

CITIZEN INSIGHTS

# CITIZEN FOOD WASTE ATTITUDES AND BEHAVIOURS OUT OF HOME

Key Findings Report



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# About WRAP

WRAP is a climate action NGO working around the globe to tackle the causes of the climate crisis and give the planet a sustainable future.

Our core purpose is to help you tackle climate change and protect our planet by changing the way things are produced, consumed, and disposed of.

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# Summary report

## BACKGROUND

WRAP is working with Hospitality and Food Service (HaFS) businesses to help the sector reduce wasted food. This includes targeted support for pubs, hotels, restaurants, Quick Service Restaurants, Healthcare, Education, Leisure, Services and Staff Catering. Through initiatives such as the Hospitality and Food Service Agreement, the Food Waste Reduction Roadmap, Guardians of Grub and the Courtauld Commitment 2030, WRAP is helping the sector to deliver a 50% reduction in food waste by 2030, in line with UN Sustainable Development Goal 12.3.

WRAP research shows that the majority of food waste arisings in the UK is generated by households, but the waste coming from the HaFS sector is not negligible – 1.1Mt is the total food waste arisings from the sector; and on average, 18% of the food purchased is being thrown away<sup>1</sup>. Food waste costs the HaFS sector £3.2 billion every year.

WRAP undertook research about citizen food waste out home for the first time in 2012<sup>2</sup>. Since then, WRAP conducted follow up research in March 2020<sup>3</sup> (unpublished) before building on the findings in 2022. The main findings address the following research questions:

- What is the frequency of eating out of home; and how has this changed as a result of the cost-of-living crisis
- What are the estimated levels of food left uneaten out of home; when and what type of food is typically left uneaten and in which venues and occasions it occurs
- What happens to food left uneaten
- Why do customers leave food when eating out and what are their attitudes to uneaten food
- What are citizens' portion sizing behaviours and what are the barriers to enhance them further

The latest research updates the insights and assesses any changes that might have occurred after the changes that have taken place in the HaFS sector with businesses and organisations increasingly expected to undertake measures to ensure sustainability in their operations and supply chain.

## METHODOLOGY

The research involved a mixed-methods approach with two phases:

1) Survey. This phase was designed to quantify key attitudes and behaviours among UK citizens who eat sit-down meals outside the home regularly (i.e. in the past month). This included the frequency of eating out of home, the occasion, the food left uneaten, the reasons and the barriers, portion sizing, behaviours and attitudes towards uneaten food. A survey of 4,006 UK adults was conducted online. Fieldwork took place between 01-04 July 2022, with quotas set on

<sup>1</sup> <https://wrap.org.uk/sites/default/files/2021-10/food-%20surplus-and-%20waste-in-the-%20uk-key-facts-oct-21.pdf>

<sup>2</sup> <https://wrap.org.uk/sites/default/files/2021-08/understanding-out-of-home-consumer-food-waste.pdf>

<sup>3</sup> Comparisons are drawn to the 2020 study in this report as the research methodology used was the same.

age and gender<sup>4</sup> interlocked, and region. To improve recall and accuracy, the survey used a construct of focusing on the most recent sit-down meal out of home.

2) Qualitative follow-on research. This phase was designed to enhance the depth of insights as well as provide a visual element to the research in terms of what food was ordered and how much was left uneaten. It was undertaken through an interactive mobile ethnography platform (Indeemo), with 14 participants taking photos/videos alongside commentary of their meals in situ. Fieldwork took place from 07–17 July 2022.

The Phase 1 survey involved a large sample of UK citizens. However, given that a sample has completed the survey (rather than a census), the results are subject to statistical margins of error. Statistical tests have been performed to assess whether an apparent difference in the survey data (i.e. across years or between sub-groups) is statistically significant or not<sup>5</sup>. These tests have been undertaken to the '99% confidence' level (i.e. 99 times out of 100 the observed difference will be real compared to 1 time out of 100 it will have happened by chance).

Analyses of the data have also been undertaken according to a range of socio-demographic variables (e.g. age, gender, children in the household). Furthermore, the survey also captured a range of key contextual information about the most recent sit-down meal, including: the type of venue; which meal it was in the day; who they dined with; whether the meal was spontaneous or planned; how many times they had eaten at the venue before, and how many courses they ate.

## KEY FINDINGS

### 1) Frequency of eating sit-down meals out of the home

- UK citizens report an average of 5.2 sit-down meals outside the home in the past month, down from 5.6 meals in March 2020 (i.e., immediately prior to the first Covid-19 lockdown). Some groups report a significantly higher number of sit-down meals outside the home, as follows:
  - Men (6.1 sit-down meals on average, compared to 4.4 among women).
  - 25-34s (8.1), 35-44s (6.6) and 18-24s (6.5), compared to 3.2 among those aged 55+.
  - Those with younger children aged 0-10 (8.7) and those with teenage children aged 11-17 (7.1), compared to 4.2 among those with no children living at home.
  - Those with a household income of £62,000+ (6.9 meals on average, compared to 4.1 among those with a household income up to £28,000).
  - Those in social grade<sup>6</sup> AB (5.9 meals on average, compared to 4.2 among those in social grade DE).

<sup>4</sup> Survey respondents were asked to select their gender, with the options of 'male', 'female', 'other (write in)' and 'prefer not to say'. Most respondents selected male or female (with the question allowing this section to be based on either their biological gender at birth or how they chose to identify). Throughout this report we refer to 'men' and 'women' on that basis. The sample size for 'other (write in)' is too small to comment on in a statistically meaningful way.

<sup>5</sup> Statistical tests are technically only valid when the survey method has used random probability sampling. While the market research industry routinely applies the same logic to non-probability samples, this must be appropriately caveated.

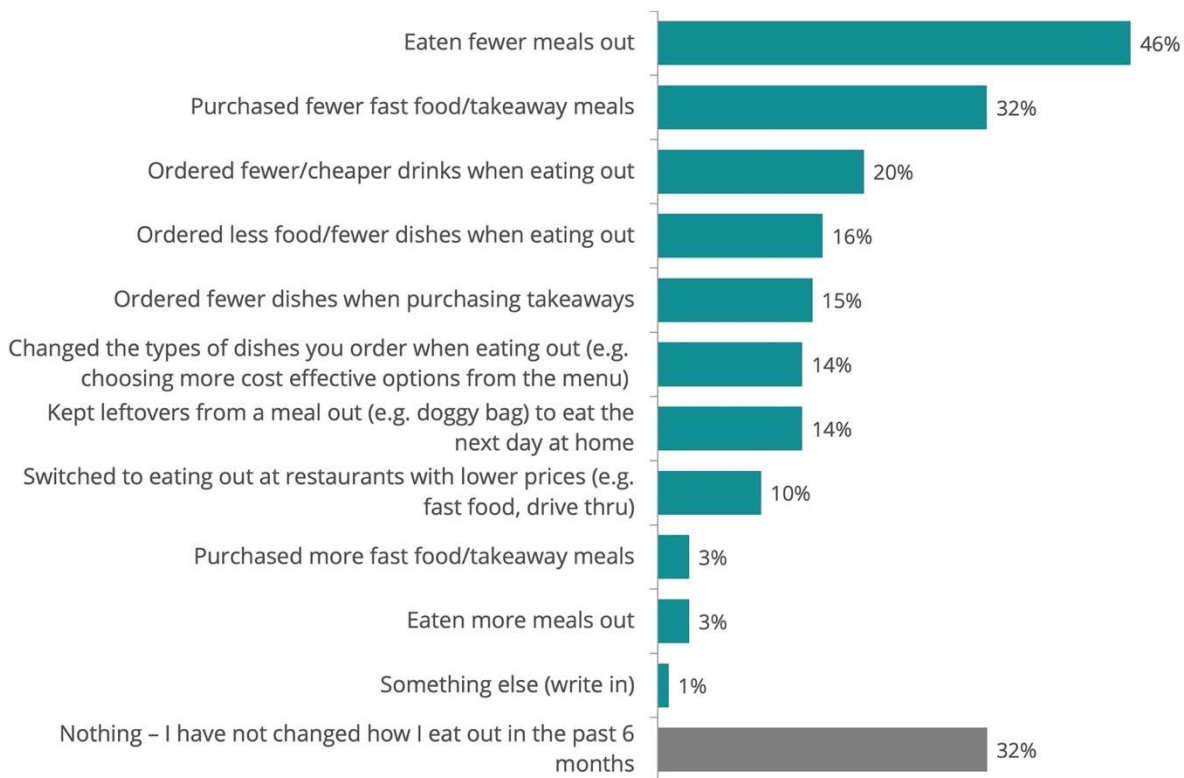
<sup>6</sup> Social grade is a classification system based on occupation and it enables a household and all its members to be classified according to the occupation of the Chief Income Earner (CIE). In addition, if the respondent is not the CIE and is working, then the social grade of that individual is also recorded. Social grade in its current form has been used on the British National Readership Survey since the 1960s.

- The cost of living is having a discernible impact on eating sit-down meals outside the home (Figure 1). This includes **reducing the frequency** of eating out as almost half - 46% - cite eating fewer sit-down meals, and 32% fewer takeaways. It also includes **adapting existing behaviours**, with one in five (20%) saying they order fewer or cheaper drink options, 16% less food/fewer dishes and 14% choosing more cost-effective options from the menu. By contrast, close to one in three (32%) say their eating out habits have not changed in response to the current increase in the cost of living.

**Figure 1. Impact of the cost of living on eating out of home**

Q. Compared to six months ago, have you made any of the following changes to how you eat out because of the increase in the cost of living?

Base: 3,984 UK adults who ate a sit-down meal out in the past month, July 2022

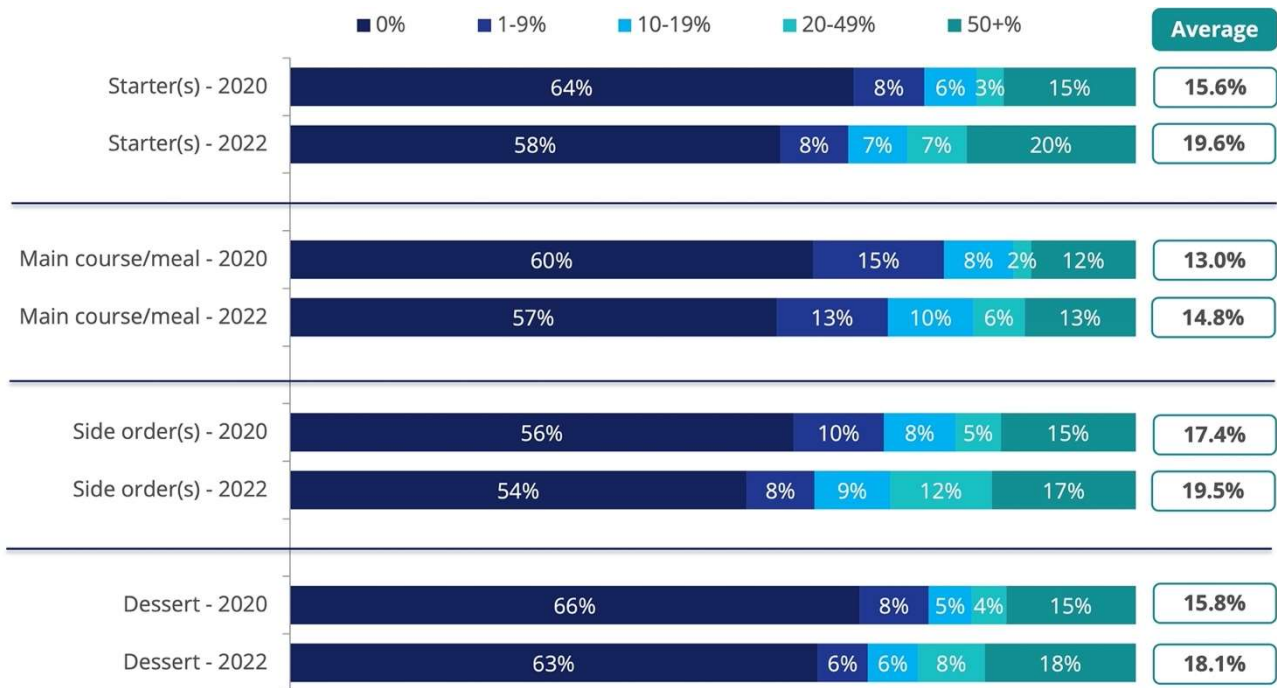


2) Portion sizing and levels of self-reported food waste

- The survey highlighted a strong association between over-portioning and levels of food left uneaten. This is consistent with both the 2012 and 2020 research, although the latest research indicates that both portion sizing and reported levels of waste have increased relative to previous years. For example:
  - Just over one in five (22%) say that the portion size of one or more of the dishes they ordered at their most recent sit-down meal was too much - up from 17% in March 2020.
  - The survey estimates that, on average, 14.8% of the main dish/course was left uneaten – significantly up from 13.0% in March 2020 (Figure 2). This trend is evident for all courses.

**Figure 2. Estimated levels of food left uneaten**

Q. Approximately how much food were you not able to eat by the end of your meal? Please include garnishes, sides (e.g., salads, chips, bread), sauces as well as things like vegetable skins, fish bones etc  
 Base: UK adults who ate a sit-down meal out in the past month (2,001 in March 2020 and 4,006 in July 2022)



- Some groups report that significantly more of their main course/meal was left uneaten:
  - Age: 25-34s, 18-24s and 35-44s (21.3%, 20.3% and 17.7%, respectively), compared to 9.6% among those aged 55+.
  - Children at home: Those with younger children aged 0-10, 21.6%, compared to 12.7% among those with no children at home.
  - Size and type of group: Those eating out in a large group report the most food left uneaten, whether with friends (25.0%) or work colleagues (25.9%). Eating with work colleagues in general is associated with higher levels of food uneaten, even in small groups (19.1%). The same trend is not observed for eating in small groups of friends. Eating in a group with other members of family (e.g. parents, other relatives, family friends) is associated with the least food left uneaten (12.7%).
  - Number of dishes: those who ordered two or more courses report higher levels of food uneaten (17.3% compared to those who ordered one course, 9.5%).
  - Size of portions: those who say they had a portion that was 'too much' report higher levels of food uneaten (26.7%, compared to 11.4% among those who do not).
  - Number of times eaten at the venue: those who have eaten at the venue once or a few times report more food left uneaten (19.1% and 17.6%, respectively) compared to those who eat there regularly (12.7%) and those for whom it was their first visit (13.7%).
  - Type of food venue: there are no significant differences according to the type of food venue, with similar levels of reported food left uneaten across restaurants, fast food restaurants, cafes, pubs/bars, hotels/B&Bs and canteens.

### 3) Types of food left uneaten

- The type of foods most likely to be left uneaten are chips/potatoes (cited by 25%), followed by salads and coleslaw (15%) (Figure 3). Beyond these items there is a wide array of other foods, from vegetables (12%), meat/fish, breads and sauces/condiments (all 11%), rice (9%) and pasta (6%). This is consistent with both the 2012 and 2020 research findings. The qualitative Indeemo phase provides examples of how much, and what kinds, of food were left uneaten (Figure 4).

**Figure 3. Types of food left uneaten**

Q. What type(s) of food, if any, were you not able to eat?

Base: 1,948 UK adults who ate a sit-down meal out in the past month and left some of it uneaten, July 2022

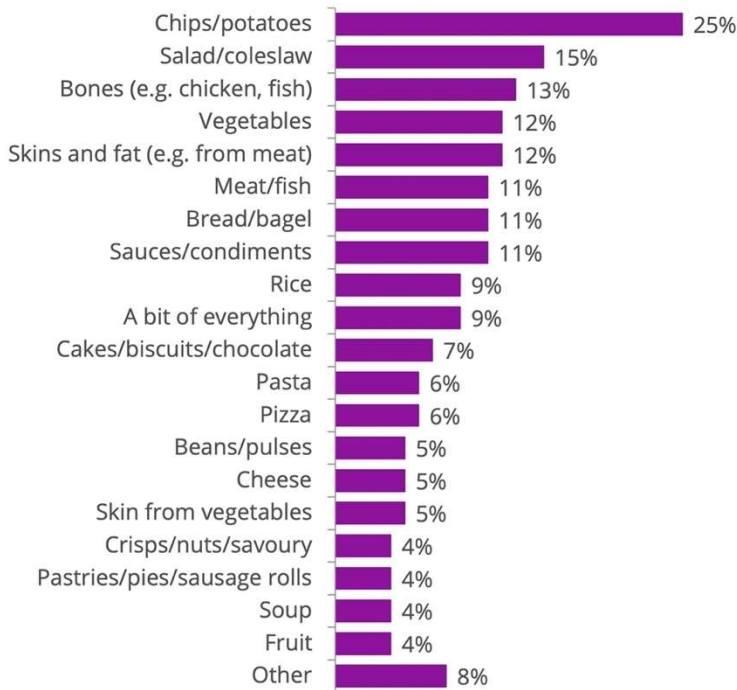


Figure 4. Examples of food left uneaten (Indeemo qualitative phase)



**Managed the omelette and the chips and full up. Was really good. Made the usual token effort with the salad but it didn't really stand a chance.**

Male, 53, Southern England, children at home, eats out of home several times a week



**The garnish was left as my partner doesn't like salad. He would have preferred the option for coleslaw or more chips.**

Female, 48, Midlands, no children at home, eats out of home several times a week

4) Reasons for food left uneaten

- The main reason stated for leaving food uneaten was the portion size (Figure 5), cited by almost half (48%) – either as the portion size was larger than expected (40%) or because they felt they ordered too much (11%). This was followed by the meal including things (e.g., salad, garnishes) that they didn't like or fancy (15%), and not liking the taste (10%).



**Figure 5. Reasons for food left uneaten**

Q. Why did you leave some of the food? *Multiple-choice question*

Base: 1,948 UK adults who ate a sit-down meal out in the past month and left some of it uneaten, July 2022



- Just over three in five (63%) say they are bothered by food uneaten out of home, although almost two in five (37%) say they are not bothered.
- The main reason why citizens were bothered is that it is a waste of their own money (cited by around three quarters (74%) of those bothered), compared to just less than half who cite the environmental impact of food waste.
- Among those who are not bothered, the main reasons cited were not feeling that they leave much, as well as preferring to leave food rather than eating too much or feeling too full.
- While the research indicates that, on the one hand, citizens are bothered by food waste out of home; it also shows that portion size is also closely intertwined with their satisfaction with the “value for money” of the meal. For example, in the qualitative phase, some participants left a significant amount of food uneaten but did not feel the portion size had been too big. Rather, they were in fact positive about the portion size (Figure 6). This in turn suggests that the survey may be under-estimating the incidence of portions that are too large. Similarly, another participant suggests that garnishes are not always conceptualised as food but more like a decorative element (Figure 7).

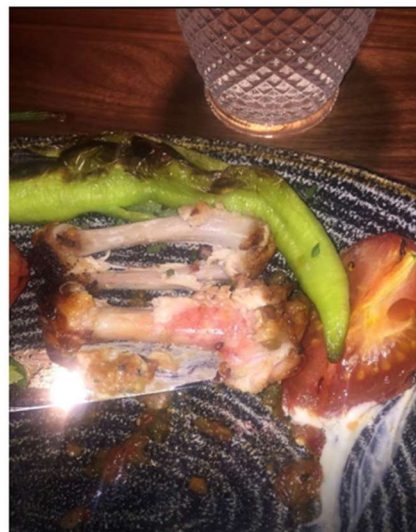
Figure 6. Implicit satisfaction with larger portions (Indeemo qualitative phase)



This was the remainder of my chips (and a little bit of bread!) - gorgeous but I was just full up! I wouldn't say the portion was too big [researcher emphasis], I think they are perfect there but I am sometimes a grazer so don't always eat a full meal! I would rate this 5/5.

Female, 48, Midlands, no children at home, eats out of home several times a week

Figure 7. Garnish as food or decoration? (Indeemo qualitative phase)



As you can see nothing left on the plate except the garnish!  
Mostly we consider the garnish to be plate decoration, especially if it's just a bit of lettuce or tomato. We also don't really like whole chilli like this. We always leave this.

Female, 59, Southern England, no children at home, eats out of home once a week

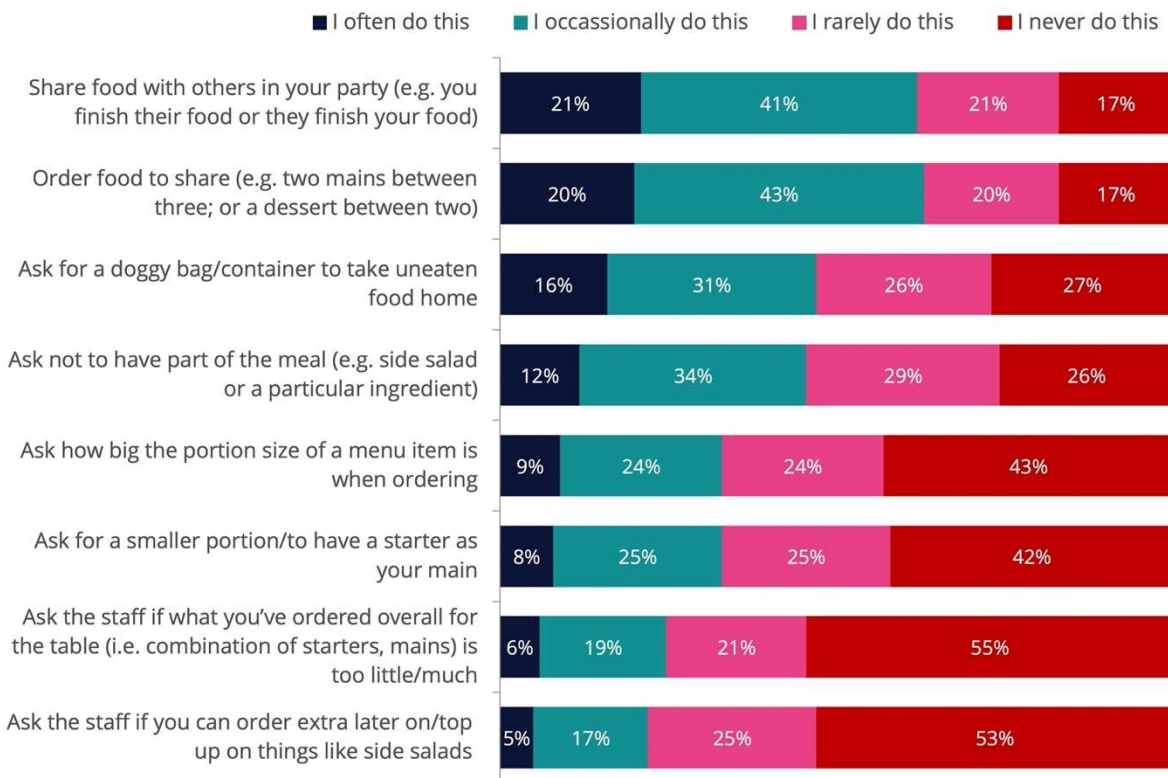
### 5) Portion choice behaviours: citizens and food venues

- The survey also sought to identify whether citizens exhibit behaviours that could lead to less plate waste in meals out of home. The findings suggest that there is scope to extend citizens' behaviours to avoid plate waste (Figure 8). Currently, the most frequently practiced behaviours are sharing food with others in the dining party and linked to this, ordering food with the intention to share. In both cases around three in five UK citizens (63%) do this 'often' or 'occasionally'. This is followed by asking for doggy bags to take leftovers home, which just less than half of UK citizens (47%) report doing often or occasionally.

- By contrast, fewer reported asking staff questions about portion sizes or the size of their overall order when ordering. Likewise, fewer reported asking not to have part of the meal or for a smaller portion, or to have a starter as their main course.
- Comparisons with March 2020 indicate that several of these behaviours have recorded small but significant increases in the past two years. For example, the proportion of UK citizens regularly asking for a doggy bag has increased from 43% to 47%. Likewise, the proportion asking about the size of the portion sizes has increased from 27% to 33%, as has the proportion asking if what they have ordered for the table is too little/too much (18% to 24%).

**Figure 8. Current portion choice behaviours: citizens**

Q. How often, if at all, do you do any of the following when eating out for a 'sit down' meal?  
 Base: 3,984 UK adults who ate a sit-down meal out in the past month, July 2022



- There are several key barriers to further increasing these behaviours identified by the research. For example:
  - For asking staff about portion sizes and how much they've ordered overall, key barriers are not contemplating this as something that they can, want or need to do, as well as the potential social embarrassment of asking.
  - For asking for smaller portion sizes, the key barriers are not contemplating this as something they can do as well as actively not wanting smaller portions.

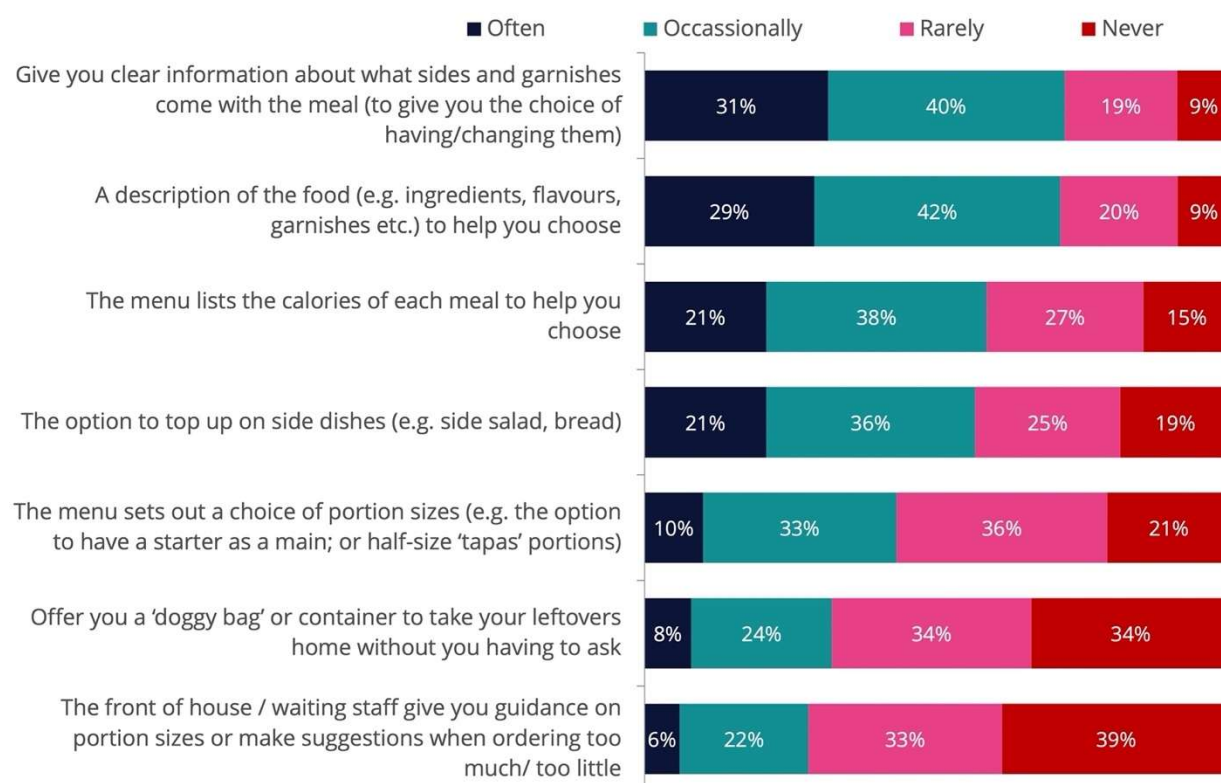
## Citizen Insights: Food waste attitudes and behaviours out of home

- For taking leftovers home, key barriers are the potential social embarrassment of asking, challenges around carrying/getting the container home, concerns about how it might taste later, and a doubt that they will use it up at home.
- As well as customer-led changes, there is also scope for food venues to improve how they guide customers in their choices (Figure 9). Only around three in ten (31%) UK citizens say the restaurants/places that they eat often give them clear information about what sides and garnishes come with the meal, with a further 40% saying that this is occasionally the case. Less than half (43%) say the menu often or occasionally sets out a choice of portion sizes (e.g. starters as a main, or tapas portions), while around one in three (34%) say they are often or occasionally offered a doggy bag to take leftovers home. The least frequently cited behaviour is front of house/waiting staff offering guidance on portion and order size – only around one in four (28%) say the food venues they eat at often or occasionally do this.

**Figure 9. Current portion choice behaviours: food venues**

Q. How often, if at all, do the restaurants/places that you have a meal at do any of the following?

Base: 3,984 UK adults who ate a sit-down meal out in the past month, July 2022



### 6) Receptivity to changes

- The survey demonstrated that UK citizens are receptive to a range of changes that food venues could make to support better portioning and less food waste. Over half (53%) say they would find it useful to have clear information about sides and garnishes (including the choice to have something different or not at all), followed by having more choice on portion sizes

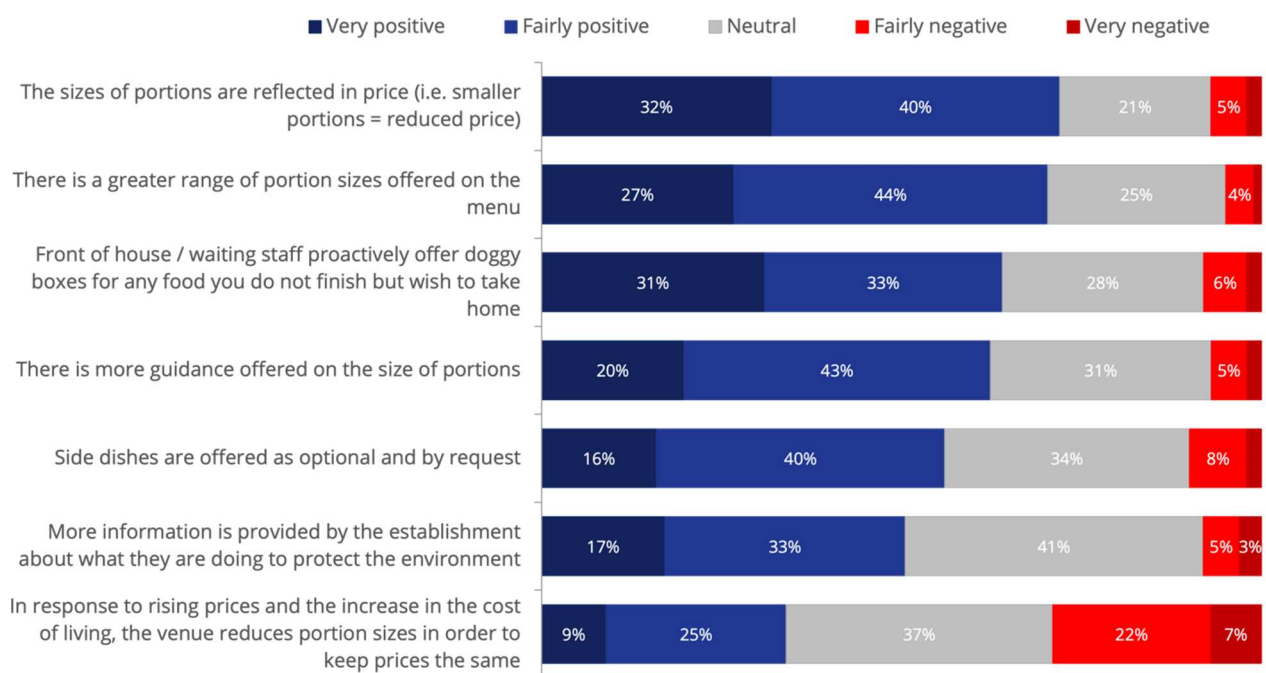
(51%). Over two in five (45%) would find it useful to be offered a doggy bag to take leftovers home.

- This is also reflected in the level of positivity towards a series of possible changes that the Hospitality and Food sector could make (Figure 10). Over seven in ten (72%) are very or fairly positive to the sizes of portions being reflected in the price (e.g. smaller portions cost less), while 71% are positive to having a greater range of portion sizes. Almost two in three (64%) are positive about being proactively offered a doggy bag to take leftovers home, and a similar proportion (63%) are positive to more guidance offered on the size of portions.
- The one proposition that is more divisive is the idea of reducing portion sizes to keep prices the same (during the current rates of inflation). Around one in three (34%) said they were positive to this idea, whereas a similar proportion (29%) were negative.

**Figure 10. Reactions to potential changes at food venues**

Q. To what extent would you be positive, negative or neutral towards each of the following when you eat a sit-down meal out of home?

Base: 3,984 UK adults who ate a sit-down meal out in the past month, July 2022



### 7) Conclusions and implications

When asked about any changes to how they eat out as a result of the increase in the cost of living, UK citizens seem to respond by having less frequent sit-down meals out of home, compared to six months ago. However, this has led to a more skewed profile of citizens who are still eating out with similar levels of frequency: those who are 18-44s, those with younger children aged 0-10, social economic grade ABs and higher income citizens.

The research finds that there is a strong association between portion sizes and levels of reported leftover food – both of which have increased since March 2020. Furthermore, there is a relationship between the number of courses ordered and the amount of food left uneaten.

Levels of self-reported uneaten food are highest among 18-44s, those with younger children those eating as part of a large group, and those eating with work colleagues. By contrast, there is no link between food left uneaten and different kinds of food venues – the research suggests that food waste is occurring across all food venues.

Potatoes/chips and salads and garnishes continue to be cited as the food items most likely to be left uneaten. The qualitative research also suggests that on some occasions garnishes are not even necessarily conceptualised as food that could be eaten (as opposed to a decorative element).

While the research indicates that, on the one hand, around three in five citizens are bothered by food waste in an out of home setting; it also shows that portion sizing is also closely intertwined with perceptions about the “value for money” of the meal. Addressing food waste associated with portioning must be approached with sensitivity to ensure that expectations of the consumer are balanced with appropriate action on plate waste. However, understanding plate waste (alongside other operational food waste areas) also presents an opportunity for cost savings within the business.

There is an opportunity for Hospitality and Food Service venues to support their customers making better choices, build awareness and set expectations about portioning, menu choice and information when eating sit-down meals out of home.

Citizens are highly positive towards having increased menu choice and information, and this represents a win-win in terms of customer satisfaction for the venue and reduced levels of food waste. This is also preferable to trying to simply reduce portion sizes, given how intertwined satisfaction with the meal and sentiments about value for money are with the size of portions.

Barriers to customers carrying out choice behaviours include perceived social embarrassment of asking as well as not realising what options available to them. Therefore, it is important for Hospitality and Food Service venues to consider how they can help their customers make informed choices about the meals they buy. Some behaviours, such as taking leftovers home, are also complicated and involve multiple considerations (not just the requesting them at the venue but then transporting, storing and using up at home) which highlights the opportunity to address barriers related to portion size before they arise.

WRAP has carried out this research to understand citizen experiences when eating a sit-down meal out of home, and the attitudes and behaviours that lead to or prevent food waste. WRAP's ambition is to build on these findings and engage with the sector to develop innovative solutions and guidance that support the reduction of plate waste, that are both achievable for business and meet the expectations of consumers. Our recommendations to the sector will build on the following areas of focus:

### Monitoring plate waste<sup>7</sup>

- Understanding where plate waste occurs starts with identifying what items are frequently left on customer plates and consider portion size monitoring to identify specific opportunities for action within the business.
- Focus in on one dish or ingredient that has been identified as a hotspot during monitoring, e.g. potatoes.

### Reviewing portion size offering

- Once levels of plate waste are established, review portion sizing and how this is communicated with customers and how staff are trained for consistent portion sizing.
- Review guidance and information provided to customers about menu items.
- Consider how menu information is communicated to customers e.g. on menus, customer interaction with front-of-house staff.
- Consider the range and diversity of dishes on offer. Specific examples highlighted in the research include starters as main, share plate, sides, large plates and small plates etc.
- Ensure portion sizes provided are measured correctly.

### Engaging staff & communicate with customers<sup>8</sup>

- Engage with staff about what is being done to tackle food waste within the business and why, so that they can talk with confidence about actions taken and provide more information to customers about the food on offer.

Food waste costs the UK Hospitality and Food Service (HaFS) sector over £3 billion each year<sup>9</sup>. WRAP will continue to support the HaFS sector to realise the opportunities and take action on reducing wasted food. In addition to [Guardians of Grub](#) free operational guidance, and free 15 minute [Cost Saving Skills course](#), WRAP has developed [sector guidelines](#) for HaFS businesses to understand how much, where and why food loss and waste is occurring- so that they can measure and act upon it. This supports the UK Food Waste Reduction Roadmap, to help meet the sustainable Development Goal (SDG) 12.3 target to halve food waste by 2030.

<sup>7</sup> [www.guardiansofgrub.com/resources](http://www.guardiansofgrub.com/resources)

<sup>8</sup> <https://guardiansofgrub.com/resources/downloads/business-case-presentation/>

<sup>9</sup> <https://wrap.org.uk/resources/report/overview-waste-hospitality-and-food-service-sector>

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