, council tax flexing and minimum standards included. Different levels of support are currently available in

13 The sixth carbon budget, The UK's path to Net Zero, Climate Change Committee, December 2020

14 Heat pump manufacturing supply chain research report, Final Report, BEIS, November 2020; Powering our net zero future, Energy White Paper, HM Government, December 2020.

15 Energy Efficiency of Existing Homes, Environmental Audit Committee, March 2021

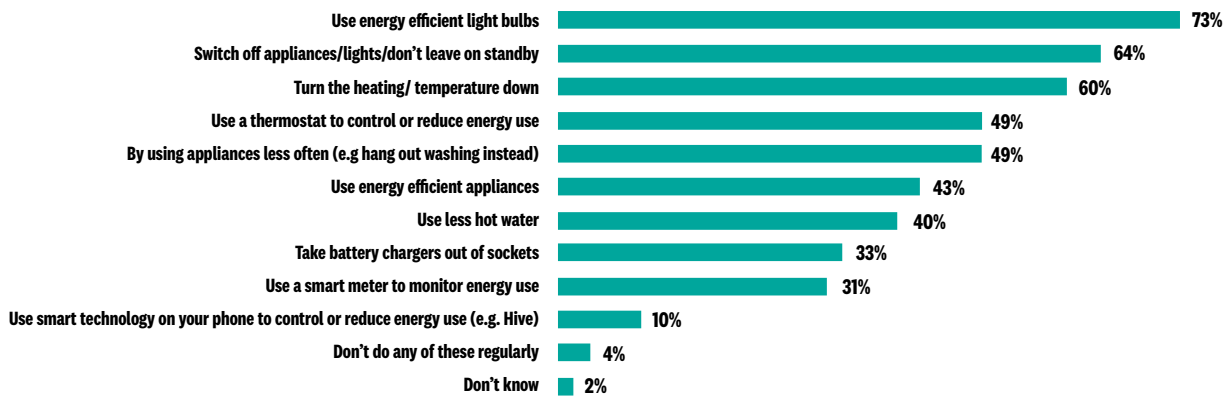
different parts of the UK. For example, the Scottish Government’s Home Energy Scotland helpline is run with the Energy Saving Trust, providing tailored advice on going green, including access to accredited installers.<sup>16</sup>

**Limited consumer awareness**

Despite the importance of addressing home heating in order to deliver on net zero, our research shows that few people view it as a priority for change, relative to other issues. This is despite consumers seeing a link between how they heat their homes and environmental sustainability:

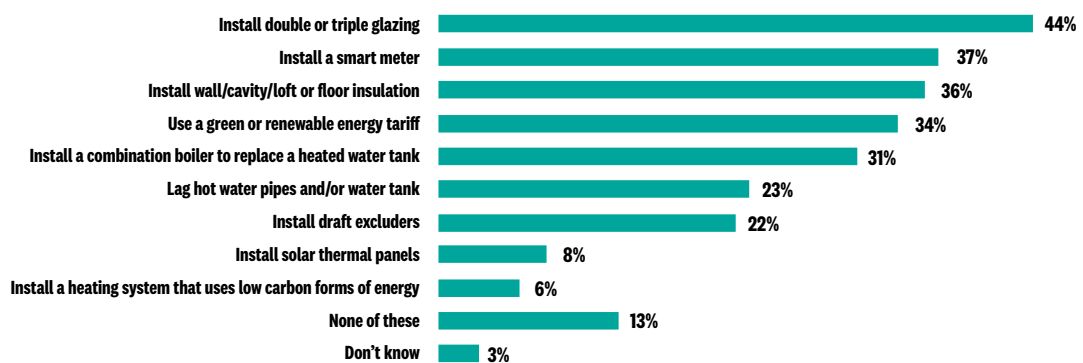
- 94% engage in environmentally sustainable behaviours when using energy, heating and hot water.
- 84% have made at least one change to their home to be more environmentally sustainable.
- 63% say environmental sustainability influences their choice of how they keep their home warm either a great deal or a fair amount.
- 58% say environmental sustainability influences their choice of energy provider either a great deal or a fair amount.

**Chart 10:** Behaviours regularly engaged in to be more environmentally sustainable when using energy, heating and hot water in home.



Base: All respondents excluding not applicable (3,582)

**Chart 11:** Measure installed in current home to be more environmentally sustainable when using energy, heating and hot water in home.



Base: All respondents excluding not applicable (3,245)

16 <https://www.homeenergyscotland.org/make-greener-choices-at-home-on-the-go/>



However, it appears that consumers underestimate the extent to which home heating contributes to household emissions. While data from Defra and BEIS shows that how we heat our homes, insulation/energy efficiency and choice of energy provider together form the third greatest household contribution to emissions (behind choice of diet and transport choices), less than a quarter of respondents identify an issue connected to home heating as having the biggest negative impact on the environment.

#### Variations across the nations

Consumers across the UK are taking actions and making improvements to their home to be more sustainable. However, there is a degree of variation across the devolved nations.

Welsh consumers appear to be leading the way. They are significantly more likely to do almost all the actions listed compared with the UK average and have the highest proportion of people taking 6+ actions (43% compared to a UK average of 34%).

Northern Irish consumers, on the other hand, are less likely to have made sustainability related home improvements (78% compared with a UK average of 84%). Fewer than one in ten has signed up to a green/renewable energy tariff (10%), installed solar panels (8%), installed a smart meter (7%) or changed their heating system to a low carbon one (5%), substantially less than the UK average.

However, this is potentially related to the range of sustainability products and services available within the market and their compatibility with people's heating systems, rather than people's appetite to be sustainable. Northern Irish consumers are the most likely to have installed double or triple glazing (55%), insulation (53%), lagged pipes (38%) or installed draft excluders (28%).

#### Cost and complexity

While many consumers take actions (see chart 10) or have made changes to their home (see chart 11) to be more environmentally sustainable, the actions consumers most commonly undertake are not especially onerous or costly. Few have taken more impactful measures, like retrofitting their homes or installing low carbon heating – which are more disruptive and costly, but also more important in terms of environmental impact.

Although consumers identify multiple barriers to moving to low carbon heating (see chart 12), the cost of making changes is the biggest concern by far. Almost three-fifths (56%) of consumers say cost puts them off, with a third (32%) also concerned over the increased running costs of changes. There is relatively little differentiation between the other factors although the underlying theme is one of confusion or uncertainty. The low carbon heating market is unfamiliar and perceived to be complex and difficult to navigate, with consumers feeling they lack both the knowledge and access to the support they need to make informed decisions.

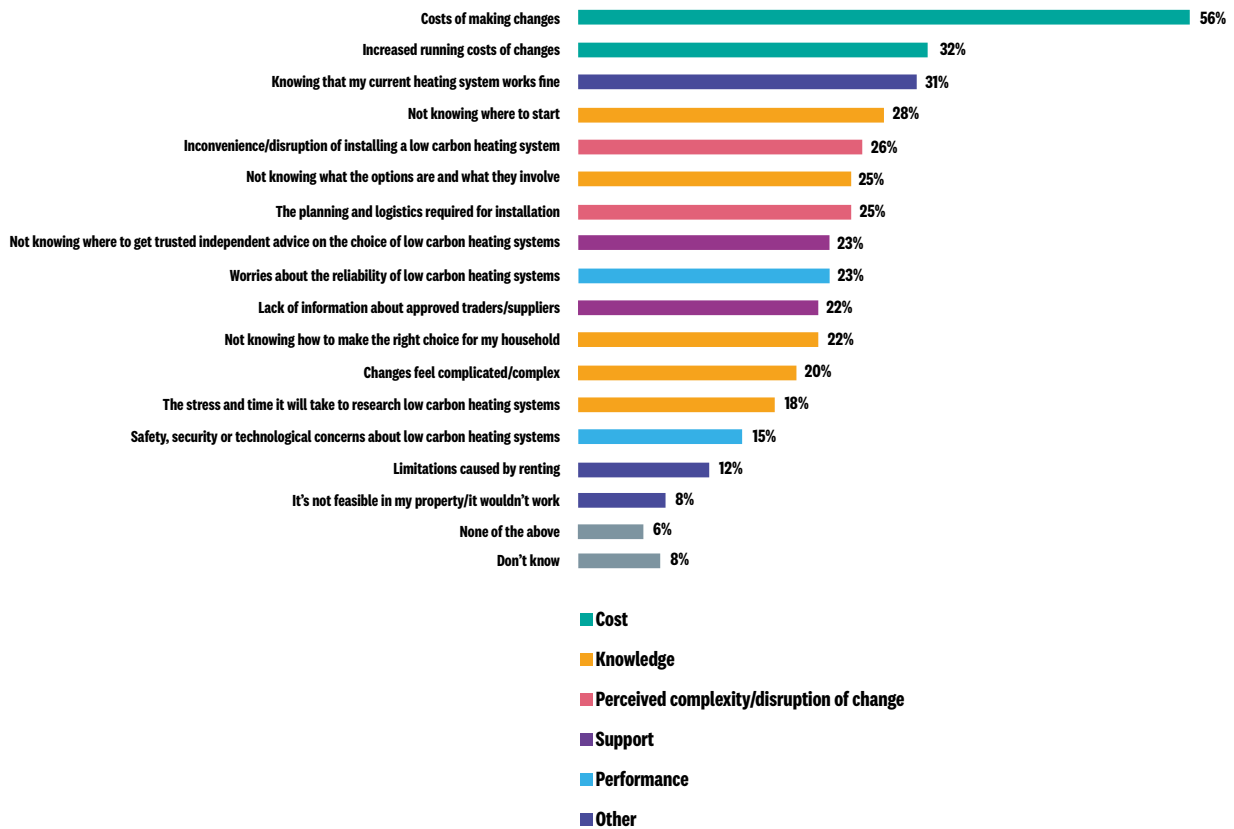
*“How does a heat exchange pump work, how much will it cost to install and how much will it cost to run compared with current installations?”*

Male, 61, Scotland

#### Cost: a concern for all

At a UK level there is no significant variation in the perception of cost as the key barrier to changing heating systems across income groups - the most and least affluent see cost in similar terms. However, respondents from Northern Ireland (62%), where per capita incomes are lower, are significantly more likely to identify cost as a barrier than the UK average (56%).

**Chart 12:** Things which would put consumers off having a low carbon heating system installed in their home



Base: All respondents (excluding not applicable) (3,029)

In addition to having low knowledge of the extent of home heating’s contribution to household emissions and confusion over where to go for advice and guidance, consumers are largely unaware of government-led changes to regulation of how we heat our homes:

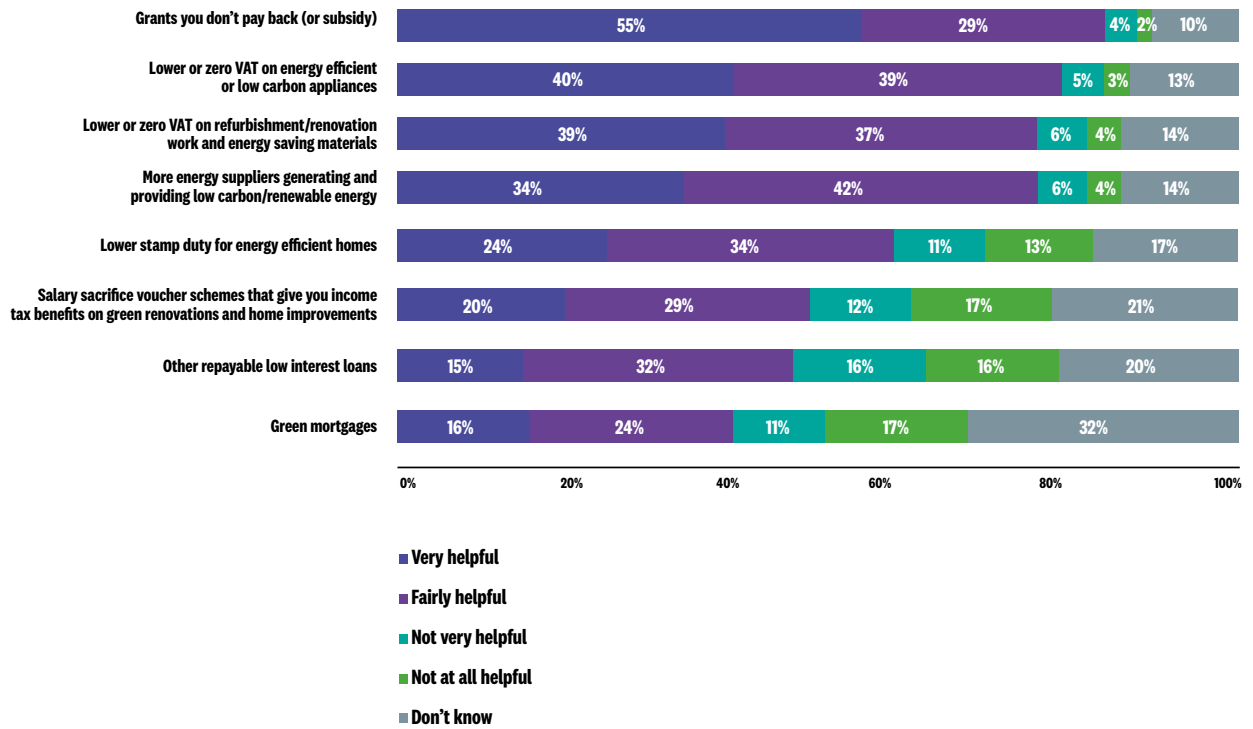
- 13% feel they know a lot or a fair amount about the need to move to a low carbon heating system for the UK to meet its net zero target.
- 17% feel they know a lot or a fair amount about government plans to ban the installation of new gas or oil boilers by the mid 2030s.

This may mean that consumers currently lack the necessary catalyst to make the switch when their current heating system reaches the end of its useful life (or even before).

### Support needed

Given the costs associated with moving to a low carbon heating system, consumers support measures that would make these systems more affordable or which would stimulate the market to make it more competitive and reduce the cost of these systems (see chart 13). Eight in ten (84%) respondents rate grants as very or fairly helpful to making their home more energy efficient. A similar proportion (76%~79%) support using tax incentives to encourage consumers to use more energy efficient appliances or refurbish their homes.

**Chart 13:** Perceived helpfulness of measures to make consumers' homes more energy efficient



Base: All respondents (3,619)

### Which? roundtable on low carbon heat

The Which? roundtable on low carbon heat included experts representing energy companies, housing and landlord associations, environmental and consumer groups, policy think-tanks and government. Reinforcing our survey findings, compared to the change to electrical vehicles, there was considered to be relatively low awareness among consumers of the need to act and how to act on home heating. There was seen to be an urgent need to broaden the conversation beyond a relatively small number of well-informed and generally more affluent consumers.

Cost was seen as a significant barrier to change. Scale and innovation could help to reduce the upfront costs, but this will not be on a par with the dramatic cost reductions in EV batteries or offshore wind. And although running costs over the long term may be lower in a more energy efficient home, the savings involved could be dwarfed in the consumer's mind by the large upfront costs.<sup>17</sup>

A huge question in the minds of the expert participants was therefore the balance to be found between the market (householder) and the state (taxpayer) paying for the change. It will be particularly difficult to use price signals to drive change as the largest users are often wealthy and would only notice the most extreme of price rises. Many of the poorest households are already living in fuel poverty making very difficult decisions on what sacrifices to make in order to heat the home. Finding the right, long term policy balance will therefore be critical, not least because past failures have discouraged home owners, landlords and tradespeople.

The emphasis was placed on a fair heat deal that supports the poorest households whilst making sure that other households have the right balance of incentives and support to encourage change and the right consumer protection in the short and longer term.

Improving advice to consumers is an important part of this and is needed right from the start of people's decision-making. The Scottish Government's Home Energy Scotland helpline, which is run with the Energy Saving Trust, was held up as a positive example of how this can be done, with support being provided throughout people's journey, including after installation when they may still need support.

Tools also need to be developed to help people understand whether their home is suitable for a heat pump and what the options and costs of action might be, including producing low carbon heat case studies and home visits.

There is also a need to recognise that energy efficiency and heating are conjoined but currently often undertaken by separate tradespeople. Ensuring consumers get integrated advice for a whole house solution and advice on sequential implementation of measures is important – and the Scottish Government's approach was highlighted as a good example in this regard. The transition needs to be underpinned by a focus on skills and a better supply chain for retrofit and maintenance, backed up by robust consumer protections.

Perverse outcomes also need to be addressed – and different government policies aligned, including those across central and local government. It is not easy for early adopters to know what is best in their particular area. Local authorities are a crucial part of decarbonising the home and have an important role to play across a range of aspects, from local coordination to providing planning permission, enforcing standards for landlords and Trading Standards services.

Attention also needs to be focused on key decision times for consumers. The point of purchase of a house is, for example, critical in delivering large-scale improvements and so a time to be tailoring financial and wider incentives.

### Action needed

- As one of the most important, as well as most complex areas where change is needed, the governments need to urgently set out a clear strategy for supporting consumers to make their homes more efficient and heating systems low carbon, including:
  - Providing accessible, unbiased guidance on the changes that people need to make to their homes.
  - Putting in place robust consumer protections so that consumers can have confidence in the reliability and safety of these relatively novel, costly products and their installation, including access to skilled, trusted installers – and are able to enforce their consumer rights if anything goes wrong. This includes clamping down on rogue traders and scammers.
  - Expanding the financial support that is available, including predictable and well-advertised grants, low-cost loans and financing and ensuring there are specific support schemes for

<sup>17</sup> An air source heat pump costs around £8000 to £15000 to install, although some suppliers expect this to fall significantly within the next 18 months.

people who are fuel-poor, in vulnerable circumstances or less able to afford these changes. Finding the right, long term policy balance between the market and state support will be critical, not least because past failures have discouraged home owners, landlords and tradespeople from responding.

### Low carbon white and tech products

How people buy, use and dispose of consumer products is a fundamental issue that needs to be addressed in order to reduce carbon emissions, as well as reduce other environmental impacts. This has been an increasing focus of policy over the past two decades, with a steady expansion of initiatives and in some cases regulation, to support lower impact choices by informing consumers about the energy use of the products they buy, incentivising improvements by manufacturers through ecodesign regulations and making it easier to recycle white and technology goods. While the market has seen a steady improvement in energy efficiency, product longevity, repair options and recycling rates remain major issues that still need to be tackled.

The UK was a member of the EU when a new range of measures were being agreed to drive a transition to a low carbon economy, including expanding ecodesign regulations, updating energy labelling and encouraging a repair culture. There has been a commitment to go even further now that the UK can shape its own regulations. The Environment Bill will provide a range of measures to help deliver on this – from empowering the devolved nations to take measures to improve resource efficiency, to powers to regulate local authority approaches to recycling.

Some measures have already been implemented. Fridges, washing machines and televisions should soon be cheaper to run, easier to repair and last longer under recent energy efficiency and eco-design legislation.<sup>18</sup> This also brings in new rules for electrical products to tackle ‘premature obsolescence’ – which leads to unnecessary and costly replacements for the consumer.

But there are some important omissions. The products included in these regulations are still limited - smartphones won’t be included for example. However, there are some positive developments in terms of encouraging longevity through product repairs. Manufacturers will be legally obliged to make spare parts for some products available to consumers for the first time – so that electrical appliances can be fixed more easily. The move is expected to extend the lifespan of products by up to 10 years – preventing appliances ending up on the scrap heap sooner than they should and reducing carbon emissions at the same time – provided it is promoted so that consumers are able to take advantage of it.

From 1 March 2021 a new energy label has been introduced in the UK which scraps the confusing A+, A++ and A+++ ratings and resets the scale back to A to G. This is designed to reinvigorate the sustainability race for manufacturers. At first it will only affect washing machines, washer-dryers, dishwashers, refrigerators and televisions. Legislation covering lighting is being introduced separately, but tumble-dryers, ovens and other appliances remain the same for now.

From the start of 2021 large retailers have had to take back Waste Electrical and Electronic Equipment (WEEE) in-store rather than pay a fee to local authorities to do it on their behalf. This is expected to increase the number of in-store recycling points from 500 to 10000. The WEEE Regulations<sup>19</sup> include most products that have a plug or need a battery, with ten broad categories defined within the Regulations.

18 The Ecodesign for Energy-Related Products and Energy Information Regulations 2021

19 The Waste Electrical and Electronic Equipment (WEEE) Regulations 2013

Defra is also developing a Waste Prevention Strategy focused around three broad themes: products and design, including ecodesign and consumer information requirements, and extended producer responsibility schemes; systems, including producer responsibility and related collection and take back services, encouraging reuse, repair, leasing businesses and supporting facilities, and encouraging greater transparency by local authorities and businesses; and information and data, including developing materials databases, product passports and encouraging voluntary corporate reporting.

There has therefore been progress, but beyond these policy proposals, significant challenges still remain to improve the sustainability of white and technology goods. These include reducing the desire to buy and use ever more new products, even if they are now produced to be more efficient. The carbon footprint of their manufacture, as well as their usage, needs greater attention, as well as how products become obsolescent too quickly (whether because of a lack of durability, issues with software and security updates, huge variance in update support between products for example). We still also throw a lot out, rather than recycle, repair or reuse. A record 53.6 million metric tonnes (Mt) of electronic waste was generated worldwide in 2019, up 21 percent in just five years.<sup>20</sup> In the UK an estimated 2 million tonnes of WEEE items are discarded each year by householders and companies.<sup>21</sup>

### **A shifting consumer culture**

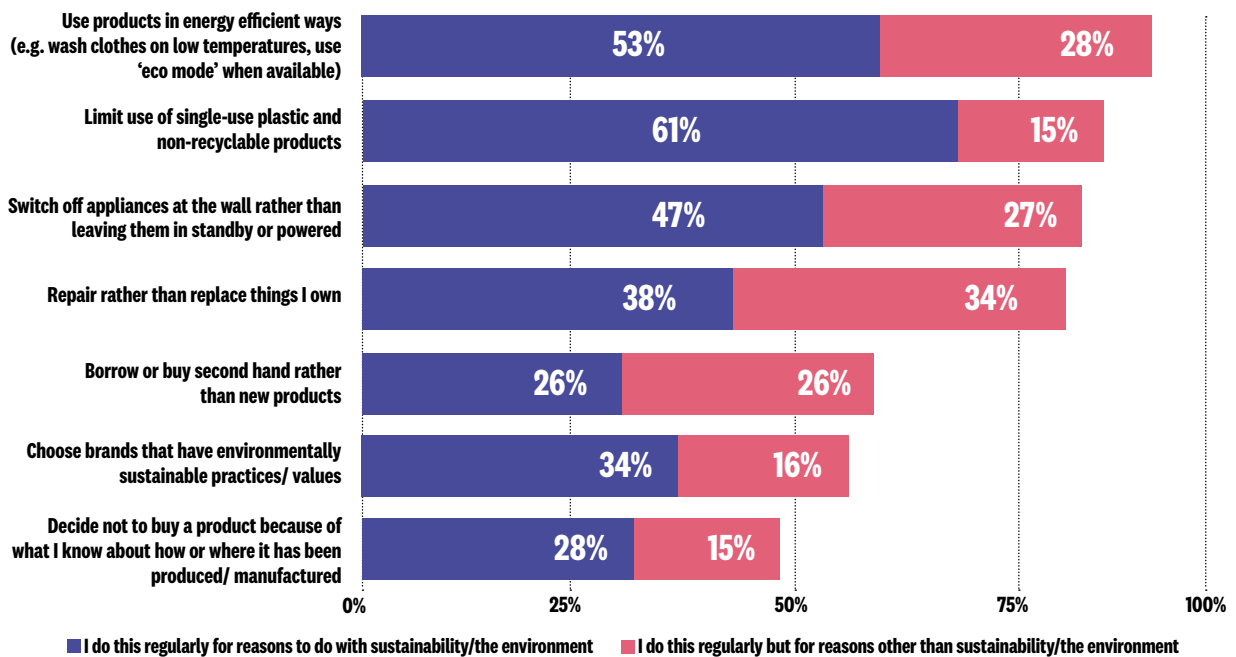
Sustainability partly informs consumers' decisions around what products they buy, how they use them, and where they buy them from (see chart 14). Notably, the actions most commonly undertaken by consumers are those that are easy to do and don't require significant lifestyle changes (e.g. limit use of single-use plastic), or which come with additional benefits to the consumer (eg. cost savings).

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20 UN's Global E-waste Monitor 2020

21 <https://www.hse.gov.uk/waste/waste-electrical.htm>

**Chart 14:** Actions taken regularly by consumer that impact the sustainability of their consumption



Base: All respondents (3,619)

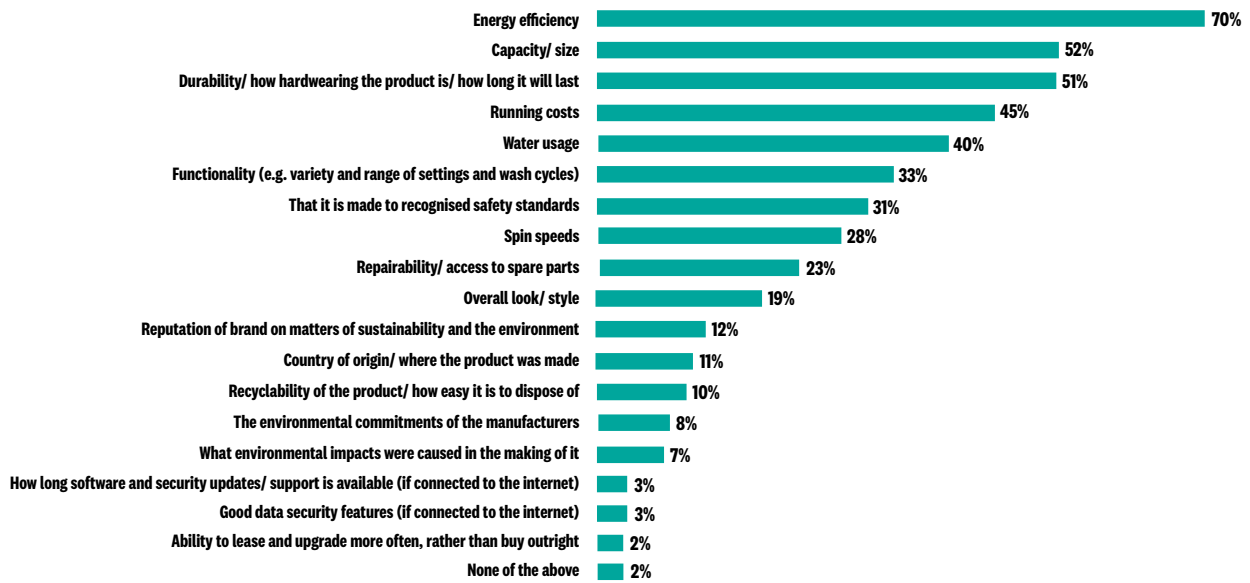
Over half (56%) of consumers claim they take environmental sustainability into account a great deal or a fair amount when choosing white goods; closer to a third (31%) claim to take sustainability into account when choosing to buy new technology products. However, when asked what specific factors they take into account when choosing either a washing machine or mobile phone, it seems performance and running costs are as, if not more, important.

When consumers are choosing a washing machine their top consideration is energy efficiency – seven in ten (70%) consumers take this sustainability related issue into account when making a purchase. Substantial numbers of consumers take other sustainability related issues into account when choosing a washing machine, such as durability (51%) and water usage (40%).

While this is heartening, other sustainability issues, such as the environmental commitments of the manufacturer (8%) and the environmental impacts caused in the making of the products (7%) were considered by fewer than one in 10 consumers, perhaps unsurprisingly well below factors linked to running cost, performance, functionality and safety.

Sustainable considerations might be made because they deliver positive environmental impact and secondary benefits, such as cost savings. Energy efficient products are better for the environment and reduce consumers' bills. A more durable product won't need to be repaired as often. This suggests secondary benefits to sustainable choices need to be highlighted alongside environmental benefits.

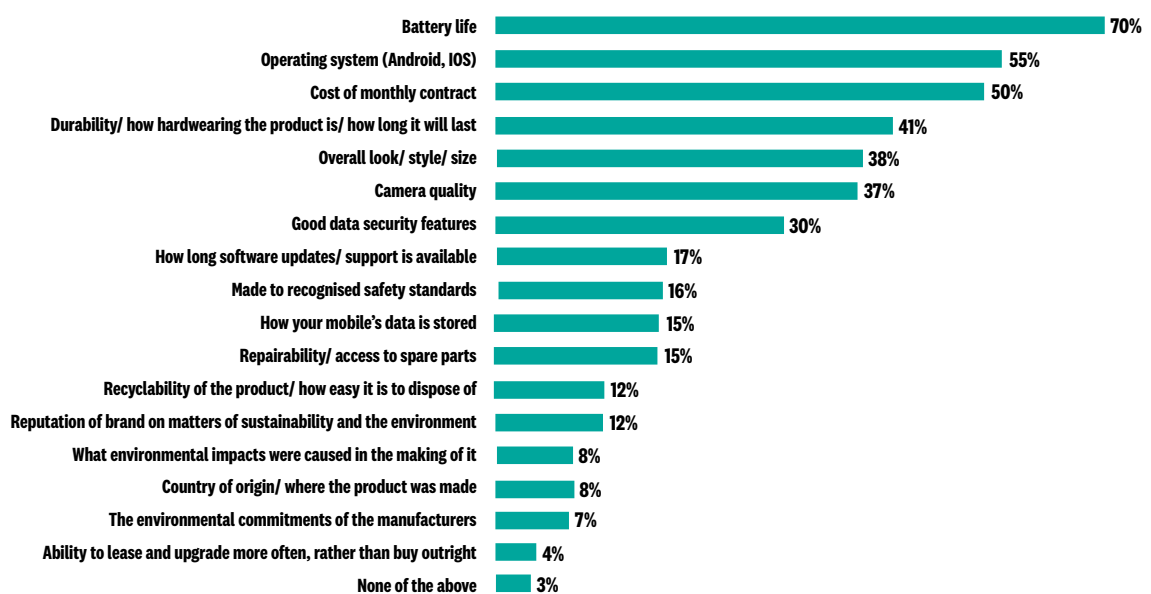
**Chart 15:** Consumers’ top five considerations when choosing a washing machine



Base: All respondents for whom question is relevant (3,549)

When it comes to mobile phones, sustainability is less consistently a top priority and those sustainability issues that do feature typically also contribute to product performance. Although the sustainability related issues of battery life (70%) and durability (41%) feature highly, consumers give considerable consideration to their mobile’s operating system, the cost of a monthly contract, look/style, camera quality and data security. Importantly, as with energy efficiency, battery life can be understood as being as much about functionality and performance as it is about helping the environment, and it’s not clear what is driving consumers’ choice here.

**Chart 16:** Consumers’ top five considerations when choosing a mobile phone



Base: All respondents for whom question is relevant (3,529)

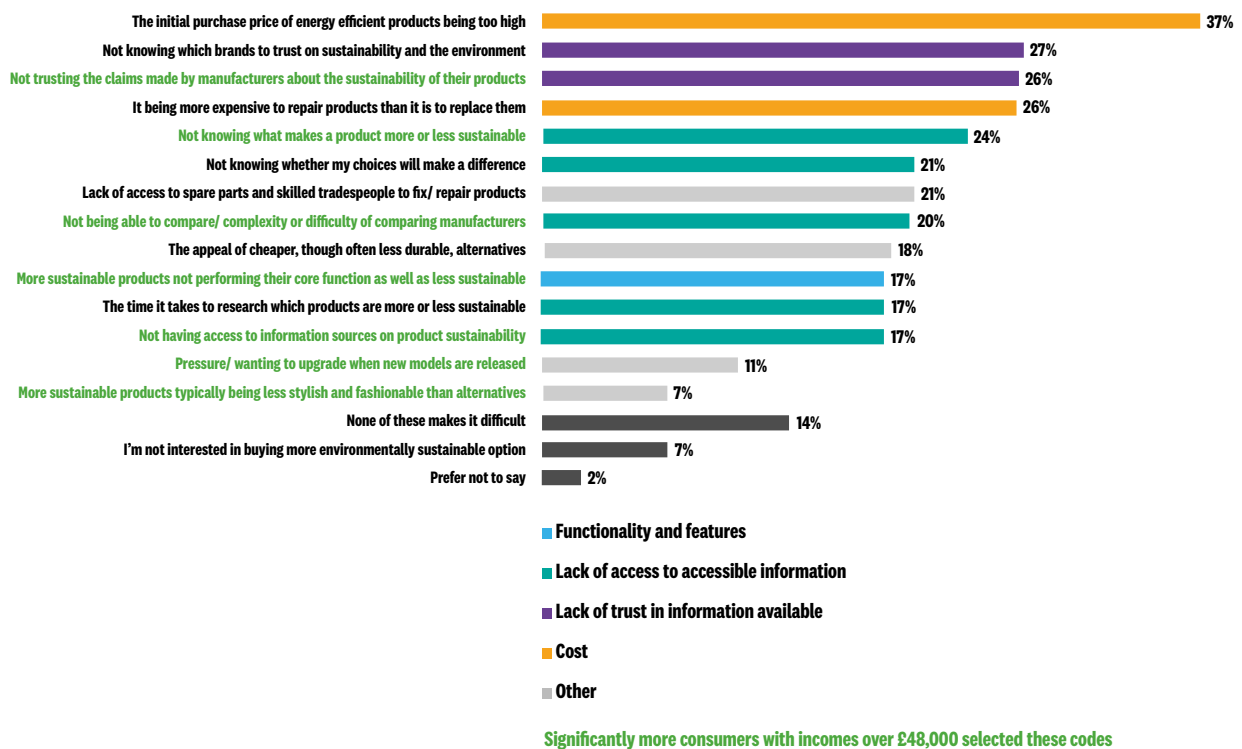


### Cost and lack of trustworthy information

Almost eight in ten (77%) consumers identify something which would put them off buying a more sustainable product. By far the most common barrier, and well ahead of other concerns, is the perception that energy efficient products are too expensive (37%).

While there is relatively little difference in the proportions mentioning other barriers (see chart 17), there appear to be particular issues with not knowing what or who to trust when it comes to environmental sustainability or not having access to the information necessary to make an informed choice.

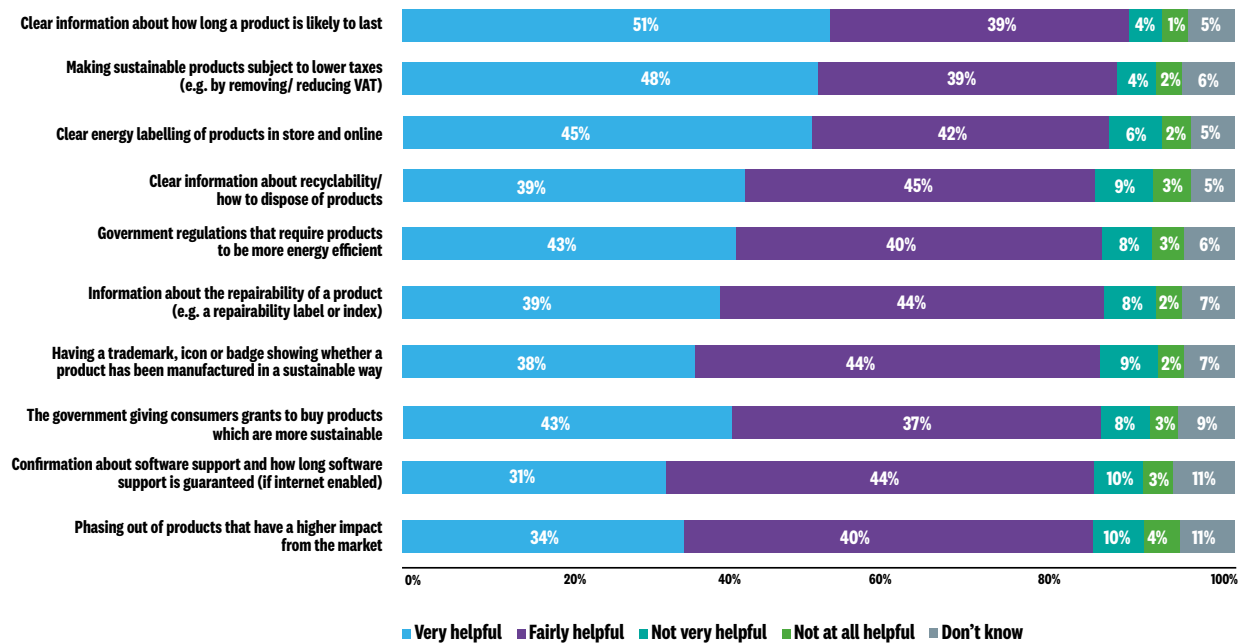
**Chart 17:** Things which would put off consumers buying consumer goods which are more environmentally sustainable



Base: All respondents (3,619)

That consumers perceive themselves to lack information is reflected in the types of support they would consider helpful (see chart 18). Nine in ten consumers say having clearer information on their products' likely durability (90%) and clear energy labelling (87%) would be helpful. Eight in ten think more information on repairability of products (83%), recyclability (84%) or having a trademark/ badge to show a product had been manufactured in a sustainable way (81%) would be beneficial.

**Chart 18:** Perceived helpfulness of measures to help consumers reduce the environmental impact of products in their home



Base: All respondents (3,619)

Measures to reduce the cost to consumers of environmentally friendly products are also considered helpful. Almost nine in ten (87%) consumers think reducing taxes on more sustainable products would be helpful, while providing grants to consumers to buy sustainable products is attractive to eight in ten consumers (80%).

### Which? roundtable on low carbon white and technology products

Which?'s roundtable on low carbon products focused on white and technology goods, and considered how consumers could be supported in transitioning to lower carbon products. Participants acknowledged that some progress had been made in improving energy efficiency. But there was also recognition that a more fundamental shift was needed in order to support consumers in choosing products that would have a lower carbon impact and creating a culture that supported greater longevity, reuse, repair and recycling.

As with the other two roundtables, participants were drawn from think tanks, environmental and consumer organisations and businesses. At the heart of the discussion was the fundamental question of whether consumers had too much choice and, as well as issues such as supportive labelling, whether there needed to be a greater policy focus on removing unsustainable products from the market – and how regulation or other incentives could support this.

Labelling can certainly be improved, along with wider information and messaging for consumers. It needs to be kept simple and help people identify the best performing products. Some participants pointed to the recent French experience, with the development of a reparability index for consumers, which could help people to consider product longevity. A greater understanding of the whole product life cycle is needed. Information needs to go wider than the product itself too, for example, supporting people in choosing reliable repairers for products.

The nature of the product is important and as a result the action needed to support consumers could be different. The dynamics and attitudes towards a washing machine, compared to a mobile phone, as highlighted by our survey, will be very different. Will consumers, for example, be prepared to accept a less aesthetically pleasing product, if it had a more modular design that was easier to repair? There also needs to be a change in attitude to 'needing new'. In general, consumers' expectations around product lifetimes need to shift, with people becoming used to owning products for longer and being more willing to get them repaired, for example. But they should also be able to expect more from manufacturers in terms of how long products will last. France was again highlighted as an exemplar for its policy on banning built-in obsolescence.

Ecodesign regulations were seen as important in driving improvements and taking the least efficient products out of the market. Washing machines were highlighted as a good example of where improvements have been made. There is an important role for government in driving this across a wider range of product categories, as well as for retailers working with suppliers to remove the least efficient products from the market. Business representatives stressed the importance of greater international harmonisation.

Affordability was stressed as being key – and even more so as a result of Covid. It was argued that this was an opportunity to make second hand, high quality, repaired products more readily available – and competent repair services more affordable and accessible. There are opportunities for new business models, including for servicing, as well as resurrecting older models, such as renting. But unintended consequences and trade-offs need to be carefully considered. It was suggested that people may be less concerned about the environmental impact of a product when they rent it, compared with when they buy it.

There was support for a focus on right to repair – but with an emphasis on making sure this can be done safely and issues around liability are clear. Longer-term warranties are important, not only for products but also for components and parts, including software. Lessons can potentially be taken from the car industry in terms of regular maintenance and repair.

Underpinning the discussion was the importance of greater policy coherence, nationally as well as globally. There needs to be much more joined up thinking between policy on sustainability and on product safety for example. The Office for Product Safety and Standards (OPSS) consultation on reform of the product safety regime was highlighted as an example of where issues such as reparability needed to be taken into account.

But it was also considered important to make sure that actions taken at a national level, also reflected the global nature of supply chains. Concern was also expressed that the way that carbon is accounted for domestically and internationally does not provide the right incentives, given the nature of supply chains and many products which are consumed in the UK being manufactured abroad, and therefore their emissions not being counted. Greater recognition of emissions from production overseas was therefore needed.

### Action needed

The government needs to deliver on its commitment to be more ambitious in its approach to driving a circular economy, working with the devolved nations. This includes:

- Delivering on its commitment to go beyond existing ecodesign and energy labelling regulations to help to drive product improvements, longevity and remove the least sustainable products from the market. The regulations should be extended to cover a wider range of appliances such as gas hobs, microwaves and kettles and new rules to tackle premature obsolescence need to include technology products, such as mobile phones.

- Further improving labelling, for example, by ensuring energy labelling reflects how consumers actually use products, by including durability information and by exploring other approaches that will help consumers, such as a repairability indicator.
- Building on the recently adopted right to repair legislation, bringing more products within scope and through measures such as longer warranties, minimum requirements for software updates and longer availability of spare parts in line with the life span of the product to support a more attractive, affordable, accessible and safe route to repairs.

## Food choices

Agriculture contributes around 12% of UK carbon emissions, with food processing, transport and food waste also adding to the environmental harm caused by the food system. A range of other environmental impacts sit alongside this. The recently published National Food Strategy<sup>22</sup> made it clear that the global food system is the single biggest contributor to biodiversity loss, deforestation, drought, freshwater pollution and the collapse of aquatic wildlife. Food is the second-biggest contributor to climate change, after the energy industry. The way that we eat is therefore destroying our environment and a similar case can be made for our health, with a great deal of common ground over what we need to be eating for our own health as well as the health of the planet.

The evidence is increasingly clear about what people should be eating for both a healthy and a more sustainable diet, but many barriers exist that make it difficult to follow this in practice. No official guidance exists on what people should be aiming to eat to reduce their environmental impact in the same way as it does for health, although the Government's Eat Well guide does take into account sustainability considerations – and if followed would reduce the environmental impact of people's diets.<sup>23</sup>

Considerations in terms of how our food choices impact include:

- the level (as well as type) of meat and dairy consumption, because of the high emissions associated with production, compared with plant-based foods
- a diet with a high carbon footprint or other environmental or sustainability impact more generally, eg. reliance on processed and/or imported food or drinks or unsustainably sourced feed, food, ingredients or other inputs; and
- unnecessary food waste.

Sustainability has been an increasing focus for some parts of the food sector over several decades, with many food companies publishing their plans for how they will improve their supply chains and production practices. The environment has also been an increasing focus in the way that foods are marketed to consumers, through green claims and assurance schemes, responding as well as driving a market for plant-based alternatives for example. Initiatives such as the Waste Resources Action Plan (WRAP) have helped to reduce food waste, although this still remains a major issue. Food waste from households and businesses is still around 9.5 million tonnes (Mt) per year. This had a value of over £19 billion a year, and would be associated with more than 25 Mt of greenhouse gas (GHG) emissions. WRAP has estimated that food that could have been eaten that gets wasted annually would make the equivalent of over 15 billion meals – enough to feed the entire UK population 3 meals a day for 11 weeks.<sup>24</sup>

22 The National Food Strategy: The Plan, Independent Review, July 2021

23 <https://www.gov.uk/government/publications/the-eatwell-guide>

24 <https://wrap.org.uk/taking-action/food-drink/actions/action-on-food-waste>

The food sector is very diverse and tackling its impact on the environment remains a major challenge that requires a fundamental re-examination of the system, including how we produce and process food and how it is marketed, as well as the balance of what we consume.

Food and agriculture is a devolved area of policy. Since leaving the EU, the UK governments have to varying extents placed a stronger focus on how agriculture can become greener by linking farm support to environmental improvements that are more ambitious than those set out under the Common Agriculture Policy. The Agriculture Act 2020 which applies to England, for example, places a focus on ‘public money for public goods’ underpinned by an environmental land management scheme.

In his recent National Food Strategy, commissioned by the UK Government, however, Henry Dimbleby set out the case for a much more fundamental transformation with land management focused on a ‘three compartment model’ with semi-natural land, low-yield farmland and high yield farmland, as well as land that is appropriate for economic development and housing.

His report also focused on incentivising food businesses to shift the balance of what they sell and therefore people consume, with a focus on tackling our reliance on junk food. The measures he proposed included requiring retailers to report on the amount of meat they are selling, with a target of a 30% reduction, as well as measures to support consumers, including updated dietary guidance from the Food Standards Agency and for it to lead on development of a food labelling system to help people compare food products based on their environmental impact.

Defra is now considering his proposals and will publish a white paper to take forward a new strategy. Food policies already exist in other parts of the UK, although they are more aspirational than the specific measures set out in Dimbleby’s Plan. The Scottish Government will be publishing a Good Food Nation Bill in the coming year. Food Standards Scotland, as a distinct agency from the FSA operating in the rest of the UK, has also set out plans to place a greater focus on supporting sustainable diets.<sup>25</sup>

### Consumers’ changing attitudes

Our research found that consumers’ sustainability considerations focus more on where their food comes from and how it is packaged, rather than what it is. Consumers recognise the food they eat contributes to their households’ emissions, although most underestimate the extent of its impact and misattribute exactly what about their food choices is bad for the environment.

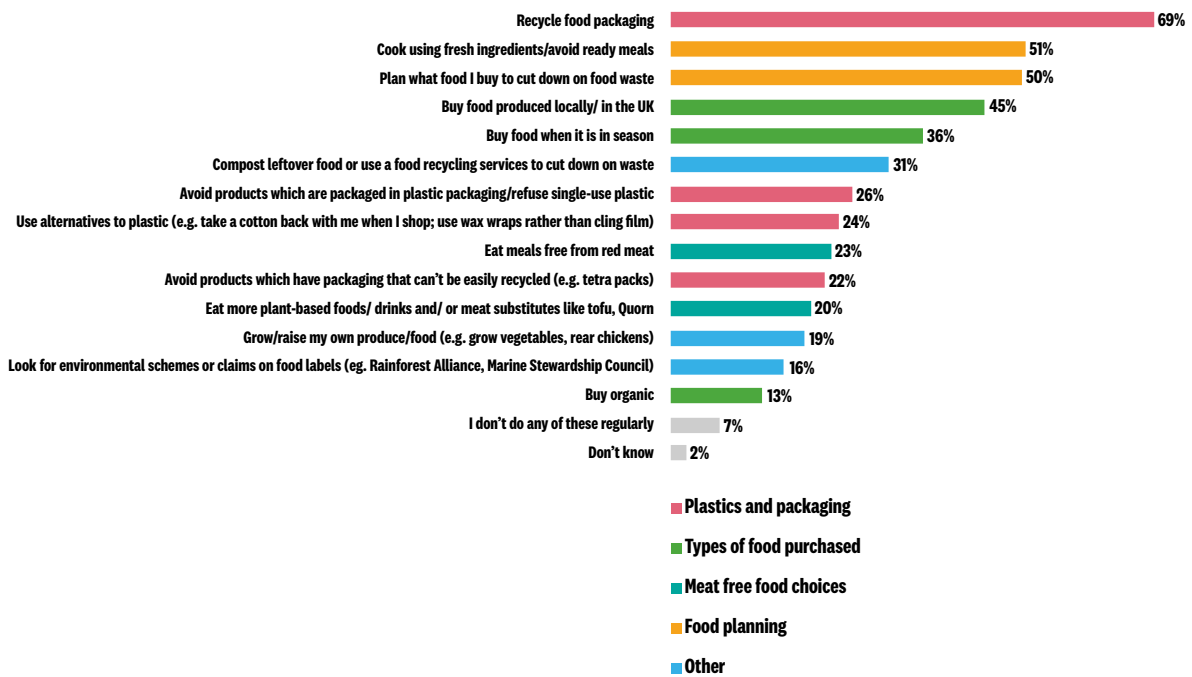
Consumers focus on the unnecessary use of plastics, not recycling enough and wasting food, rather than the type of food they eat (see chart 1). Just one in eight (13%) identify the type of food consumers eat as households’ greatest negative impact on the environment with half (51%) saying they know just ‘a little’ or ‘hardly anything’ about the impact of red meat consumption on the greenhouse gas emissions.

Few consumers eat less meat or plant-based foods for sustainability reasons, although almost all do something to improve the sustainability of their consumption. Over half (57%) say environmental sustainability influences their choice of food and groceries a ‘great deal’ or a ‘fair amount’ and nine in ten (91%) do something to try to reduce the impact of their food choices on the environment (see chart 19).

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25 Healthy, safe, sustainable: driving Scotland’s food future, our strategy from 2021 to 2026, Food Standards Scotland, May 2021

**Chart 19:** Actions consumers take on a regular basis to reduce their environmental impact on food consumption



Base: All respondents for whom question is relevant (3,585)

As with the other areas already discussed, consumers focus their actions on things which are relatively easy to do or align with what they think matters most when it comes to sustainability. The most common action taken by far is recycling food packaging, something seven in ten (69%) consumers do regularly to reduce their environmental impact. This is also the thing consumers think makes the biggest impact on their household’s emissions (see chart 5).

In contrast, just a fifth (23%) regularly eat meals free from red meat and 20% eat more plant-based foods, an action that would make more of a difference to their household emissions, but one that would likely require a shift in lifestyle. The third most commonly selected reason consumers say they are put off buying food that is more sustainable is that they are happy with their current diet and food choices (23%), with a further one in eight (16%) saying sustainable foods are just not as tasty and one in ten saying their friends and family’s preferences (8%) or their dietary requirements (7%) stop them doing more (see chart 20).

### Eating less meat

Around a fifth of consumers are eating less red meat (23%) and eating plant based meals (20%) on a regular basis to reduce the environmental impact of their food choices.

Consumers’ knowledge of the impact of meat consumption on the environment is patchy at best. Although 42% say they know ‘a lot’ or ‘a fair amount’, half (51%) say they know just ‘a little’ or ‘hardly anything’. One in twenty (5%) say they had not heard of it before taking part in our survey.

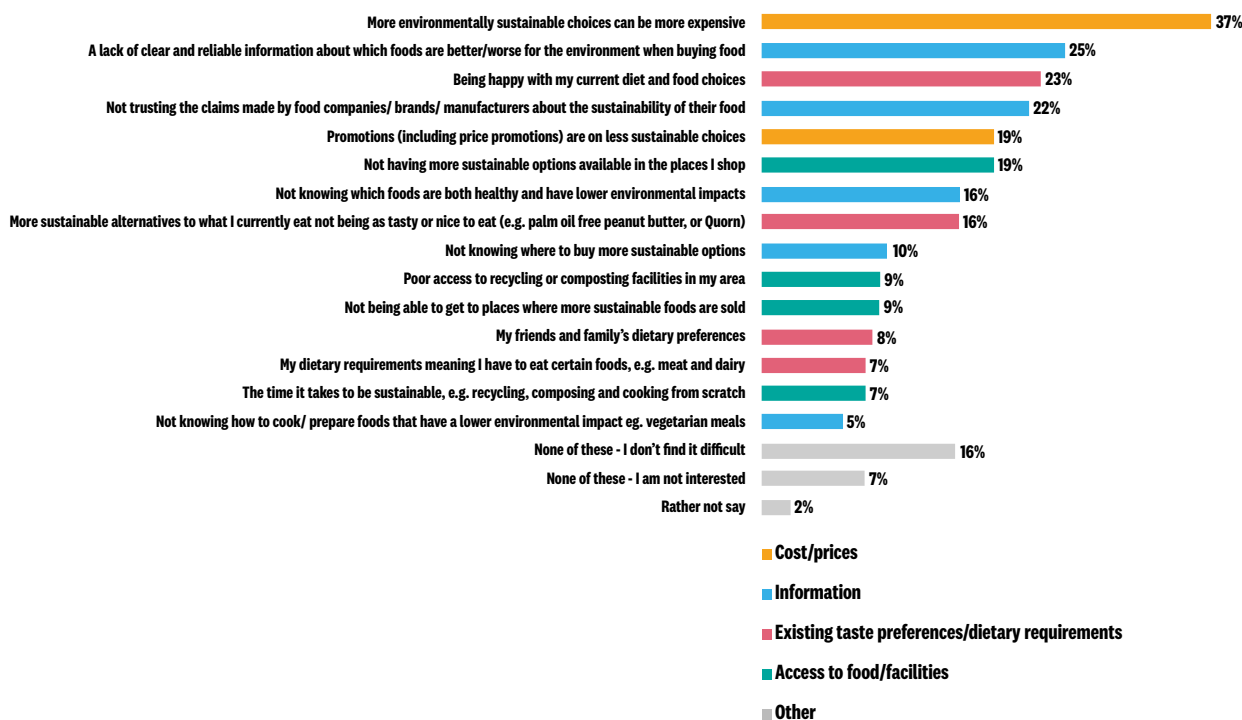
Knowledge of meat’s contribution to emissions and the choice to eat less of it appears to be related. A third (36%) of those who say they know ‘a lot’ or ‘a fair amount’ about meat’s contribution say they eat meals free from red meat to reduce the environmental impact of their food choices. Just 14% of those who say they know ‘a little’ or ‘hardly anything’ and 7% who hadn’t heard about it before the survey do the same.

We see a similar pattern when it comes to eating more plant-based foods, drinks and / or meat substitutes. A third (33%) of those who say they know ‘a lot’ or ‘a fair amount’ about meat’s contribution say they eat more of these foods, compared with one in ten (11%) of those who say they know ‘a little’ or ‘hardly anything’ and 5% of those who say they who hadn’t heard about it before the survey do the same.

### Perceived cost and confusion

Three quarters (75%) of consumers identify something which puts them off doing more when it comes to buying more sustainable food.

**Chart 20:** Factors which would put consumers off buying food which is more sustainable/ environmentally friendly



Base: All respondents for whom question is relevant (3,572)

The most commonly perceived barrier by quite a margin is cost, with two fifths of consumers (37%) perceiving more environmentally sustainable choices as more expensive – even though this should not be the case if choosing more plant-based foods – and as not being included in price promotions as frequently (19%). While cost appears to be the key perceived barrier, it seems many consumers face barriers finding the information they need in a format they can understand and trust. Others struggle to access sustainable foods or the facilities they need to be more sustainable, such as recycling and composting points.

### Support for interventions

Consumers want the government, retailers and food businesses to make it harder for them to choose options that are bad for the environment. People expressed strong support for a range of measures to make it easier to buy more sustainable foods.

When it comes to food retailers and food businesses, consumers support measures to remove plastics from their shelves, improve the availability of sustainable products and make sustainable foods more affordable (see chart 21).

**Scottish consumers most likely to think supermarkets should do more**

Three fifths (58%) of Scottish consumers think supermarkets are not doing enough to support consumers to make more environmentally sustainable choices. This compares with a UK average of 49%. They are also more likely than the UK average to think supermarkets should introduce measures to support consumers including that they should make greater use of sustainable / plastic free food packaging (60% compared with 53% of the UK average) and stock more locally produced foods (55% compared with an average of 48%).

**Chart 21:** Ways consumers think food retailers and food businesses could help them reduce the environmental impact of their food choices



Base: All respondents (3,619)

Consumers also support measures that would improve the availability of information about the environmental impact of individual food items and their shopping baskets. Consumers support food retailers and food businesses making changes to their packaging and see a role for the government in requiring clear labelling on food packaging (53%) and putting tighter controls on the claims that can be made on foods (45%) (see chart 22).



**Chart 22:** Ways consumers think government could help them reduce the environmental impact of their food choices

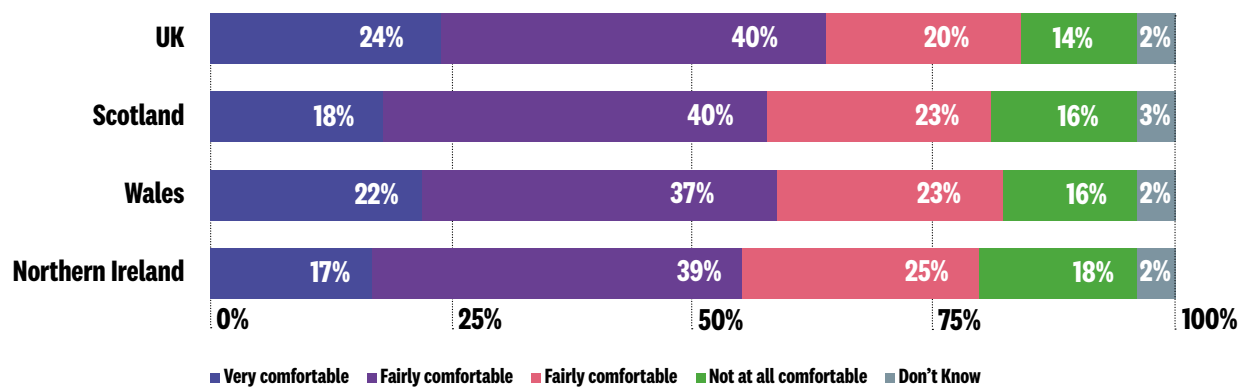


Base: All respondents (3,619)

### Eating less meat - a devolved issue?

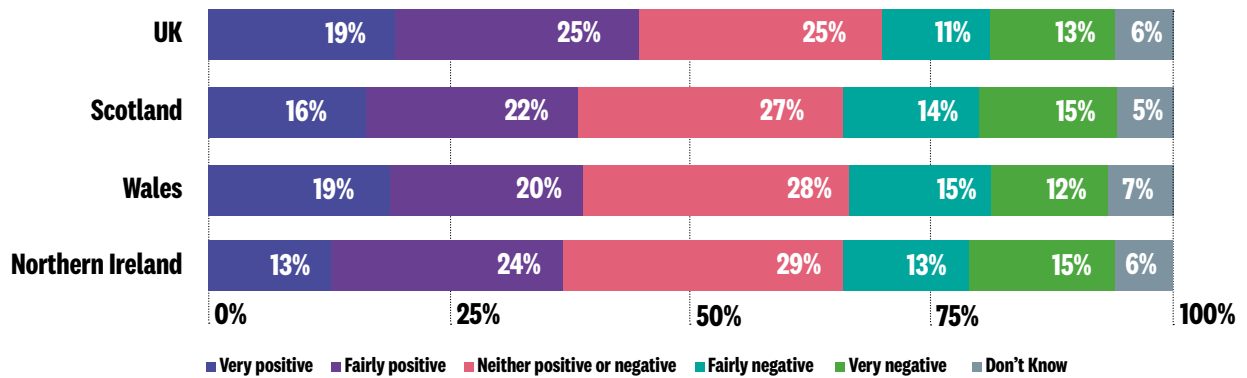
Consumers from Wales, Scotland and Northern Ireland have different views on eating less meat and what role the UK Government should take in promoting red-meat free or low red meat diets, than the UK as a whole. Respondents from all three of the devolved regions are less comfortable than the UK average with eating less red meat (see chart 23), which may reflect the importance of agriculture for these economies. They are also slightly less likely to feel positive about the government promoting red-meat free or low red meat diets to reach their 2050 net zero targets.

**Chart 23:** Self-assessed comfort reducing red meat consumption by devolved nation



Base: All respondents excluding not applicable (UK 3,143/Scotland 569/Wales 532/Northern Ireland 507)

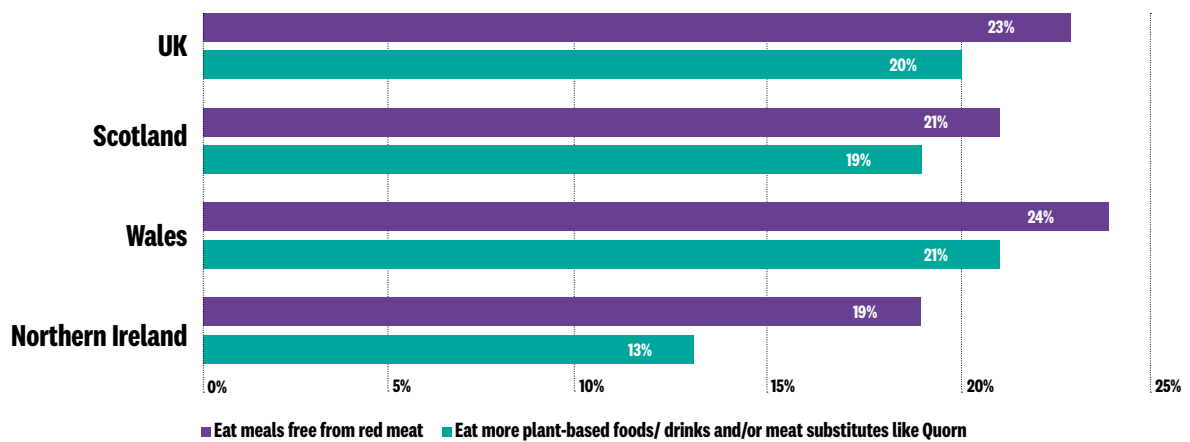
**Chart 24:** Consumers’ positivity/negativity towards Government encouraging consumers to eat less red meat



Base: All respondents (UK 3,619 /Scotland 569/Wales 532/Northern Ireland 507)

Northern Irish consumers differ the most from the UK average. In addition to being less comfortable reducing their red meat consumption and supporting the government encouraging them to eat less red meat, they are significantly less aware of the contribution of red meat to greenhouse gas emissions and also less likely to have reduced their red meat consumption or to consume plant-based alternatives.

**Chart 25:** Actions regularly taken to reduce meat consumption by nation



Base: All respondents for whom question is relevant (UK 3,585/Scotland 565/Wales 526/Northern Ireland 501)

### Action needed

- The governments across the UK need to implement a range of measures, including through legislation, to drive sustainable, as well as healthier, food production and support consumers in making lower environmental impact choices. These require a whole food system approach and include:
  - Alignment of objectives across all policies that are relevant for food, including agriculture and trade policy to support consumers in making lower impact choices, including establishing core food standards that will be applied to imports.
  - Financial and other incentives, such as transparent reporting on the balance of foods sold and controls over food marketing, to ensure food businesses produce and promote more sustainable options.
  - Development of dietary guidelines and a government-led, UK-wide labelling scheme to help consumers make lower environmental impact food choices.

# Conclusion

People and their consumption choices need to be put at the heart of our action as a nation to tackle the climate crisis, building on the impetus that COP26 provides. This is not a replacement for government and business action – or an excuse for inaction – but requires a joint effort.

Our research highlights that people need effective support to help them make low carbon choices – and that if they have this support, they are willing to do so.

In undertaking this research and hosting our roundtables we have identified seven cross-cutting principles for more effective consumer engagement on low carbon consumption choices that need to guide the UK governments' approaches. This is in addition to our specific recommendations for the four areas that we have highlighted. These are essential for engaging, inspiring and supporting people in making low carbon choices – as well as for ensuring public support for the range of ambitious measures that need to be adopted by policy makers.

## 1. Joined up policy

Joined up government and joined up policy is essential to deliver the enormous transition to a net zero future at the pace now needed and within the practical constraints of cost and upheaval to people's lives. Whether dealing with fundamental policies, such as the future UK approach to trade – or more specific regulatory issues such as the safety, security and sustainability of consumer products – there needs to be a coordinated approach across government departments and regulators. They must be focused on common priorities and recognise the importance of consumers and their interests.

## 2. A people-centred approach

The transition from a coal fired to wind powered electricity system has happened with the involvement of a limited number of key players and without directly affecting most companies in the economy, let alone ordinary people. But the next great leaps we need to make are dependent on the buy-in and support of the vast majority of people in the UK and therefore ensuring that policy supports and motivates them in the way that they need whether at national or local level, recognising the domino effect that the right policy choices can have on corporate decisions and the choices made by people in their daily lives.

## 3. An equitable transition

In driving the UK economy and its society fast towards a low carbon future, there needs to be a clear recognition that many people don't have the economic resources to participate in the transition, regardless of how much of a climate change crisis we face. The poorest sections of society cannot be penalised by the net zero transition, whatever the broader, long term societal good – and shouldn't miss out on the opportunities and benefits either (such as more efficient cars, better insulated homes). They need to be supported financially and in terms of practical access to low carbon living solutions.

#### 4. Clear information that people can trust

People need clear and trusted information to support them in making more sustainable choices. They are picking up the signals that the climate crisis is fueling more extensive and dangerous weather events but they struggle to link this consistently with their day-to-day purchasing decisions and have a clear sense of what they can do to make most difference. Where efforts have been made to provide carbon and other sustainability information campaigns or product information – from cars to washing machines, homes and food – the approach can all too often be disconnected. There needs to be a coordinated net zero engagement campaign that acts as an anchor point for consistent consumer engagement, information and labelling around homes, cars, food and products, alongside practical measures that will support people in their everyday choices.

#### 5. Phase out bad choices

The need for a joined up approach to engaging people in decision making on their purchasing decisions can only be done in tandem with a policy and fiscal system that actively ‘sunsets’ bad, high carbon choices. This is being done with sales of new petrol and diesel cars (2030), hybrids (2035) for example. The poorest performers in any market need to be phased out, applying the principles of an equitable net zero transition. Companies can no longer expect to put high carbon products on the market and expect society to pay for the external costs of the carbon associated with their production, use and disposal.

#### 6. Low carbon and circular

There is rightly an enormous focus on shifting rapidly to a low carbon future but circularity also has to be a priority. Less resource use and less waste are desirable end goals in their own regard but will also help deliver a low carbon future. Putting circularity at the heart of thinking about low carbon consumption will only help with progress. This includes establishing a functioning second-hand EV car market; encouraging the repair of consumer products; preventing food waste; and ensuring that as gas fired central heating systems are removed resources in them are recovered for recycling.

#### 7. Consumer protections fit for our sustainable future

Low carbon choices will require consumers to make complex and often costly decisions and often in evolving, new markets, leaving them vulnerable without adequate consumer protections. People therefore need to be supported by a framework of effective consumer rights and protections. They need to easily access the products and services that are right for them, with reassurance that they will perform effectively and be safe – and that they can trust the professionals and tradespeople who advise them and where needed refit, repair or install. If things should go wrong, they must have a simple, but reliable route to effective redress.

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