



Office for Health  
Improvement  
& Disparities

Sugar reduction – industry progress 2015 to 2020

**Including the final report for foods included in the programme and the latest data for drinks included in the Soft Drinks Industry Levy and juices and milk based drinks**

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## Executive summary

This report presents the fourth and final assessment of progress made by industry towards the 20% sugar reduction ambition for food categories, and a second assessment for juice and milk based drinks, included in the sugar reduction programme. It also includes data on products subject to the Soft Drinks Industry Levy (SDIL).

The sugar reduction programme, and all other parts of the reformulation programme, transferred from Public Health England (PHE) to the Office for Health Improvement and Disparities (OHID) on 1 October 2021. Both organisations are referred to in this report.

The sugar reduction programme was launched in 2016 and set an ambition for all sectors of the food industry to voluntarily reduce sugar by 20% by 2020 in the food categories that contribute most to the intakes of children aged up to 18 years ([Sugar reduction: achieving the 20%, 2017b](#)). In May 2018, unsweetened juice and sweetened milk based drinks were incorporated into the programme, having been excluded from SDIL, with an ambition set for all sectors of industry to reduce sugar by 5% in juice based drinks, and 20% in milk based drinks by 2021 ([Sugar reduction guidelines for industry: juice and milk based drinks, 2018b](#)). In January 2019, fermented (yogurt) drinks were also added to the programme, with a sugar reduction ambition of 20% by 2021 ([Sugar reduction guidelines for industry: fermented \(yogurt\) drinks, 2019](#)).

Progress is reported for retailers and manufacturer branded products purchased for consumption in the home. Analysis is based on data for the year ending 6 September 2020, compared with a baseline year of 2015, and uses sales weighted averages for products purchased across Great Britain (GB). The dataset therefore covers the first 6 months of the coronavirus (COVID-19) pandemic.

Progress is also reported for products sold in those businesses that provide the food and meals that we buy and eat out of the home, take away or have delivered to the home, which is included under the eating out of home sector. For these products, a comparison over time is made for 2020 against a baseline year of 2017 because robust data for 2015 is not available. Simple averages are used for the eating out of home sector as the available data does not match purchases with nutrition information at product level. To enable a comparison across the sectors, the simple average is also calculated for retailer and manufacturer products. As well as looking at reductions in sugar levels, an assessment of the change in calories likely to be consumed on a single occasion (calories per single serve) is also included for all categories across the sectors.

Changes in products subject to SDIL are regularly monitored on behalf of HM Treasury (HMT) ([The Soft Drinks Industry Levy Regulations, 2016](#)). Therefore, this report also includes an assessment of the changes in the sugar content and sales of drinks covered by SDIL between 2015 and 2020.

Some businesses have also provided case studies of sugar reduction activity which may not have been captured in the datasets used to assess progress.

## **Headline results**

### **Sugar content of food products**

#### **Retailer own brand and manufacturer branded products (in home sector)**

The main findings were (see Table ES1a):

- overall there was a 3.5% reduction in the sales weighted average total sugar per 100g in products sold between baseline (2015) and year 4 (2020)
- as with previous year's reports, there were larger reductions for specific food categories, including reductions of 13.5% for yogurts and fromage frais, 14.9% for breakfast cereals, and 7.2% for ice cream, lollies and sorbets compared to baseline
- a reduction of 10.1% compared to baseline was also seen for sweet spreads and sauces. However, this was largely due to increased sales of peanut butter, which are inherently lower in sugar compared to other products in the category
- puddings had a 2.3% reduction compared to an increase of 2% for the year 3 report

#### **Out of home sector products**

The main findings were (see Table ES1a):

- overall there was a 0.2% reduction in the simple average total sugar per 100g in products sold between baseline (2017) and year 4 (2020)
- two of the 5 categories included in the out of home analysis had a reduction in sugar between 2020 and baseline, these were cakes (down 8.2%) and morning goods (down 3.5%)
- ice cream, lollies and sorbets increased by 0.5%, and puddings and biscuits both increased by 0.3%
- chocolate confectionery, sweet confectionery, breakfast cereals, and yogurt and fromage frais were excluded as the 2020 business level data could not provide reliable comparisons to baseline data. Sweet spreads and sauces are not included for the eating out of home sector.

**Table ES1a. Summary of change in sugar content by food category between baseline (2015) and year 4 (2020)**

<b>Product category</b>	<b>Retailers and manufacturers (% change in SWA (note 1) sugar per 100g)</b>	<b>Eating out of home sector (% change in SA (note 2) sugar per 100g)</b>
Overall	-3.5	-0.2
Biscuits	- 3.1	0.3
Breakfast cereals	-14.9	NA (note 4)
Chocolate confectionery	-0.9	NA (note 4)
Ice cream, lollies and sorbet	-7.2	0.5
Puddings	-2.3	0.3
Sweet spreads and sauces	-10.1	NA
Sweet confectionery	-2.8	NA (note 4)
Yogurts and fromage frais	-13.5	NA (note 4)
Cakes	-3.2 (note 3)	-8.2
Morning goods	-4.9 (note 3)	-3.5

Note 1: Sales weighted average is the mean weighted by total sales. This gives more weight to products with higher sales

Note 2: Simple average is the simple arithmetic mean. Products are given equal weight. The baseline is 2017

Note 3: The baseline for cakes and morning goods for retailers and manufacturers is 2017 rather than 2015, as only a small amount of data was collected for cakes and morning goods in 2015. More information is given in the methodology chapter and Appendix 2

Note 4: Data for sweet confectionery, chocolate confectionery, yogurts and fromage frais, and breakfast cereals in the eating out of home sector has been excluded due to incomparability of results across different years

## **Calorie content of food products likely to be consumed on a single occasion**

### **Retailer own brand and manufacturer branded products (in home sector)**

The main findings were (see Table ES1b):

- there has been an overall decrease of 0.5% in the sales weighted average calories for products likely to be consumed on a single occasion (calories per single serve) since 2015
- categories which showed the most progress compared to baseline were yogurts and fromage frais; ice cream, lollies, and sorbet; and cakes (2017 baseline) with reductions of 7.3%, 7.1% and 4.3% respectively
- the overall sales weighted average calories for puddings increased by 7.2% compared to baseline and for sweet confectionery the increase was 4.4%
- an assessment of the number of products meeting the calorie benchmark has been conducted for the first time. Overall, 83.5% of around 6,000 retailer and manufacturer branded products met the calorie benchmark in year 4 (2020). This was an improvement from 81.9% at baseline (2015).

### **Out of home sector products**

The main findings were (see Table ES1b):

- for the categories included in the year 4 analysis, there has been an overall reduction in average calories per portion from 422 kcals in 2017 to 377 kcals in 2019, which represents a decrease of 10.7%
- categories with decreases in calories per portion from baseline were ice creams, lollies and sorbets (down 19.2%), cakes (down 15.5%), puddings (down 8.6%) and morning goods (down 2.3%)
- biscuits were the only category to increase in calories per portion, which was a 2.6% increase from 270 kcal in 2017 to 277 kcal in 2020

**Table ES1b. Summary of change in calories likely to be consumed on a single occasion (per single serve) by food category between baseline (2015) and year 4 (2020)**

<b>Product category</b>	<b>Retailers and manufacturers (% change in SWA (note 1) calories per single serve)</b>	<b>Eating out of home sector (% change in SA (note 2) calories per single serve)</b>
Overall	-0.5	-10.7
Biscuits	-1.8	2.6
Breakfast cereals	NA	NA (note 4)
Chocolate confectionery	-3.2	NA (note 4)
Ice cream, lollies and sorbet	-7.1	-19.2
Puddings	7.2	-8.6
Sweet spreads and sauces	NA	NA
Sweet confectionery	4.4	NA (note 4)
Yogurts and fromage frais	-7.3	NA (note 4)
Cakes	-4.3 (note 3)	-15.5
Morning goods	-0.6 (note 3)	-2.3

Note 1: Sales weighted average is the mean weighted by total sales. This gives more weight to products with higher sales

Note 2: Simple average is the simple arithmetic mean. Products are given equal weight. The baseline is 2017

Note 3: The baseline for cakes and morning goods for retailers and manufacturers is 2017 rather than 2015

Note 4: Data for breakfast cereals, chocolate confectionery, sweet confectionery, and yogurts and fromage frais in the eating out of home sector has been excluded due to incomparability of results

### **Analysis by socioeconomic status (SES) for retailers and manufacturer branded products**

- assessment of the change in the sales weighted average total sugar per 100g by socioeconomic group, between baseline (2015) and year 4 (2020), shows that the results were similar for the different SES groups for the majority of sugar reduction food categories

- assessment of the change in the sales weighted average calories per single serve portion by socioeconomic group, for baseline (2015) and year 4 (2020), shows that the results were similar across socioeconomic groups with some exceptions.

Equivalent figures for the eating out of home sector are not available.

## **Volume of sales for retailers and manufacturer branded products**

### **Total sales of sugar**

- overall there has been a 7.1% increase in the tonnes of sugar sold from the product categories included in the programme between baseline and year 4
- the largest increases in tonnes of sugar sold were 26.9% for chocolate confectionery and 24.5% for sweet spreads and sauces
- three categories had reductions in tonnes of sugar sold; yogurts and fromage frais (down 18.4%), breakfast cereals (down 11.3%) and puddings (down 7.5%)

### **Total volume sales**

- overall, there has been a 8.1% increase in total volume sales between 2015 and 2020 for the product categories included in the programme
- increases were seen in the sales of sweet spreads and sauces (up 32%), chocolate confectionery (up 27.8%), and ice cream, lollies and sorbets (up 18.7%)
- in contrast, yogurts and fromage frais had a 5.0% reduction and puddings had a 3.1% reduction in total volume sales

The increase in sugar and total volume sales is partly due to the food system being disrupted during the first 6 months of the coronavirus (COVID-19) pandemic, resulting in more food and drink being purchased for consumption in the home. This was partly due to some initial stockpiling and schools, workplaces and most businesses in the out of home sector either closing or operating differently. It is not possible to quantify how much of this increase was due to the pandemic.

Equivalent sales figures for the eating out of home sector are not available.



## **Juice and milk based drinks**

### **Retailers and manufacturer branded products – changes in sugar and calorie content**

The main findings were (see Table ES1c):

- there have been reductions in the sales weighted average sugar per 100ml for 2020 from 2017 for some categories, including 29.7% for pre-packed milk based drinks, 6.9% for pre-packed flavoured milk substitute drinks and 7.1% for pre-packed fermented (yogurt) drinks
- there were also some reductions in the simple average sugar per 100ml, in particular, 34.2% for milkshake powders, syrups and pods as consumed, and coffee and tea powders, syrups and pods as consumed
- hot chocolate and malt powders, syrups and pods as consumed was the only category with increased simple average sugar per 100ml between 2017 and 2020 (up 5.1%)
- the number of calories likely to be consumed on a single occasion decreased in all categories

**Table ES1c. Summary of change in sugar content and the number of calories likely to be consumed on a single occasion (per single serve) by juice and milk based drink category in retailers and manufacturer branded products**

<b>Product category</b>	<b>% Change in SWA (note 1) or SA (note 2) sugar per 100ml</b>	<b>% Change in SWA (note 1) or SA (note 2) calories per single serve</b>
Pre-packed milk based drinks	-29.7 (note 1)	-20.0 (note 1)
Pre-packed flavoured milk substitute drinks	-6.9 (note 1)	-8.0 (note 1)
Pre-packed fermented (yogurt) drinks (note 4)	-7.1 (note 1)	-2.3 (note 1)
Coffee and tea powders, syrups and pods as consumed	-20.3 (note 2)	NA (note 3)
Milkshake powders, syrups and pods as consumed	-34.2 (note 2)	NA (note 3)
Hot chocolate and malt powders, syrups and pods as consumed	5.1 (note 2)	NA (note 3)
Pre-packed mono juices	-1.7(note 2)	-3.4 (note 1)
Pre-packed blended juices	-2.8 (note 1)	-8.8 (note 1)

Note 1: Sales weighted average is the mean weighted by total sales, giving more influence to products with higher sales

Note 2: Simple average is the simple arithmetic mean. Products are given equal influence. The percentage change is based on added sugar rather than total sugar for the milk based drinks categories

Note 3: Not reported due to the format in which products are sold

Note 4: Pre-packed fermented (yogurt) drinks are a subset of the yogurts and fromage frais category due to the composition and similarity, but are reported with milk based drinks

### **Eating out of home sector**

The main findings were (see Table ES1d):

- open cup milkshakes showed a 12.7% increase in sugar content and a 12.2% increase in calories per single serving from baseline
- by contrast, open cup hot or cold drinks showed a decrease in sugar content of 10.2%, but an increase in calories per single serving of 14.3%

- over the same time, blended juice drinks showed a 9.4% decrease in sugar content and a 3.5% increase in calories per serving
- between baseline and year 1, all categories showed a decrease in the percentage of products at or below the maximum calories per serving guideline (open cup milkshakes 42% down to 20%, open cup hot or cold drinks from 69% to 53%, and blended juice drinks from 46% to 35%)

**Table ES1d: Summary of change in sugar content and the number of calories likely to be consumed on a single occasion (per single serve) by juice and milk based drink category for the eating out of home sector between baseline (2017) and year 2 (2020)**

<b>Product category (Milk based drinks)</b>	<b>% Change in simple average (note 1) sugar per 100ml</b>	<b>% Change in simple average (note 1) calories (kcal) per single serve</b>
Open cup milkshakes	12.7	12.2
Open cup hot or cold drinks	-10.2	14.3
<b>Product category Juice based drinks</b>	<b>% Change in simple average (note 1) sugar per 100ml</b>	<b>% Change in simple average (note 1) calories (kcal) per single serve</b>
Blended juice based drinks	-9.4	3.5

Note 1: Simple average is the simple arithmetic mean. Products are given equal influence. The percentage change is based on added sugar rather than total sugar for the milk based drinks categories

## **Soft Drinks Industry Levy**

- overall the percentage change in sales weighted average sugar was down 46% from 2015 and decreases were similar across all socioeconomic groups (reductions of between 44% to 47%)
- the total sugar purchased per household from drinks subject to the SDIL has decreased across all socioeconomic groups. The reduction is largest in Group E (people on long term state benefits, casual and lowest grade workers, unemployed with state benefits only) at 38.4%, and then is similar across all remaining socioeconomic groups (between 28.0% and 36.5% reduction)
- overall the sales of drinks subject to the SDIL increased between 2015 and 2020 by around 750,000 thousand litres (increase of 21.3%); drinks with less than 5g of sugar increased by over 1,500,000 thousand litres. Sales decreased by over 5 fold for drinks with 5-8g of sugar per 100ml and more than halved for drinks with over 8g of sugar per 100ml.

## **Limitations**

There are a number of limitations to the data and analysis presented in this report. It is not possible to test the statistical significance of the changes over time, which means that

some of the smaller changes or differences between food categories could have occurred by chance.

For the eating out of home sector, it is not possible to produce the sales weighted average sugar content of products in g per 100g or 100 ml. This is because it is not possible to link sales with nutrition data at product level. Therefore, simple averages have been used, but these have the disadvantage of not taking into account the volume of sales of the product, meaning that low selling products are given the same weight as high selling products. Also, there may be bias as nutrition information is not available for some outlets.

The baseline used for the in home sector is 2015. However, only a small amount of data was collected for cakes and morning goods in 2015 so progress for these categories is compared to a baseline year of 2017.

The SDIL analysis by socioeconomic group has not accounted for other factors that could be causing some of the differences seen, including price changes and other household characteristics. For example, only a small proportion (11%) of group E are families, and 57% are single person households.

For this report, there were fewer products weighed for the in home sector compared to previous years (for more information on the weighing of certain products, please see Appendix 2). To enable comparisons between years, it was decided that the nutritional information per 100g, where available from the year 3 dataset, would be cloned for analysis in year 4. This occurred for 426 products overall from the following categories: biscuits, cakes, morning goods and puddings (around 7.3% of products in these categories). This is likely to mask the size of any additional change in average sugar content compared to year 3, as any potential difference in these products will not have been reflected in year 4.

## **Conclusion**

The results of this report show continued mixed progress across different sectors, categories, businesses and brands for the food and drinks included in the sugar reduction programme; and further changes to products subject to the Soft Drinks Industry Levy.

# Introduction

The sugar reduction programme, and all other parts of the reformulation programme, transferred from Public Health England (PHE) to the Office for Health Improvement and Disparities (OHID) on 1 October 2021. Both organisations are referred to in this report.

The sugar reduction programme was launched in 2016 and set an ambition for all sectors of the food industry to voluntarily reduce sugar by 20% by 2020 in the food categories that contribute most to the intakes of children aged up to 18 years. The categories included in the programme are biscuits; breakfast cereals; cakes; chocolate confectionery; ice cream, lollies and sorbets; morning goods (such as pastries and buns); puddings; sweet confectionery; sweet spreads and sauces; yogurts and fromage frais ([Sugar reduction: achieving the 20%, 2017b](#)).

In May 2018, unsweetened juice and sweetened milk based drinks were incorporated into the programme, having been excluded from the Soft Drinks Industry Levy (SDIL), with an ambition set for all sectors of industry to reduce sugar by 5% in juice based drinks, and 20% in milk based drinks by 2021 ([Sugar reduction guidelines for industry: juice and milk based drinks, 2018b](#)). In January 2019, fermented (yogurt) drinks were also added to the programme, with a sugar reduction ambition of 20% by 2021 ([Sugar reduction guidelines for industry: fermented \(yogurt\) drinks, 2019](#)).

The programme covers children up to the age of 18 years. As children eat a wide range of food and drink, and not just those that are manufactured for or marketed to children, all foods in each category are included. Further details of the programme are available elsewhere ([Sugar reduction and wider reformulation, 2017a](#)).

This report includes assessments of progress overall and by category for the food and drink included in the sugar reduction programme. As PHE was asked by HM Treasury to monitor change in products subject to the Soft Drinks Industry Levy (SDIL), this report also includes an assessment of the changes in the sugar content and sales of drinks covered by SDIL between 2015 and 2020 ([The Soft Drinks Industry Levy Regulations, 2016](#)).

Some businesses have also provided case studies of sugar reduction activity which may not have been captured in the datasets used to assess progress.

# Methodology

## Food categories

### Introduction

This section briefly sets out descriptions of the underlying data sources and analytical methods used to produce this report. A more detailed description of the methodology and category definitions, including limitations to the data and analysis, can be found in Appendix 2. Product categories covered by the sugar reduction programme are:

- biscuits
- breakfast cereals
- cakes
- chocolate confectionery
- ice cream, lollies and sorbets
- morning goods
- puddings
- sweet confectionery
- sweet spreads and sauces
- yogurts and fromage frais

This report also includes the second assessment of progress made in unsweetened juice and sweetened milk based drinks and an assessment of changes in drinks covered by the SDIL.

### Metrics used to measure progress

A series of metrics have been used to monitor progress and these can be mapped to the 3 options businesses are likely to be taking to reduce the sugar content of products covered by the programme. Some businesses may choose to use 1 of these options and some may choose to implement a combination. The options are:

- reducing the amount of sugar per 100g or 100ml (reformulation)
- reducing the portion size of a product likely to be consumed on a single occasion
- shifting consumers' purchasing patterns towards lower or no added sugar products

### **Retailers and manufacturer branded products**

This report uses 5 metrics for retailers and manufacturer branded products to measure progress against the sugar reduction ambitions.

#### **Sales weighted average total sugar content (grams per 100g or 100ml)**

The average (mean) sugar content of each food product is weighted by its total sales volume in weight (kilogrammes) to give more influence to products with higher sales. Therefore, changes to the sugar content of products with higher sales will have a greater impact on the sales weighted average than changes for products with fewer sales. For the SDIL and juice and milk based drinks, sales in litres are used to weight the sugar content of each product to give a sales weighted average grams per 100ml.

#### **Simple average: the simple arithmetic average of total sugar content (grams per 100g or 100ml)**

Products are not weighted according to volume sales in this calculation, so this measures the average (mean) sugar content of products regardless of how much is sold. Again, there is a SDIL and juice and milk based drinks equivalent expressed as grams per 100ml.

#### **Sales weighted average calories in products likely to be consumed on a single occasion (single serve)**

This measure is restricted to a subset of products which are likely to be consumed on a single occasion. It is the average (mean) number of calories (expressed as kcals) per serving of each product, where the contribution of each product to the average is weighted by its total sales volume in servings.

Portion size has been estimated through analysis and consumption information and is not always consistent with portion size information provided on product packaging by retailers or manufacturers.

The proportion of single serve products included in this analysis varies between categories, with around three-quarters of products included for morning goods but only around a third for chocolate and sweet confectionery. Breakfast cereals and sweet spreads and sauces are not included in this analysis as consumers take variable sized servings out of a pack, jar or bottle and it is therefore not possible to measure single serve



portions as there is no standard size. Powders and syrups in the milk based drinks analysis have been excluded for the same reason. Pods and sachets have also not been included as consumers could have more than a single pod or sachet to make up their drink.

This metric is designed to adjust for any potential negative impacts of reducing sugar such as increasing calories at the same time or increasing the size of a portion.

### Proportion of products at or below the maximum calorie guidelines

This measure is also restricted to the subset of products which are likely to be consumed on a single occasion. The proportion of products at or below the maximum calorie guidelines (as set out in the sugar reduction technical report) is calculated as a percentage of all products in the category ([Sugar reduction: achieving the 20%, 2017b](#)). This measure gives a further sense of progress in different categories.

### Total sugar sales

This is the total volume of sugar sold (in tonnes) in the categories included in the programme. It is calculated by multiplying the sugar content of each product by the volume sales of that product. Therefore, it will reflect both changes in sales volumes and changes in sugar content of products.

The metrics align against the mechanisms available for change as shown in Box 1.

### Box 1: Metrics used to assess sugar reformulation programme for retailers and manufacturer branded products

Metric	Simple average of sugar per 100g or 100 ml	Sales weighted average of sugar per 100g or 100 ml	Sales weighted average of calories per single serve	Total sugar sales	Proportion below max calorie guidelines
1. Reformulate to reduce sugar content in products	✓	✓	✓	✓	✓
2. Reduce the portion size for products likely to be consumed on a single occasion			✓	✓	✓
3. Shift consumer purchasing patterns towards lower or no added sugar products		✓	✓	✓	

For retailers and manufacturers, the headline metrics in this report are largely based on the sales weighted average total sugar content per 100g or 100ml, and the sales weighted average calories in products likely to be consumed on a single occasion. However, the other metrics help to monitor the full impact of the reformulation programme. The sales weighted average total sugar per 100g or 100ml is used as the main metric for monitoring progress because it is based on all products purchased (apart from some juice and milk based drinks categories), whereas the calories metric is based on those which have a single serve portion size (as determined by PHE) which is a subset of all products purchased.

## **Eating out of home sector**

Following publication of the PHE ([Sugar reduction: report on first year progress, 2018a](#)) report on the first year of progress, OHID (formerly PHE) reviewed the data and metrics used for the eating out of home sector. For this report, simple averages will be used to track progress for this sector rather than sales weighted averages. This is because of limitations with the commercially available dataset used for this sector, which mean that it is not possible to link the nutrition data to purchases at product level with the same level of accuracy as for retailers and manufacturer branded products. Therefore, only the following metrics are used for the eating out of home sector.

### **Metrics used in this report to assess progress of the sugar reduction programme for the eating out of home sector**

1. Simple average total sugar content per 100g (or 100ml for SDIL and juice and milk based drinks).
2. Simple average for calories in products likely to be consumed on a single occasion (calories per single serve).
3. Proportion of products at or below the maximum calorie guidelines for each category

These metrics are also compared against the equivalent simple average metrics for retailers and manufacturer branded products.

## **Time periods covered**

For retailers and manufacturer branded products, comparisons are generally made between the baseline year of 2015 and the fourth year (2020) of the programme.

The data for 2020 covers the first 6 months of the COVID-19 pandemic (March to September 2020). This was a time when food and drink purchasing behaviour was severely disrupted due to:

- Stockpiling in the early days of the pandemic
- Schools, workplaces and most businesses in the eating out of home sector either closing or operating through delivery, which led to more food and drink being purchased and bought into the home, and less purchased for consumption out of the home

One option was to reduce the time frame so that data collection, which began in September 2019, ended before the first period of national lockdown which began in March 2020; the second option was to change the data collection to avoid periods of lockdown. As both options would have resulted in data that were not comparable with previous years it was decided, to maintain consistency and use data for the same duration as previous reports. The datasets used in this report therefore cover volume purchases for the 52 weeks ending 6 September 2020 for retailer and manufacturer branded and OOH sector products.

The baseline comparison to 2015 has an exception for cakes and morning goods, where the 2015 baseline data for these categories was not considered to be robust and the data for subsequent years has been gradually improved to include more products. Therefore, for these 2 categories the data for 2017 (year 1) has been used as the baseline instead of 2015, with comparisons therefore being made between 2017 and 2020.

While this approach also has some limitations, the 2017 data is more complete than the 2015 data for these categories so allows for more robust comparisons to be made. However, comparisons between 2017 and 2020 should still be made with caution, because data was collected for around 30% more cake products in 2020 compared with 2017 and around 50% more morning goods products (the number of products included in the analysis can be seen in Table 1).

To enable an overall comparison for all categories combined to be made with the updated baseline year of 2015, the 2017 data for cakes and morning goods has been used to replace the 2015 data for these 2 categories. This may underestimate overall change between 2015 and 2020 because it implies that there has been no change for cakes and morning goods between 2015 and 2017.

As reported in the year 1 sugar reduction progress report, it is not possible to report on progress for Aldi and Lidl in the same way as for other businesses due to a lack of baseline data ([Sugar reduction: report on first year progress, 2018a](#)). Data is now available for these retailers for 2017 (year 1) and 2020 (year 4), and therefore progress reported for these retailers' products will be based on comparisons between year 1 and year 4.

More information on this methodology and other small changes in the time periods used for comparisons is available in Appendix 2.

For the eating out of home sector, comparisons are made between 2017 and 2020, making 2017 the baseline period for this sector. For juice and milk based drinks, comparisons are made between 2017 and 2020 for all sectors.

## **Data sources**

### **Retailers and manufacturer branded products**

The baseline and year 4 analyses for retailers and manufacturer branded products use commercially available data from Kantar FMCG's consumer panel (formerly Kantar Worldpanel). This includes data on volume of sales and nutrition information. The baseline year for this report used data collected over 52 weeks ending 31 January 2016 and the fourth-year dataset covers volume purchases for the 52 weeks ending 6 September 2020, and nutrition data held on Kantar systems in March 2021.

Nutrition data is collected at category level on a rolling basis throughout the year and the frequency of data collection increased from every 6 months in the baseline year to every 4 months in year 3. Therefore, nutrition data for all categories will have been collected in the 4 months leading up to 8 September 2020. Due to the restrictions imposed by the first COVID-19 lockdown, Kantar fieldwork was halted between April and August 2020, but nutrition data continued to be collected from third parties. Kantar fieldwork resumed in September 2020, with categories featured in the reformulation programme prioritised for fieldwork collection until December 2020. If no nutrition information for a product was found in 2020 then the most recently collected nutrition information available from a previous year was used.

Some reformulation changes may not be identified and reported on in the year that they occur if the reformulated products appeared on the shelves after the last set of nutrition data was collected for that category. More information on the data collection methodology used by Kantar FMCG is provided in Appendix 2.

There are no confidence intervals associated with the estimates calculated, as described in Appendix 2. This means that the statistical significance of the changes cannot be assessed.

### **Eating out of home sector**

The sales data for this sector for 2020 are from a commercially available dataset provided through a consumer survey also run by Kantar FMCG. Nutrition information for the eating out of home sector has been collected by Kantar from business websites. The collection of nutrition data for the eating out of home sector is usually supplemented by a request from PHE directly to businesses to provide data. However, this additional data collection

exercise did not take place for 2020 as businesses were heavily affected by the COVID-19 pandemic so may not have had the resources to provide data.

Due to delays in the collection of nutrition data for the out of home sector in 2020, most of the data used in this report was collected in April to May 2021 with a further small supplementary collection in autumn 2021. For the purposes of this report it is labelled as 2020 data as we expect there was limited reformulation towards the end of 2020 while the out of home sector was recovering from the COVID-19 pandemic. Comparisons are made between 2017 and 2020 and a fuller description of the eating out of home sector data is provided in Appendix 2.

As with the analysis for retailers and manufacturer branded products, there are no confidence intervals associated with the estimates calculated as described in Appendix 2. This means that the statistical significance of the changes cannot be assessed.

## **Geographical coverage**

Both commercially available datasets cover Great Britain, therefore the results presented in this report are representative of Great Britain as a whole.

## **Quality assurance**

The data sources and methodology used in this report were presented to external stakeholders (including retailers, manufacturers, eating out of home businesses, trade bodies and non-governmental organisations) before the first-year progress report was produced. Feedback received from stakeholders was used to check that PHE's proposals, the category definitions, analytical methods, and data sources used were appropriate.

The commercial datasets used from Kantar FMCG have quality control measures built into their production process. In addition, PHE has carried out quality control checks of all data used and all analyses to mitigate against issues remaining with the data. These include:

- checking datasets for implausible values and excluding those from the analysis
- checking the consistency of nutrition variables across a product line
- cross-referencing to other datasets or online information
- replicating analyses as a quality control measure
- examining data behind business-specific results to ensure they are plausible and comparable (otherwise excluded from the analysis)

- checking data against information supplied by businesses

Specific data checks and questions were sent to data suppliers as and when they arose, where there were anomalies, or other queries over the collection of certain variables or the viability of data collection from certain outlets.

More information related specifically to quality assurance for juice and milk based drinks data is available in Appendix 2.

## **Obtaining permission to publish individual business data for retailers and manufacturers**

Due to limitations placed on the use of individual business sales data by Kantar FMCG, OHID requested written agreement from each retailer or manufacturer to include the percentage change in the sales weighted average sugar and calories for their products in the report.

This applies to all categories included in the sugar reduction programme – food and juice and milk based drinks – and to the drinks subject to the SDIL. Where permission was declined or no response was received, the relevant data was not included in Appendix Tables 2, 3, 4 and 9, and the appropriate reason given next to the business name.

Of the 106 businesses that were contacted, 58 replied and gave permission; 5 replied and did not give permission; 43 did not reply.

Permission is not required to publish individual business level data for the eating out of home sector as the nutrition information is freely available online on business websites, and no sales data is used in the analysis.

## **Juice and milk based drinks**

This section summarises the methodological approach used for the analysis of juice and milk based drinks. More detail is available in the juices and milk based drinks section in Appendix 2.

### **Methodology**

Much of the methodology used in the analysis of products that come under the different categories of juice and milk based drinks is the same as that used in the analysis of the different food categories in the voluntary sugar reformulation programme and the drinks that fall under the SDIL ([Sugar reduction guidelines for industry: juice and milk based drinks, 2018b](#)) which was summarised earlier in this section and more detail is available in

Appendix 2. This section focuses on the methodological aspects of the analysis that are relevant only to juice and milk based drinks.

## **Time periods covered**

The baseline year for juice and milk based drinks is 2017, and year 2 is 2020 for retailers and manufacturer branded products and for relevant products sold in the eating out of home sector.

## **Reporting metrics, categories and ambitions**

Details of the drinks in scope, baseline figures, sugar reduction ambitions, sugar allowances and maximum calorie guidelines for products likely to be consumed on a single occasion can be found in the PHE ([Sugar reduction guidelines for industry: juice and milk based drinks, 2018b](#)) technical guidelines.

As is consistent with the rest of the sugar reduction programme, a series of metrics have been used to measure progress in different categories. Data from Kantar FMCG (formerly Kantar Worldpanel) has been used for retailers and manufacturer branded products for baseline and year 2, and the year 2 data for the eating out of home sector; and Lumina Intelligence (formerly MCA) for the 2017 data for the eating out of home sector.

The categories and associated reporting metrics for juice and milk based drinks are presented below in Table 1. These apply to all sectors of the drinks industry:

- retailers and manufacturer branded products for consumption in the home
- the eating out of home sector (such as restaurants, takeaways, pubs and cafes)

**Table 1. Summary of metrics, guidelines and examples of products for retailers and manufacturer branded and the eating out of home sector juice and milk based drink categories**

<b>Category</b>	<b>Simple average (SA) against baseline sugar (g per 100ml)</b>	<b>Sales weighted average (SWA) against baseline (g sugar per 100ml)</b>	<b>Calorie (Kcal) guidelines for products likely to be consumed in a single occasion</b>	<b>Reduction ambitions</b>	<b>Product examples</b>
Sweetened milk based drinks – retailers and manufacturer branded products					
Pre-packed milk based drinks (note 2)		✓	✓	Sugar per 100ml: - 10% interim reduction SWA (note 1) - 20% final reduction SWA (note 1)  Kcals single serve: - 300kcal max	Milkshakes, flavoured milks, coffees, smoothies with larger % dairy
Pre-packed flavoured milk substitute drinks		✓	✓	Sugar per 100ml: - 10% interim reduction SWA (note 1) - 20% final reduction SWA (note 1)  Kcals single serve: - 300kcal max	Drinks in scope made with milk substitutes, including flavoured varieties
Pre-packed fermented (yogurt) drinks		✓	✓	Sugar per 100ml: - 20% final reduction SWA (note 1)  Kcals single serve:	Kefirs, pre and probiotics, lassis, plant stanols and sterols



Category	Simple average (SA) against baseline sugar (g per 100ml)	Sales weighted average (SWA) against baseline (g sugar per 100ml)	Calorie (Kcal) guidelines for products likely to be consumed in a single occasion	Reduction ambitions	Product examples
				- 300kcal max	
Coffee and tea powders, syrups and pods as consumed (note 3)	✓			Sugar per 100ml: - 10% interim reduction SA (note 1) - 20% final reduction SA (note 1)	
Hot chocolate and malt powders, syrups and pods as consumed (note 3)	✓			Sugar per 100ml: - 10% interim reduction SA (note 1) - 20% final reduction SA (note 1)	
Milkshake powders syrups and pods as consumed (note 3)	✓			Sugar per 100ml: - 10% interim reduction SA (note 1) - 20% final reduction SA (note 1)	

Sweetened milk based drinks – eating out of home sector

Open cup hot or cold drinks (note 4)	✓		✓	Sugar per 100ml: - 10% interim reduction SA (note 1) - 20% final reduction SA (note 1)  Kcals single	Coffees, hot chocolate, tea, frappes, seasonal beverages. Includes drinks in scope made with milk substitutes
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Category	Simple average (SA) against baseline sugar (g per 100ml)	Sales weighted average (SWA) against baseline (g sugar per 100ml)	Calorie (Kcal) guidelines for products likely to be consumed in a single occasion	Reduction ambitions	Product examples
				serve: - 300kcal max	
Open cup milkshakes (note 4)	✓		✓	Sugar per 100ml: - 10% interim reduction SA (note 1) - 20% final reduction SA (note 1)  Kcals single serve: - 300kcal max	Includes drinks in scope made with milk substitutes

Unsweetened juices – retailers and manufacturer branded products

Pre-packed mono juice	✓		✓	Sugar per 100ml: - No increase in baseline SA  Kcals single serve: - 150kcal max	For example, 100% apple, 100% orange, 100% carrot juice
Pre-packed blended juices		✓	✓	Sugar per 100ml: - 5% final reduction SWA  Kcals single serve: - 150kcal max	Mixed 100% juices, includes blended juices with dairy where the greater % is juice. Juice with water combinations drinks (minimum 20% juice), nut and plant sap waters

Unsweetened juices – eating out of home sector

Blended	✓		✓	Sugar per	Mixed 100% juices,
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Category	Simple average (SA) against baseline sugar (g per 100ml)	Sales weighted average (SWA) against baseline (g sugar per 100ml)	Calorie (Kcal) guidelines for products likely to be consumed in a single occasion	Reduction ambitions	Product examples
juices				100ml: - 5% final reduction SA  Kcals single serve: - 150kcal max	includes blended juices with dairy where the greater % is juice. Juice with water combinations drinks (minimum 20% juice), nut and plant sap waters

Note 1: Adjusted for sugar allowance for naturally occurring lactose or a basic level of sweetening for milk substitute drinks

Note 2: Containing more than 75% milk

Note 3: Made up to manufacturer's instructions

Note 4: Whole drink as sold, with additions such as syrups, flavourings, and toppings

Progress for blended juices will be reported separately across the sectors. For retailers and manufacturer branded blended juices progress against the ambition is assessed using a sales weighted average, whereas for the eating out of home sector progress is assessed using a simple average. Mono juices are reported on only for retailers and manufacturer branded products and are monitored against the sugar content not increasing above the simple average baseline figure.

The ambitions for juice and milk based drinks include maximum calorie guidelines for products likely to be consumed on a single occasion for all categories apart from powders, pods and syrups, due to the format in which these products are sold. The individual categories of juice and milk based drinks have different calorie guidelines for products likely to be consumed on a single occasion, as found in the juice and milk based drinks technical guidelines and detailed in Table 1 above ([Sugar reduction guidelines for industry: juice and milk based drinks, 2018b](#)).

## Retailers and manufacturer branded powdered, syrup and pod-based drinks

Kantar FMCG typically collects nutrition information for products as they are sold. There are some products which are not consumed in the same way in which they are sold (for

example, milkshake and coffee powders, syrups or pods). Kantar FMCG provide a flag on their dataset to indicate if the nutrition information is for the product 'as consumed' or 'as sold'. In instances where the information is provided 'as sold', efforts were made by PHE nutritionists to source the 'as consumed' values through online searches, and where this was not possible a standardised per individual dilution factor was applied to the nutrition values.

No powders, syrups or pod products were used in the eating out of home sector analysis.

## **Sugar allowances**

Allowances have been made for naturally occurring sugars in milk (lactose) and a basic level of sweetening for milk substitute drinks, as the sugars per 100ml guidelines are based on a percentage reduction of the added sugar content rather than the total sugar content. These allowances were established in collaboration with relevant trade bodies and industry for the technical guidelines (Sugar reduction guidelines for industry: juice and milk based drinks, 2018b). Further detail of the allowances set, and the way this has been incorporated into the analysis, can be found in Appendix 2.

# Results

## Food categories

### Introduction

This chapter has 3 sections as follows:

1. Retailers and manufacturer branded product. This provides an assessment of changes made between baseline (2015) and year 4 (2020) in retailers and manufacturer branded food products included in the programme.
2. Eating out of home sector. This provides an assessment of changes between year 1 (2017) and year 4 (2020) for the food products included in the programme.
3. The SDIL. This provides an assessment of changes between baseline (2015) and year 4 (2020) across the sectors, and an analysis by socioeconomic group for retailers and manufacturer branded products.

The analysis presented in this chapter is supplemented by detailed tables which accompany this report and are referred to throughout this chapter. These are described in Appendix 1.

All percentage changes presented in this report have been calculated from unrounded data, so it may not be possible to reproduce them from the rounded data which follows.

## Retailers and manufacturer branded products

### Sales weighted average total sugar content per 100g for retailers and manufacturer branded products

The sales weighted average is quoted in Chapter 1 of the Childhood Obesity Plan as the main metric by which progress towards the 20% reduction ambition will be measured ([Childhood obesity: a plan for action, 2016](#)). There are some limitations on whether this metric captures all reformulation activity as discussed in Appendix 2. However, despite these limitations it remains the best metric to assess progress against the 20% reduction ambition.

The overall and product category level sales weighted average total sugar content per 100g for retailers and manufacturer branded products at baseline (2015) and year 4 (2020), are shown in Figure 1.

Figure 2 shows the percentage change over the same period. It can be seen that:

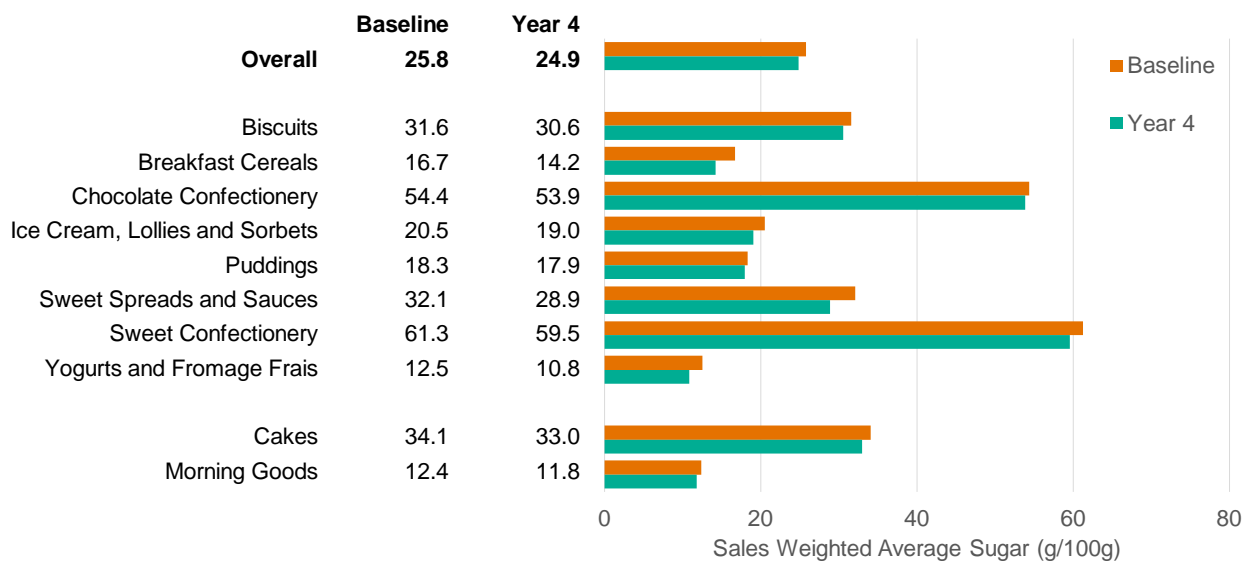
- overall there was a 3.5% reduction in sales weighted average total sugar per 100g in products sold between baseline (2015) and year 4 (2020)
- there were larger reductions for some specific product categories (breakfast cereals down 14.9% and yogurts and fromage frais down 13.5% compared with the 2015 baseline)
- there was a reduction of 10.1% for sweet spreads and sauces<sup>1</sup> and 7.2% for ice creams lollies and sorbets compared with 2015
- there were reductions of 3.2% for cakes and 4.9% for morning goods, compared with their baseline of 2017<sup>2</sup>
- there were smaller reductions for the 4 other categories: biscuits (3.1%), sweet confectionery (2.8%), puddings (2.3%) and chocolate confectionery (0.9%)

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<sup>1</sup> The decrease for spreads and sauces is largely due to an increase in the proportion of sales in that category which are due to peanut butter. Peanut butter has a much lower sugar content than chocolate spreads, fruit spreads and dessert toppings which make up the remainder of that category. Therefore, an increase in the proportion of sales for peanut butter relative to the other products resulted in a decrease in the sales weighted average total sugar g per 100g, though there was actually an increase in sugar content for most peanut butter brands.

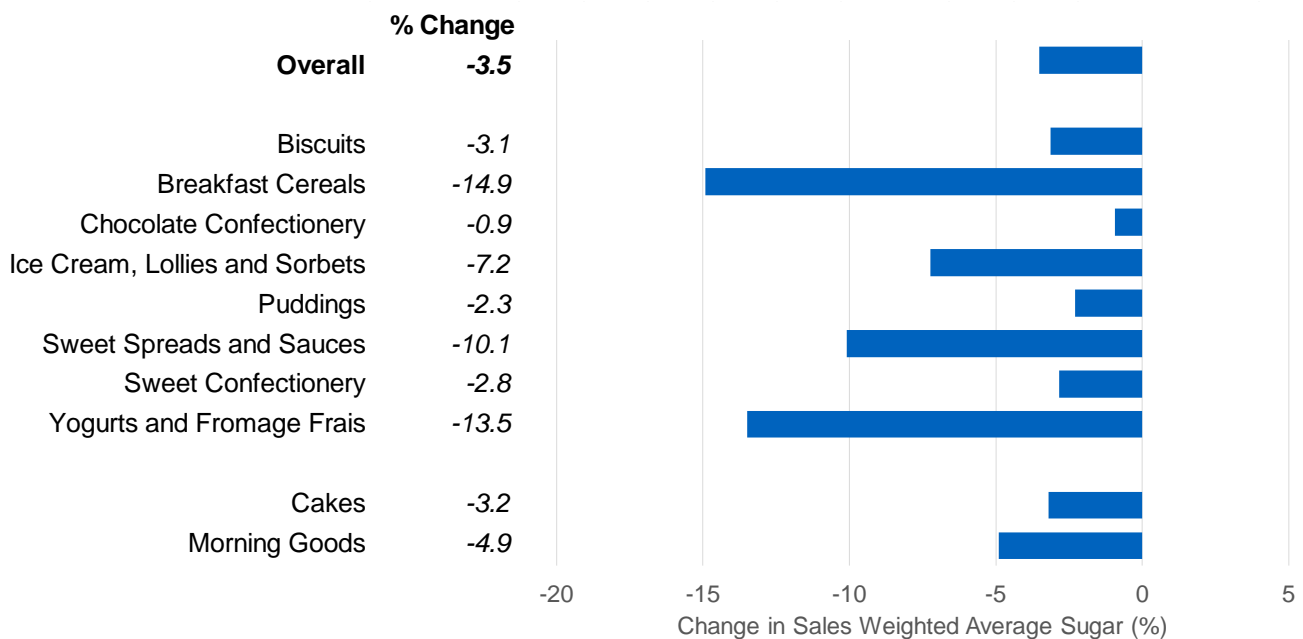
<sup>2</sup> Only a small amount of data was collected for cakes and morning goods in 2015 so progress is being compared with a baseline year of 2017. More information is given in the methodology chapter and Appendix 2.

**Figure 1: Sales weighted average total sugar (g per 100g) by category for baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: The baseline year for cakes and morning goods is 2017 rather than 2015. However, data for cakes and morning goods for 2017 has been copied into 2015 so these categories are included in the "Overall" row.

**Figure 2: Percentage change in sales weighted average total sugar (g per 100g) by category between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: The baseline year for cakes and morning goods is 2017 rather than 2015. However, data for cakes and morning goods for 2017 has been copied into 2015 so these categories are included in the "Overall" row.

## **Simple average total sugar content per 100g for retailers and manufacturer branded products**

This metric is a simple arithmetic average of the products purchased in each category and therefore does not give more influence to products which have higher sales. The simple average is used later in this chapter to compare retailers and manufacturer branded products with businesses operating in the eating out of home sector.

Figure 3 shows the simple average at both overall and product category level for baseline (2015) and year 4 (2020). Figure 4 shows the change between this period.

It can be seen that:

- overall there has been a 2.9% reduction in the simple average total sugar per 100g
- the largest decreases at a category level were 19.2% for sweet spreads and sauces, 17.0% for yogurts and fromage frais, and 14.4% for breakfast cereals
- other categories had smaller changes, such as ice creams, lollies and sorbets (6.2% reduction) and sweet confectionery (3.4% reduction)
- there was a decrease for morning goods (down 4.2%) and cakes (down 0.2%) from 2017<sup>3</sup> (Table 5)

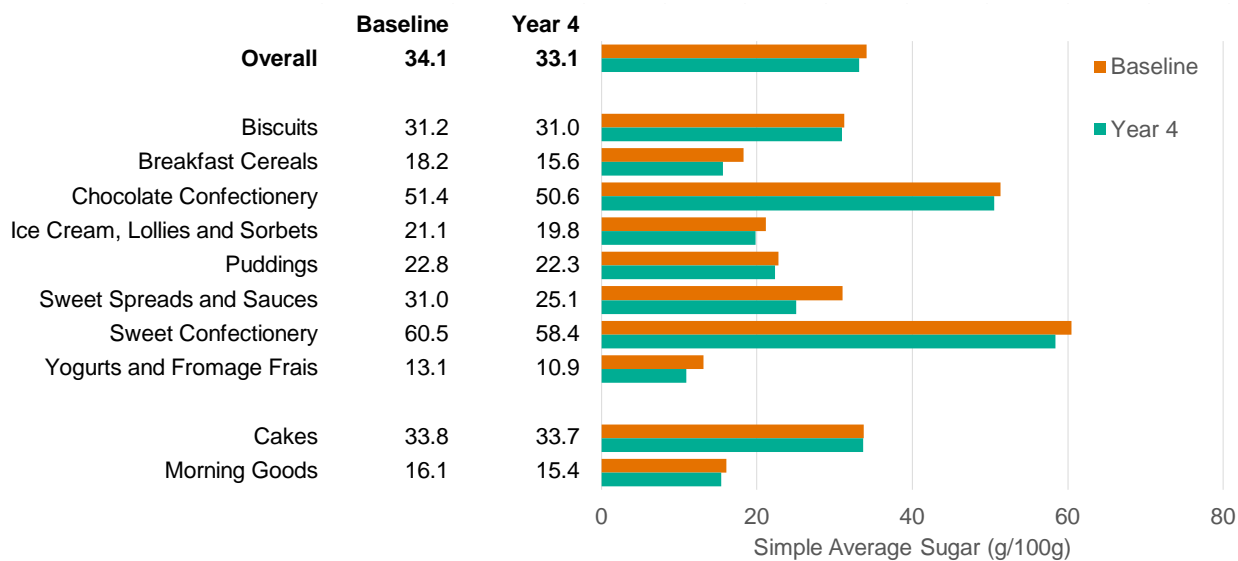
In general, the changes seen in the simple average for each category are like those seen for the sales weighted average. The most noticeable difference is for spreads and sauces which had a decrease of 19.2% for the simple average compared with a decrease of 10.1% for the sales weighted average (Figure 2). This is primarily because one of the largest selling brands did not reduce the sugar content of their products between baseline and year 4 by as much as other products in this category. As the products within this brand account for around 20% of sales for this category they have quite a large influence on the sales weighted average, but the same influence as all the other products in this category on the simple average.

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<sup>3</sup> Only a small amount of data was collected for cakes and morning goods in 2015 so progress is being compared with a baseline year of 2017. More information is given in the methodology chapter and Appendix 2.

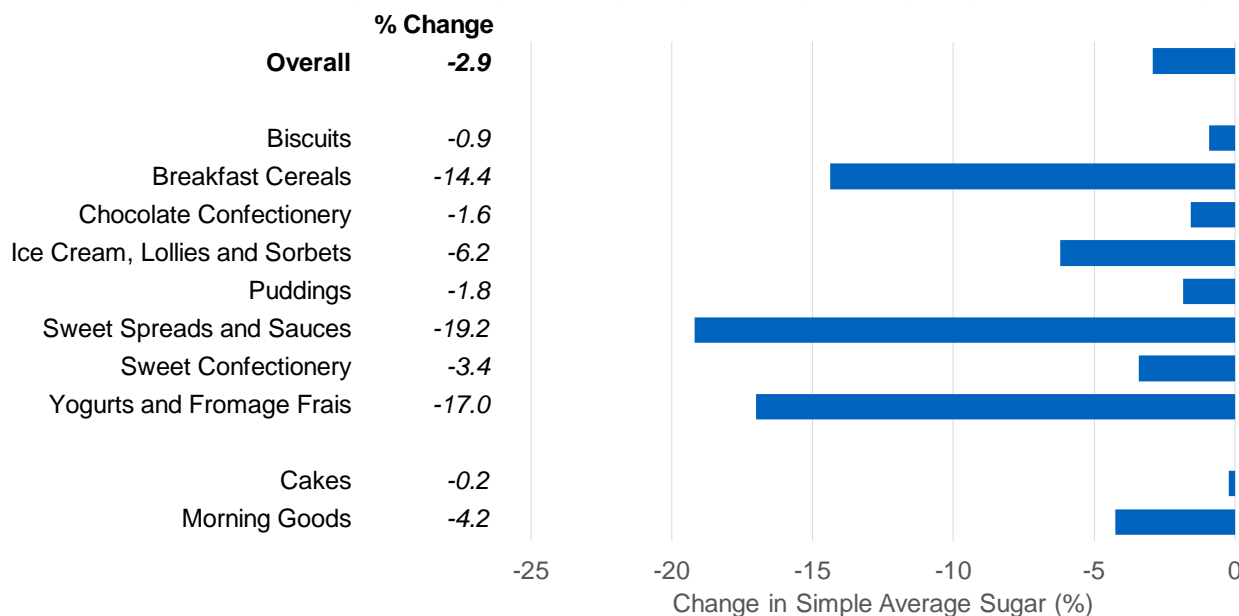


**Figure 3: Simple average total sugar (g per 100g) by category for baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: The baseline year for cakes and morning goods is 2017 rather than 2015. However, data for cakes and morning goods for 2017 has been copied into 2015 so these categories are included in the "Overall" row.

**Figure 4: Percentage change in simple average total sugar (g per 100g) by category between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: The baseline year for cakes and morning goods is 2017 rather than 2015. However, data for cakes and morning goods for 2017 has been copied into 2015 so these categories are included in the "Overall" row.

### **Sales weighted average calories in products likely to be consumed on a single occasion (single serve) for retailers and manufacturer branded products**

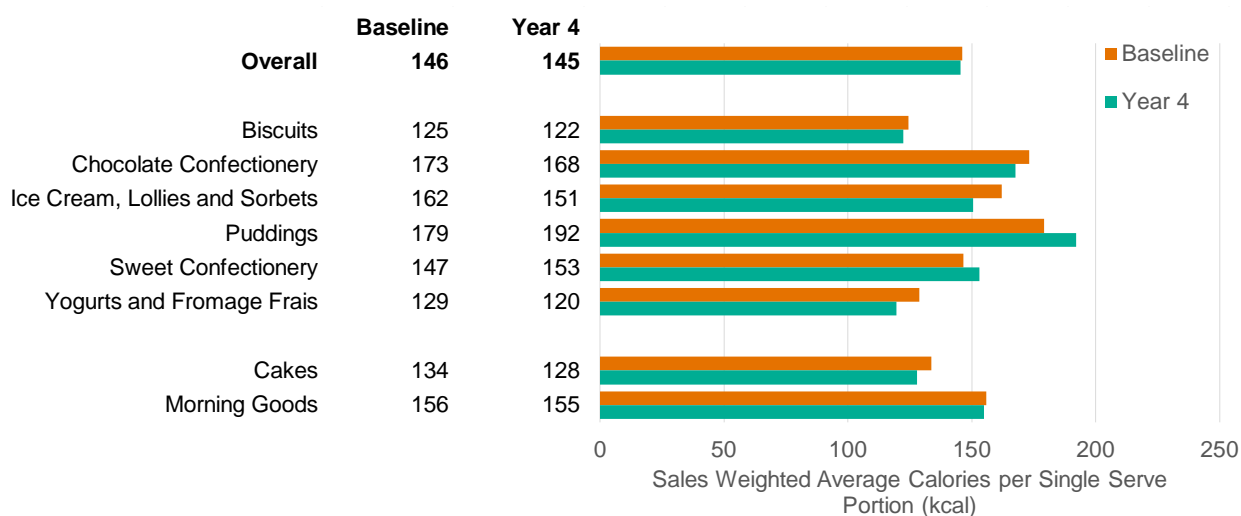
For some categories, such as chocolate and sweet confectionery, the mechanisms for action on sugar reduction are more limited due to technical limitations and issues around consumer acceptability. This may mean the primary mechanism that businesses can use is to reduce the portion size of the product, because reducing the sugar content may alter the taste or texture of the product quite significantly which could affect sales. Products that are likely to be consumed on a single occasion, and where a portion size could be calculated, were identified and the following analysis is restricted to that subset.

Changes over time, which are discussed in the remainder of this section, may be due to the portion sizes of existing products changing or new products being introduced that have different portion sizes to those already on the market or both.

Figure 5 shows the sales weighted average calories in a single serve portion at product category and overall level for baseline (2015) and year 4 (2020). Figure 6 shows the change during this period. From this data it can be seen that:

- overall there has been a small change (down 0.5%), since 2015, in sales weighted average calories in products likely to be consumed on a single occasion (146 kcals per portion in 2015 and 145 kcals in 2020)
- there have been some changes at category level and the largest decreases were 7.3% for yogurts and fromage frais, 7.1% for ice cream, lollies and sorbets and 3.2% for chocolate confectionery
- the largest increase was 7.2% for puddings<sup>4</sup> followed by 4.4% for sweet confectionery
- cakes had a decrease of 4.3% against the 2017 baseline<sup>5</sup>
- other categories had smaller changes

**Figure 5: Sales weighted average calories (kcals) for products likely to be consumed on a single occasion by category for baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**

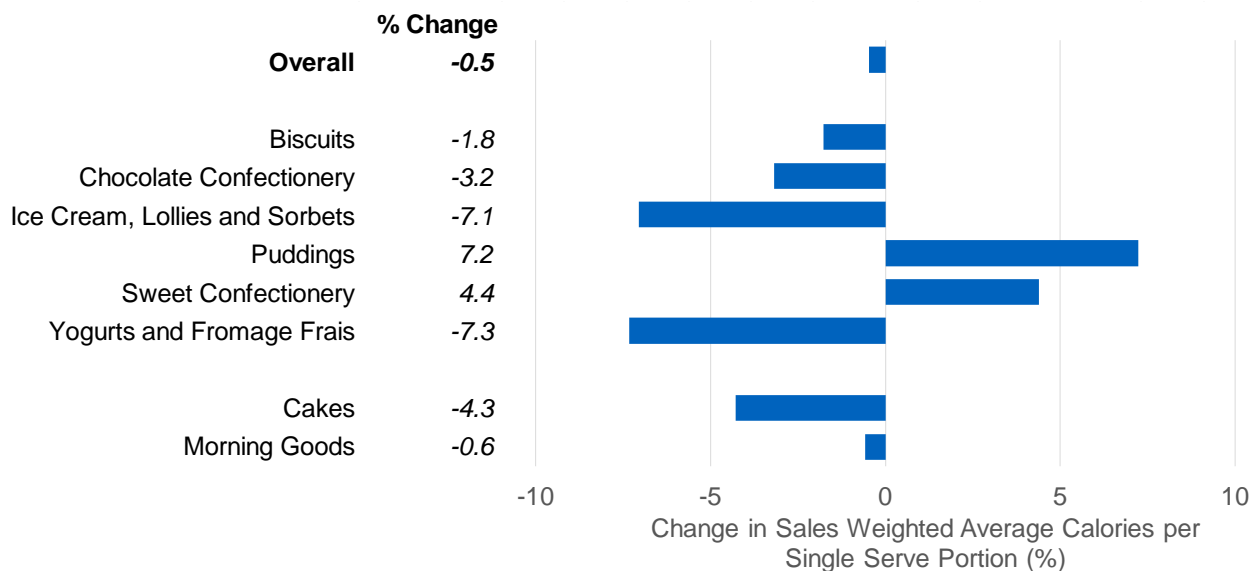


Note: The baseline year for cakes and morning goods is 2017 rather than 2015. However, data for cakes and morning goods for 2017 has been copied into 2015 so these categories are included in the "Overall" row.

<sup>4</sup> Part of the increase can be attributed to the inclusion of mince pies. Excluding them results in an increase in sales weighted average for puddings of 4.1%.

<sup>5</sup> Only a small amount of data was collected for cakes and morning goods in 2015 so progress is being compared with a baseline year of 2017. More information is given in the methodology chapter and Appendix 2.

**Figure 6: Percentage change in sales weighted average calories for products likely to be consumed on a single occasion by category between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: The baseline year for cakes and morning goods is 2017 rather than 2015. However, data for cakes and morning goods for 2017 has been copied into 2015 so these categories are included in the "Overall" row.

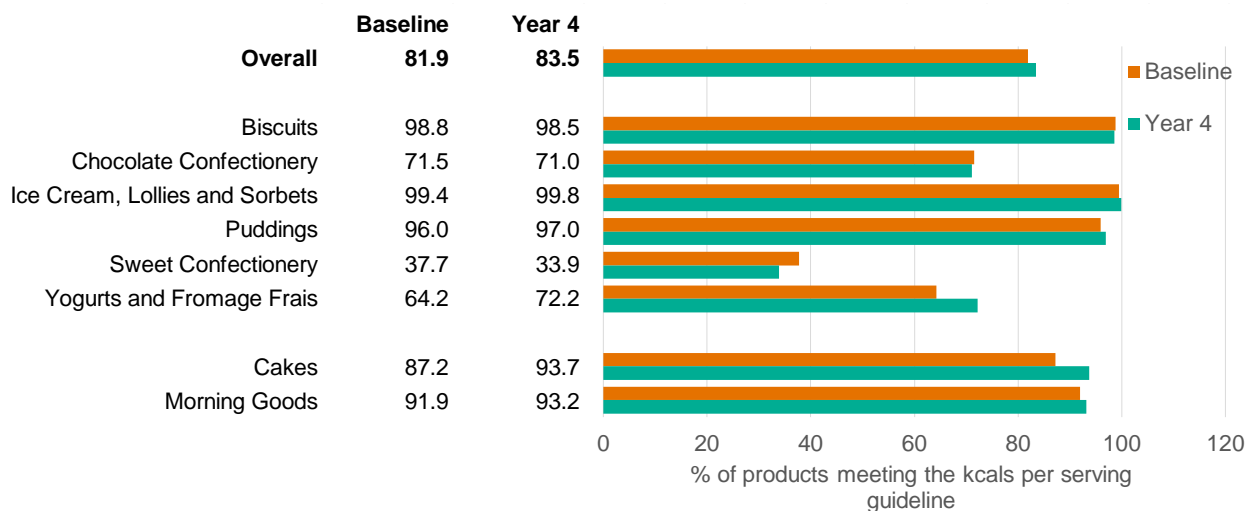
**Proportion of products likely to be consumed on a single occasion (single serve) for retailers and manufacturer branded products below the recommended calorie guidelines**

The guidelines for the foods included in the sugar reduction programme include maximum calories per portion for products likely to be consumed on a single occasion ([Sugar reduction: achieving the 20%, 2017b](#)). The proportion of products meeting the guidelines is shown in Figure 7.

It can be seen that:

- Overall 83.5% of around 6,000 retailer and manufacturer branded products met the calorie benchmark in year 4 (2020); this was an improvement from 81.9% at baseline (2015)
- Nearly all ice creams lollies and sorbets met the maximum calorie guidelines (99.8%) and there was also a high proportion meeting the guidelines for biscuits (98.5%), puddings (97.0%), cakes (93.7%) and morning goods (93.2%)
- Sweet confectionery had the lowest proportion of products meeting the maximum calories guidelines at 33.9% which was a reduction from 37.7% at baseline

**Figure 7: Proportion of products likely to be consumed on a single occasion meeting the maximum calorie guidelines by category in year 4 (2020) for retailers and manufacturer branded products**



Note: The baseline year for cakes and morning goods is 2017 rather than 2015. However, data for cakes and morning goods for 2017 has been copied into 2015 so these categories are included in the "Overall" row.

## Differences between retailers and manufacturers

This section compares progress made in retailers and manufacturer branded products between baseline (2015) and year 4 (2020) using the sales weighted average total sugar content per 100g (Figure 8) and the sales weighted average calories for products likely to be consumed on a single occasion (Figure 9). Some of the differences in progress between retailers and manufacturers will partly reflect the different products sold, for example, manufacturers sell relatively more chocolate and sweet confectionery, and retailers sell relatively more puddings.

It can be seen that:

- overall, retailers made more progress than manufacturers in reducing total sugar per 100g (decreasing by 6.3% and 1.0% respectively)
- this was not the case for calories in products likely to be consumed on a single occasion, where manufacturers had a decrease of 2.3% while retailers had an increase of 2.0%
- in terms of sugar per 100g, manufacturers made greater progress than retailers for most categories (chocolate confectionery, ice cream, lollies and sorbets, puddings, sweet spreads and sauces, yogurts and fromage frais, cakes, and morning goods)

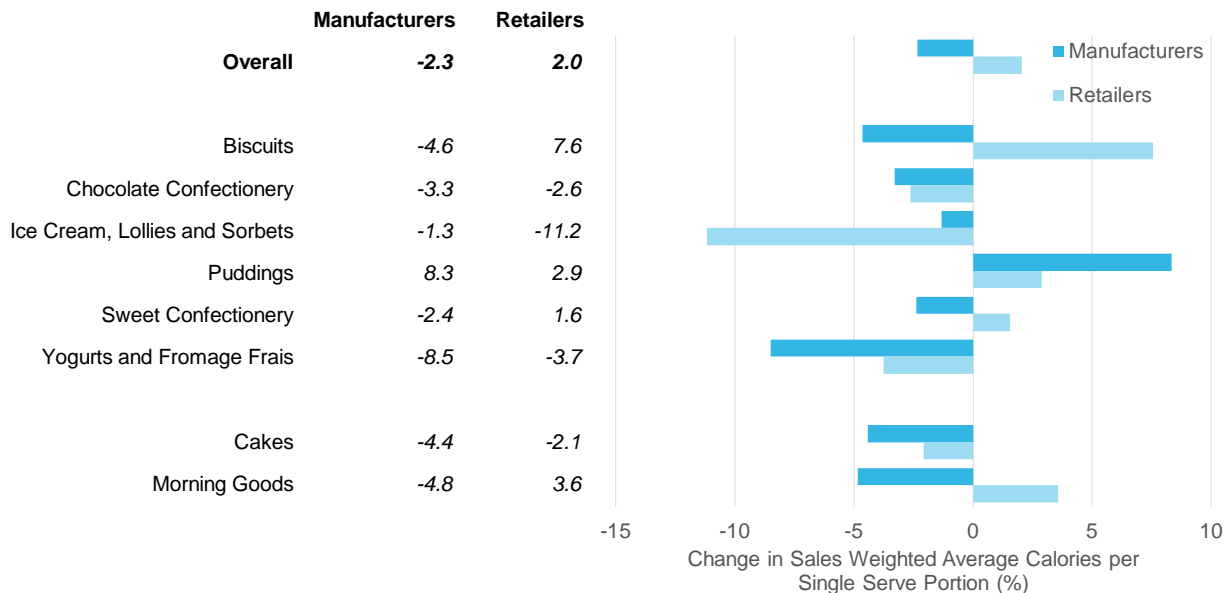
- retailers made more progress than manufacturers in biscuits, breakfast cereals and sweet confectionery
- for calories per portion, manufacturers made more progress than retailers for biscuits, chocolate confectionery, sweet confectionery, yogurts and fromage frais, cakes, and morning goods
- however, this was not the case for ice cream, lollies and sorbets and puddings where retailers had larger decreases or smaller increases in calories per portion than manufacturers (Figure 9)

**Figure 8: Percentage change in sales weighted average total sugar per 100g by category between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: The baseline year for cakes and morning goods is 2017 rather than 2015. However, data for cakes and morning goods for 2017 has been copied into 2015 so these categories are included in the "Overall" row.

**Figure 9: Percentage change in sales weighted average calories for products likely to be consumed on a single occasion by category between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: The baseline year for cakes and morning goods is 2017 rather than 2015. However, data for cakes and morning goods for 2017 has been copied into 2015 so these categories are included in the "Overall" row.

## Progress at business level

Figure 10 shows comparisons between baseline (2015) and year 4 (2020) for the sales weighted average total sugar per 100g at business and category level for retailers and manufacturers. The green dotted line represents the 20% reduction ambition for 2020. It can be seen that very few businesses have reached this ambition so far and some had increases in their sales weighted average total sugar per 100g (Figure 10 and Appendix Table 2).

A restriction on the use of the data from Kantar FMCG meant that businesses had to give permission to have their results shown in Figure 10 and Appendix Table 2. Therefore, some data has been omitted where permission was not given, and some additional data has been removed where there were concerns around the comparability of the results between baseline and year 4.

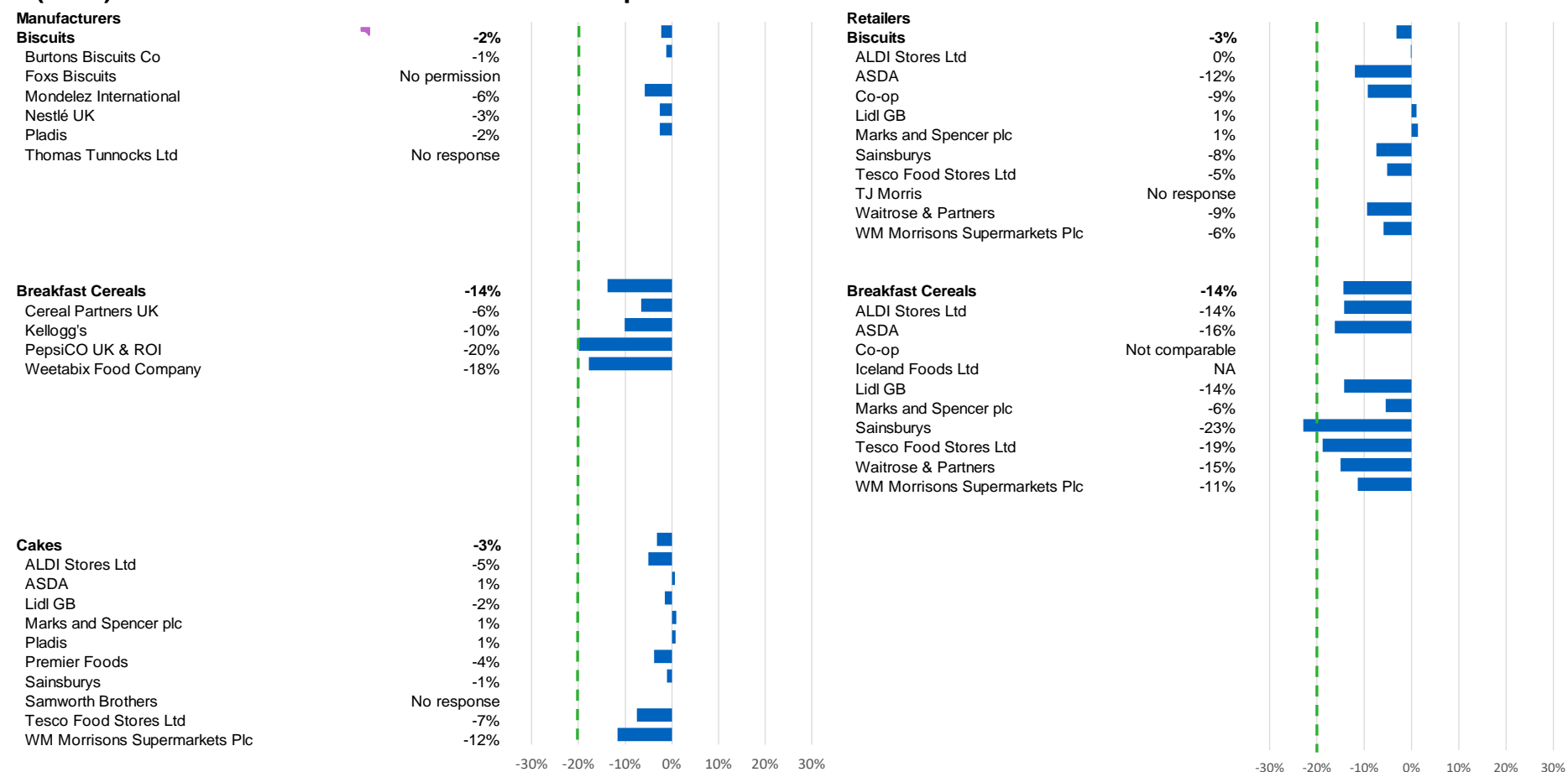
Figure 11 shows a similar comparison between baseline (2015) and year 4 (2020) for the sales weighted average calories (kcal) for products likely to be consumed on a single occasion at a business level for retailers and manufacturers (Appendix Table 3).

The same restrictions apply in terms of requiring permission to show businesses figures and non-comparable figures have also been removed. Puddings have not been included in

Figure 10 and 11 as the analysis of this category is additionally complicated by the inclusion of more mince pies in 2020 than in the baseline data. Therefore, analysis for this category both including and excluding mince pies are shown in Appendix Table 2 and 3.

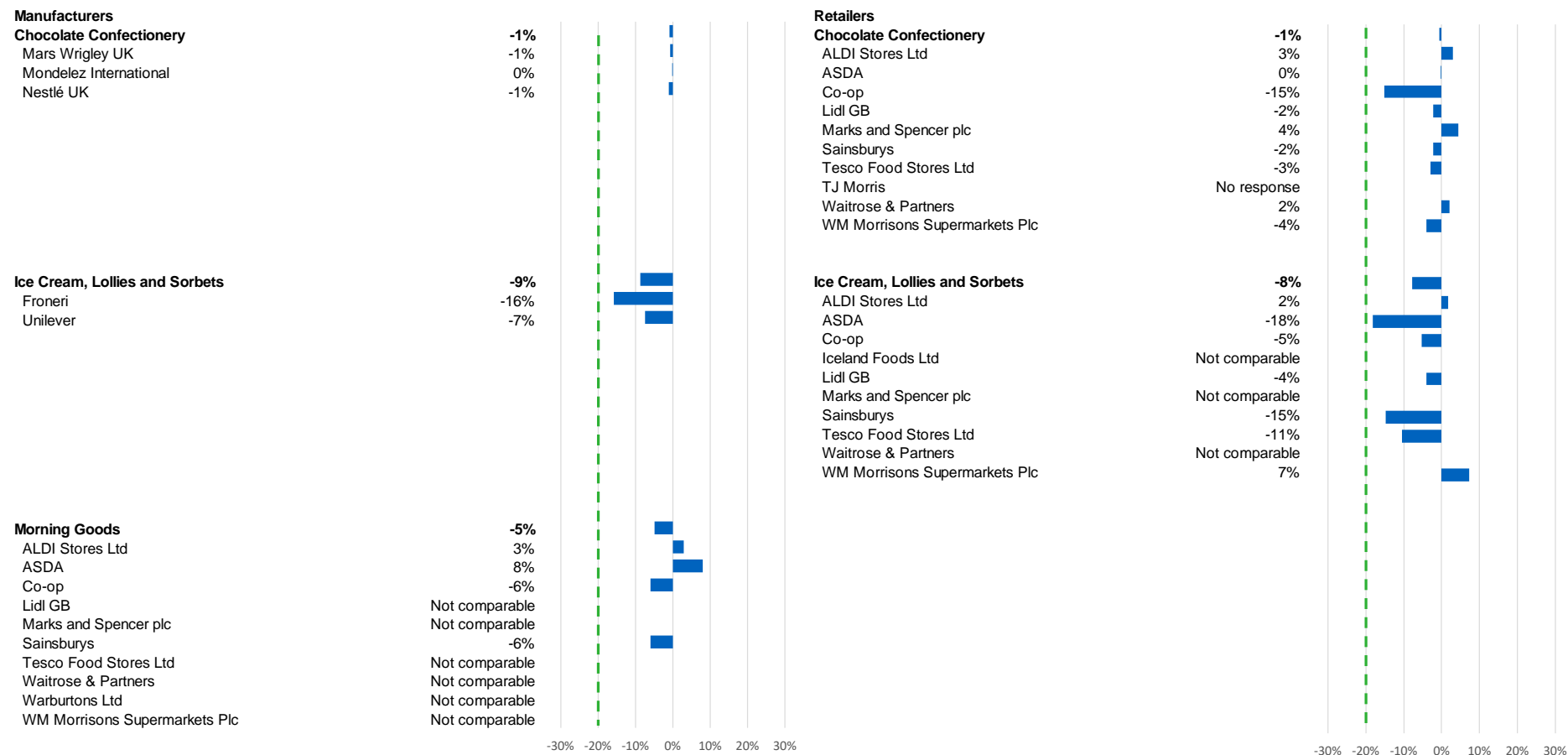


**Figure 10: Changes in sales weighted average total sugar per 100g by category and business between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note 1: The baseline year for cakes and morning goods is 2017 rather than 2015. The list of businesses for cakes and morning goods is a combined list of manufacturers and retailers.

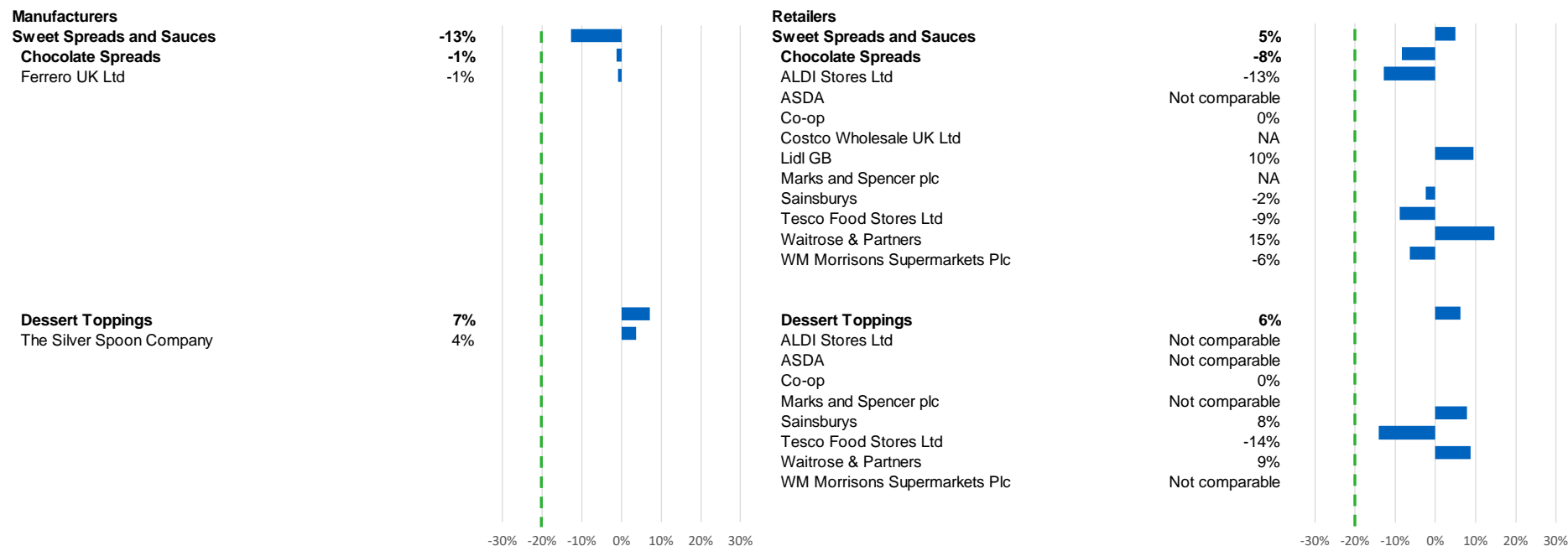
Note 2: Manufacturers and retailers are listed in alphabetical order within each category. They are not listed by volume of sugar sales. The list includes those who account for the top 80% of sugar sales. For manufacturers, any businesses which did not have at least 1% of



sales in 2015 and 2020 were removed.

Note 1: The baseline year for cakes and morning goods is 2017 rather than 2015. The list of businesses for cakes and morning goods is a combined list of manufacturers and retailers.

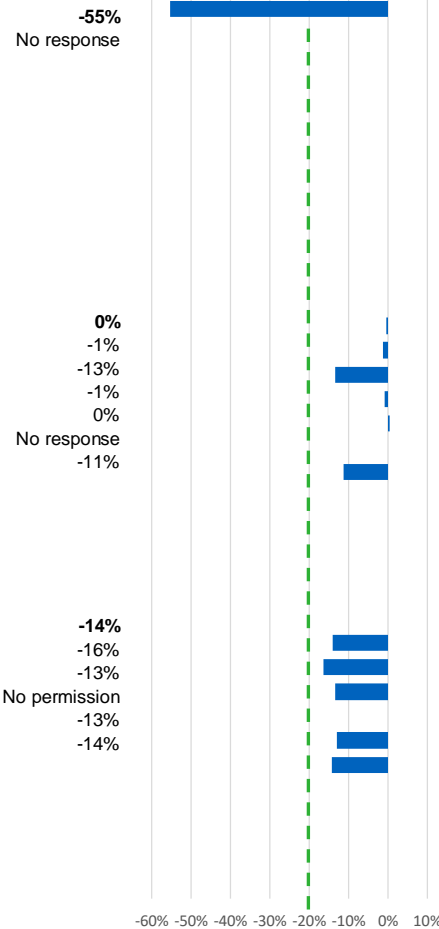
Note 2: Manufacturers and retailers are listed in alphabetical order within each category. They are not listed by volume of sugar sales. The list includes those who account for the top 80% of sugar sales. For manufacturers, any businesses which did not have at least 1% of sales in 2015 and 2020 were removed.



Note 1: The baseline year for cakes and morning goods is 2017 rather than 2015. The list of businesses for cakes and morning goods is a combined list of manufacturers and retailers.

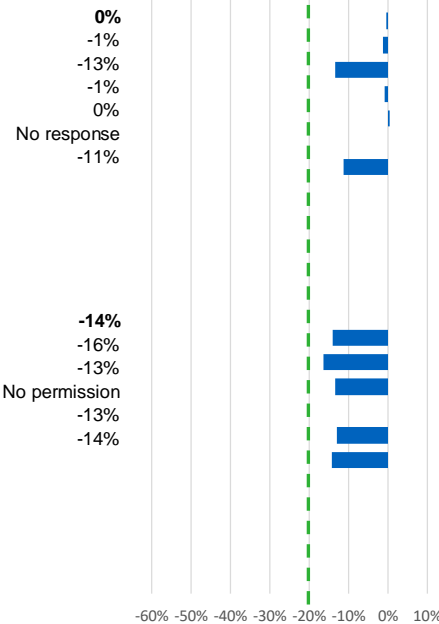
Note 2: Manufacturers and retailers are listed in alphabetical order within each category. They are not listed by volume of sugar sales. The list includes those who account for the top 80% of sugar sales. For manufacturers, any businesses which did not have at least 1% of sales in 2015 and 2020 were removed.

**Manufacturers**  
**Fruit Spreads**  
St Dalfour

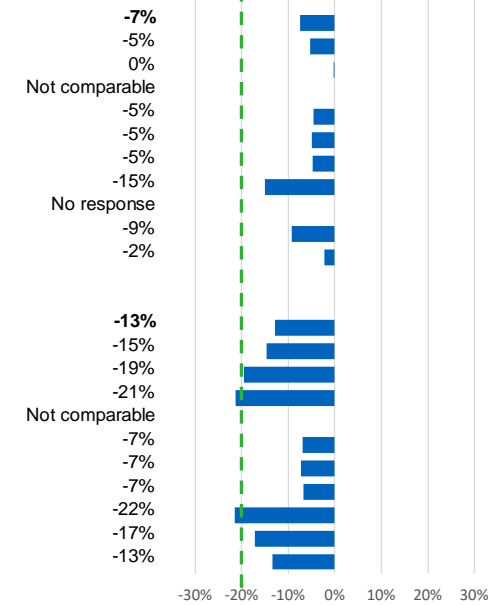


**Retailers**

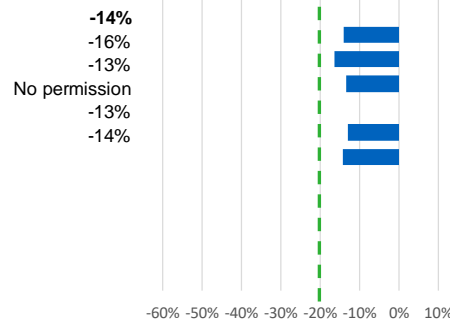
**Sweet Confectionery**  
Haribo Dunhills (Pontefract) PLC  
Mars Wrigley UK  
Mondelez International  
Nestlé UK  
Swizzels Matlow Ltd  
Valeo Confectionery



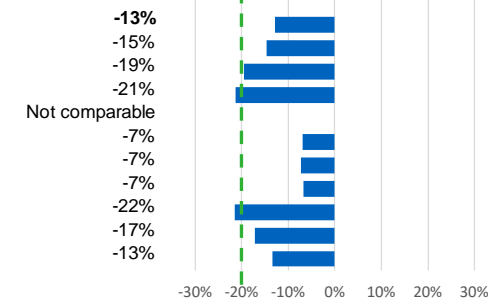
**Sweet Confectionery**  
ALDI Stores Ltd  
ASDA  
Co-op  
Lidl GB  
Marks and Spencer plc  
Sainsburys  
Tesco Food Stores Ltd  
TJ Morris  
Waitrose & Partners  
WM Morrisons Supermarkets Plc



**Yogurts and Fromage Frais**  
Danone Ltd  
Lactalis Nestle Chilled Dairy UK  
Muller UK and Ireland  
Yeo Valley Farms (Production) Ltd  
Yoplait UK



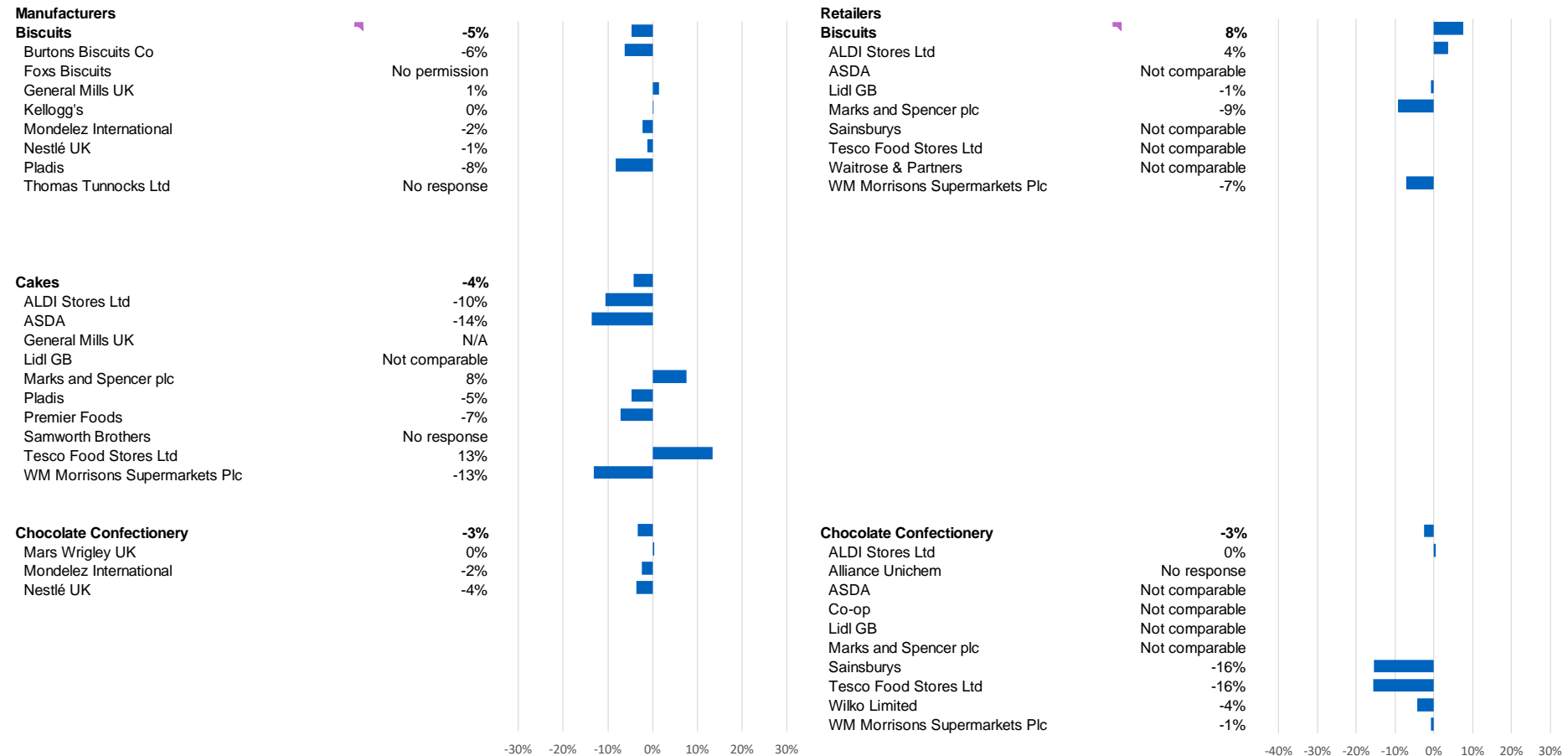
**Yogurts and Fromage Frais**  
ALDI Stores Ltd  
ASDA  
Co-op  
Iceland Foods Ltd  
Lidl GB  
Marks and Spencer plc  
Sainsburys  
Tesco Food Stores Ltd  
Waitrose & Partners  
WM Morrisons Supermarkets Plc



Note 1: The baseline year for cakes and morning goods is 2017 rather than 2015. The list of businesses for cakes and morning goods is a combined list of manufacturers and retailers.

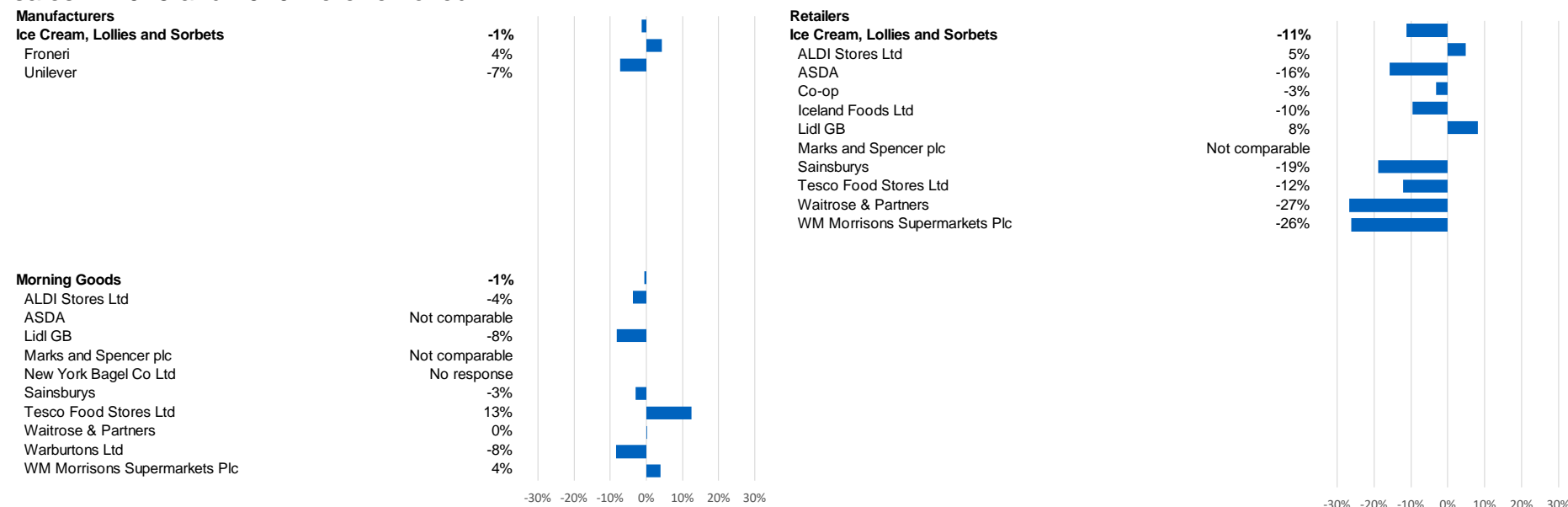
Note 2: Manufacturers and retailers are listed in alphabetical order within each category. They are not listed by volume of sugar sales. The list includes those who account for the top 80% of sugar sales. For manufacturers, any businesses which did not have at least 1% of sales in 2015 and 2020 were removed.

**Figure 11: Changes in sales weighted average calories (kcal) for products likely to be consumed on a single occasion by category and business between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note 1: The baseline year for cakes and morning goods is 2017 rather than 2015. The list of businesses for cakes and morning goods is a combined list of manufacturers and retailers.

Note 2: Manufacturers and retailers are listed in alphabetical order within each category. They are not listed by volume of sugar sales. The list includes those who account for the top 80% of sugar sales. For manufacturers, any businesses which did not have at least 1% of sales in 2015 and 2020 were removed.



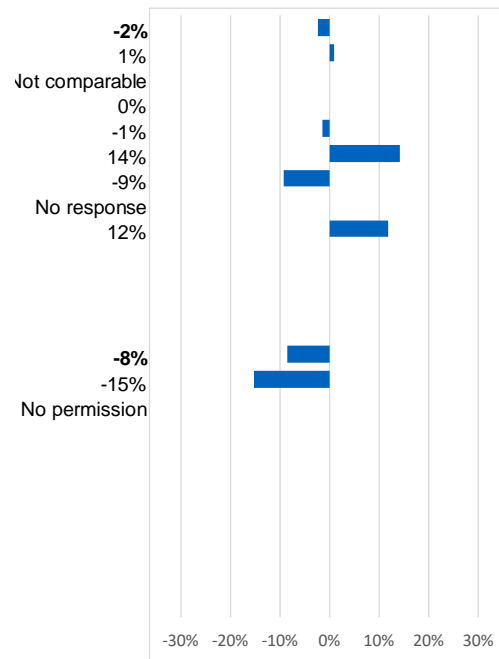
Note 1: The baseline year for cakes and morning goods is 2017 rather than 2015. The list of businesses for cakes and morning goods is a combined list of manufacturers and retailers.

Note 2: Manufacturers and retailers are listed in alphabetical order within each category. They are not listed by volume of sugar sales. The list includes those who account for the top 80% of sugar sales. For manufacturers, any businesses which did not have at least 1% of sales in 2015 and 2020 were removed.

**Manufacturers**

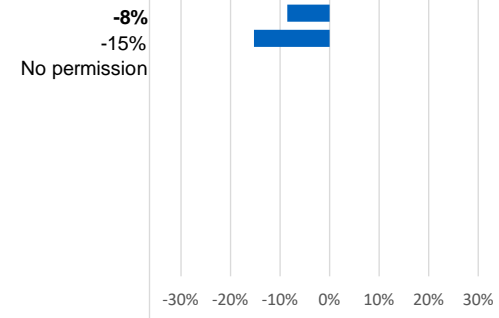
**Sweet Confectionery**

Cloetta UK Ltd  
 Haribo Dunhills (Pontefract) PLC  
 Kellogg's  
 KP Snacks Limited  
 Nestlé UK  
 Pervetti Van Melle - PVM UK  
 Swizzels Matlow Ltd  
 Valeo Confectionery



**Yogurts and Fromage Frais**

Danone Ltd  
 Muller UK and Ireland



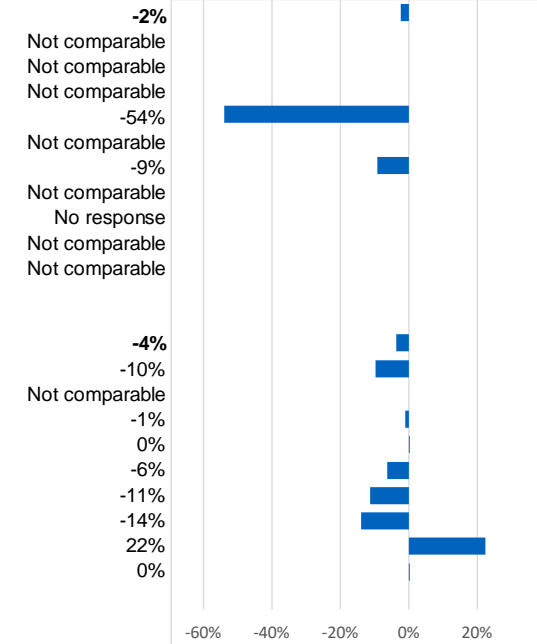
**Retailers**

**Sweet Confectionery**

ALDI Stores Ltd  
 ASDA  
 Co-op  
 Lidl GB  
 Marks and Spencer plc  
 Sainsburys  
 Tesco Food Stores Ltd  
 TJ Morris  
 Waitrose & Partners  
 WM Morrisons Supermarkets Plc

**Yogurts and Fromage Frais**

ALDI Stores Ltd  
 ASDA  
 Co-op  
 Lidl GB  
 Marks and Spencer plc  
 Sainsburys  
 Tesco Food Stores Ltd  
 Waitrose & Partners  
 WM Morrisons Supermarkets Plc



Note 1: The baseline year for cakes and morning goods is 2017 rather than 2015. The list of businesses for cakes and morning goods is a combined list of manufacturers and retailers.

Note 2: Manufacturers and retailers are listed in alphabetical order within each category. They are not listed by volume of sugar sales. The list includes those who account for the top 80% of sugar sales. For manufacturers, any businesses which did not have at least 1% of sales in 2015 and 2020 were removed.

## Progress at brand level

This section looks at the brand level analysis reported in Appendix Table 4. The top selling 20 brands in each category (based on volume of sales) were analysed for changes in sugar content. The analysis was completed separately for the top 20 selling retailer brands and top 20 selling manufacturer brands<sup>6</sup>.

Any brand owned by businesses who did not give permission for their sales weighted averages to be shown have had their figures suppressed in the report tables. There were also some businesses which did not respond to the request to show their data, and others where the results were removed because data were not felt to be comparable between the baseline and year 3<sup>7</sup>.

In total, 249 retailers and manufacturer branded products were analysed and of these, Figure 12 shows that:

- 133 brands (53%) showed a decrease in sales weighted average total sugar content per 100g of more than 2%<sup>8</sup>
- 43 brands (17%) showed an increase in sales weighted average total sugar content per 100g of more than 2%
- 73 brands (29%) showed either no change or a change of less than 2% (Appendix Table 4)

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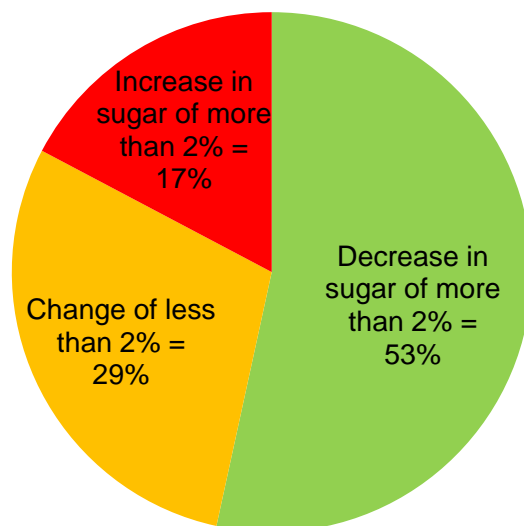
<sup>6</sup> Manufacturer brands were only included if they contributed more than 1% of sales in both the baseline year and year 3. This was to avoid including comparisons which may only be based on a small number of products.

<sup>7</sup> In all these cases, the data for these brands was still used to calculate overall and category level averages.

<sup>8</sup> The figure of 2% was chosen so that a reasonable number of brands would show a difference of more than this, given that the average decrease is 3.5%.



**Figure 12: Proportion of brands showing changes of 2% or more in the sales weighted average total sugar per 100g between baseline (2015) and year 4 (2020)**



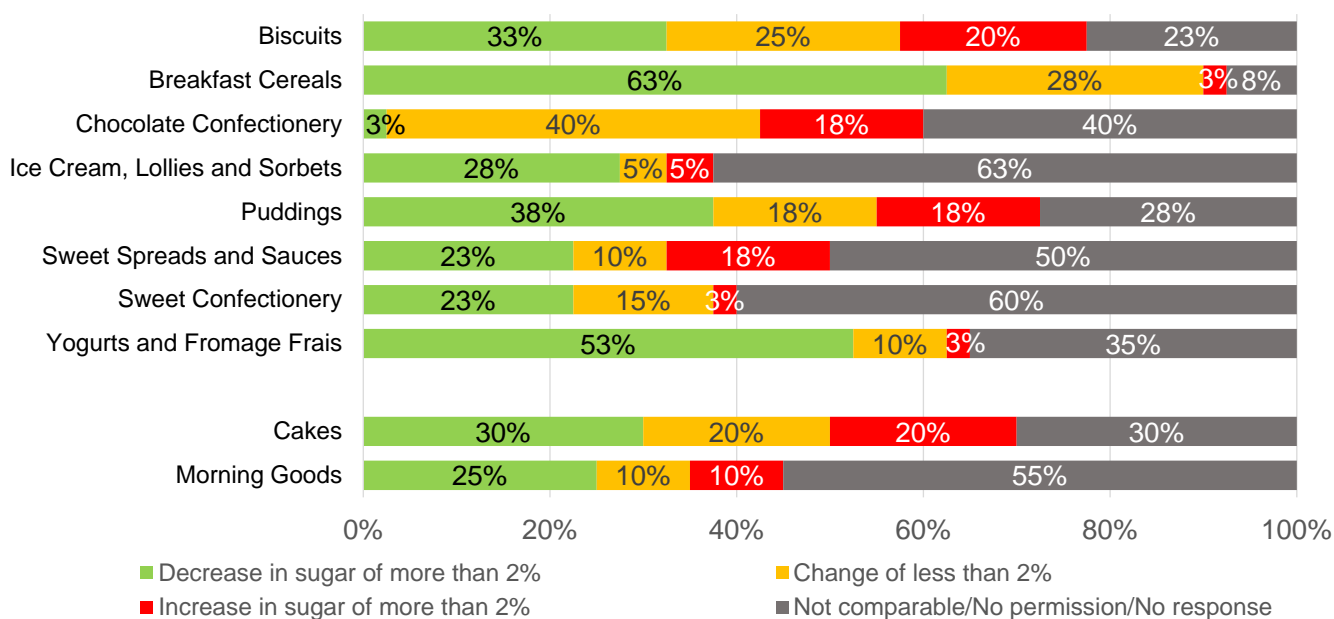
Note: Cakes and morning goods were compared against their baseline of year 1.

Figure 13 shows the same information but within each category. It also includes the proportion of brands where the sales weighted averages were either not comparable between years or the business did not give permission for their data to be shown.

It shows that:

- the highest proportion of brands with a decrease in their sales weighted average total sugar per 100g of 2% or more were in the breakfast cereals (63%) and yogurts and fromage frais (53%) categories
- Biscuits (20%), cakes (20%), chocolate confectionery (18%), sweet spreads and sauces (18%) and puddings (18%) were the categories with the highest proportion of brands increasing their sales weighted average total sugar per 100g by 2% or more (Table 4)

**Figure 13: Proportion of brands showing changes of 2% or more in the sales weighted average total sugar per 100g between baseline (2015) and year 4 (2020) by category**



Note: Cakes and morning goods were compared against their baseline of year 1.

For the 133 brands which showed a decrease in sales weighted average sugar content of more than 2%, further analysis was conducted to see if this resulted in an increase in saturated fat.

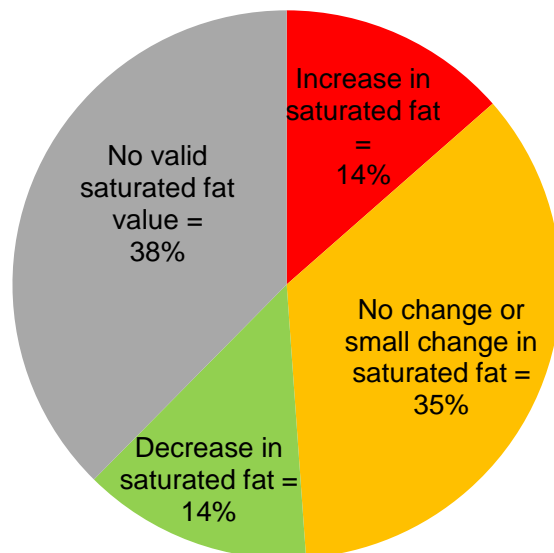
Of these brands, Figure 14 shows that:

- 18 brands (14%) showed a decrease in saturated fat of more than 10%<sup>9</sup>
- 47 brands (35%) showed no change or a change of less than 10% in saturated fat
- 18 brands (14%) showed an increase in saturated fat of more than 10%
- the remaining 50 brands (38%) did not have a valid saturated fat value (Appendix Table 4).

There is also an assessment of changes in salt content, available in Appendix Table 4.

<sup>9</sup> The figure of 10% was chosen as it would clearly show where brands were clearly adding saturated fat to compensate for a decrease in sugar.

**Figure 14: Analysis of changes in saturated fat of more than 10% for top selling brands with more than a 2% decrease in sugar**



Note: Cakes and morning goods were compared against their baseline of year 1. Brands are assessed against a 10% change for saturated fat per 100g. 50 brands are excluded as they do not have a saturated fat percentage change value.

## Progress at product level

Appendix Table 5 shows the calories in products likely to be consumed on a single occasion for the top 30 products by total servings for each category. Of the 119 products where it is possible to make a comparison between the baseline and year 4, 47 (39%) show a decrease in calories per serving of 2% or more.

## Volume of sales for retailers and manufacturer branded products

This section looks at the volume of sales for the categories included in the sugar reduction programme and change between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products.

As mentioned earlier, the data for 2020 covers the first 6 months of the COVID-19 pandemic. This was a time when food and drink purchasing behaviour was severely disrupted due to:

- Stockpiling in the early days of the pandemic

- Schools, workplaces and most businesses in the eating out of home sector either closing or operating through delivery, which led to more food and drink being purchased and bought into the home, and less purchased for consumption out of the home

These factors have led to large increases in the volume of products purchased and bought into the home in 2020 compared to previous years. It will also affect categories in different ways – for example, breakfast cereals are generally more likely to be eaten at home than ice creams, lollies and sorbet. Therefore, purchasing of breakfast cereals bought into the home would be less affected by COVID-19.

For this analysis data for cakes and morning goods are excluded. This is because substantially more products were captured for these categories in year 4 (2020) compared with other years due to improvements in data collection (see Appendix Table 1 for the number of products).

Therefore, the sales figures quoted in this section are underestimates of the total amount of sugar purchased because cakes and morning goods are excluded.

The section is split into 2 parts:

1. Total sales of sugar – this analysis looks at the volume of sugar being purchased and how this has changed over time.
2. Total volume sales – this analysis looks at the volume of products being purchased.

It is important to look at how the total volume sales for each product and category vary over time as the product level sales are being used to weight the contribution of each product in the sales weighted average calculation. Therefore, if the sales of higher sugar content products increase relative to lower sugar content products then this can lead to an increase in the sales weighted average, even if some of those higher sugar products have been reformulated to decrease their sugar content. In other words, increases in sales of some of the higher sugar categories or decreases in lower sugar categories or both can neutralise any reformulation work overall, as the average product purchased will have a higher average sugar content.

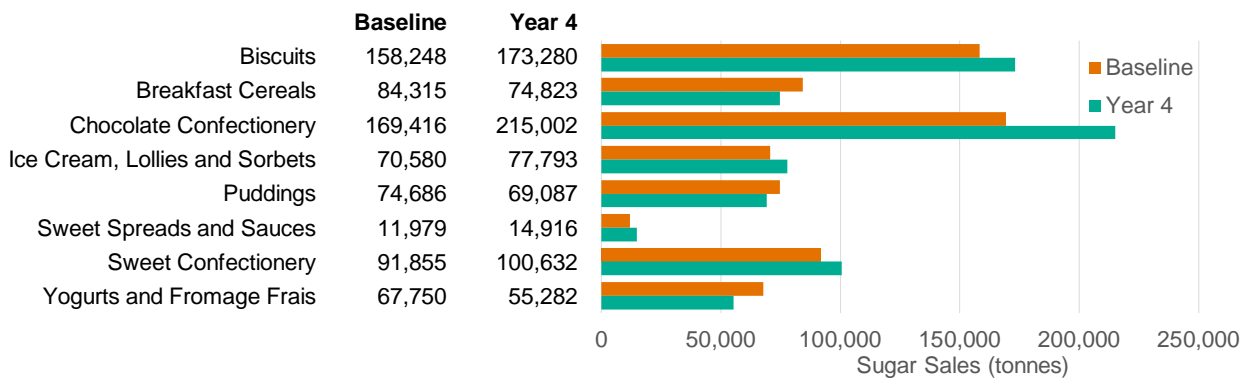
## **Total sales of sugar**

Figure 15 shows the sales in tonnes of sugar sold by category (excluding cakes and morning goods) for baseline and year 4. Figure 16 shows how this has changed since baseline.

For retailers and manufacturers, it can be seen that:

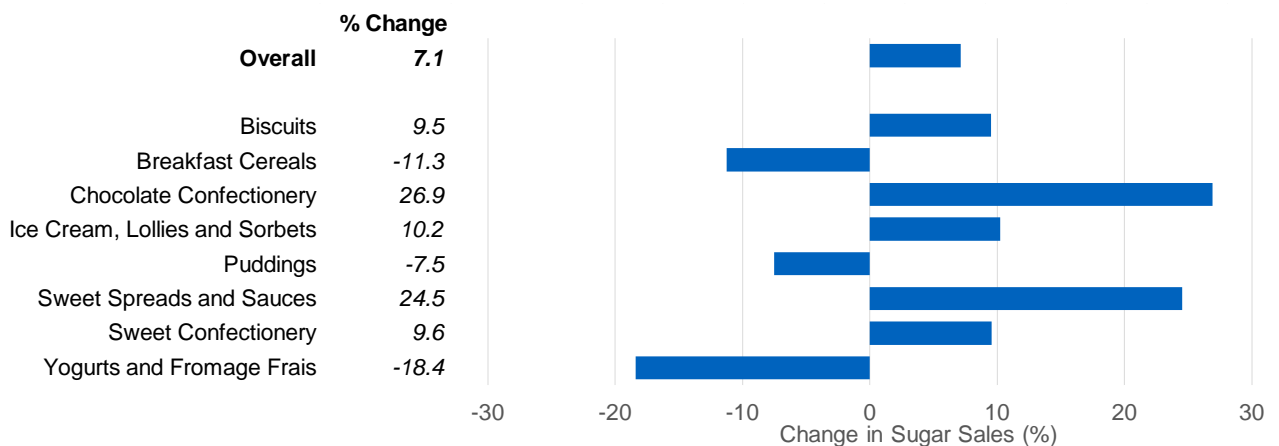
- overall there has been an increase from 728,829 tonnes of sugar sold at baseline to 780,815 tonnes in year 4 which represents an increase of 7.1% (the percentage change in sugar sales are shown in Figure 16)
- the largest increases in tonnes of sugar sold were 26.9% for chocolate confectionery and 24.5% for sweet spreads and sauces
- the largest decreases were 18.4% for yogurts and fromage frais, 11.3% for breakfast cereals and 7.5% for puddings (Table 5)

**Figure 15: Sales of sugar by category in baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: Cakes and morning goods are excluded from this chart. This is because there are a lot more products in the 2020 dataset compared to 2017 so a comparison of sales would show a large increase which would be due to an increase in data quality rather than an increase in sales.

**Figure 16: Percentage change in sales of sugar by category between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: Cakes and morning goods are excluded from this chart. This is because there are a lot more products in the 2020 dataset compared to 2017 so a comparison of sales would show a large increase which would be due to an increase in data quality rather than an increase in sales.

## Total volume sales

This section looks at the total volume of sales in the same categories (excluding cakes and morning goods). It firstly looks at the actual level of sales and then it analyses the proportion of sales each category contributes to the overall total, as this indicates the contribution each category is making to the overall sales weighted average<sup>10</sup>.

Figure 17 shows the total volume sales by category for baseline and year 4 and Figure 18 shows how this has changed over time.

For retailers and manufacturers, they show that:

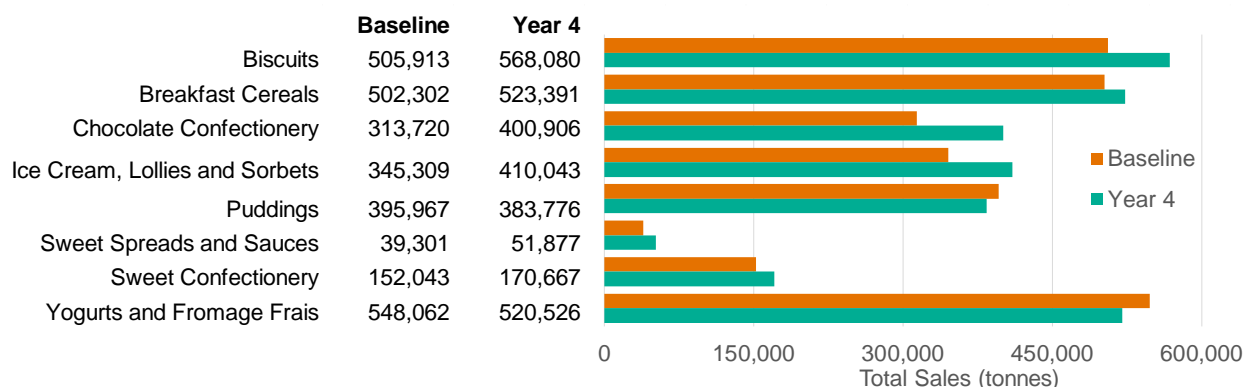
- overall there has been an increase from 2,802,616 tonnes of products sold at baseline to 3,029,266 tonnes in year 4 which represents an increase of 8.1% (the percentage change in total sales are shown in Figure 18)
- sales decreased in 2 categories: puddings (down 3.1%), and yogurts and fromage frais (down 5%)
- the largest increases in sales were sweet spreads and sauces (up 32.0%), chocolate confectionery (up 27.8%), ice cream, lollies and sorbets (up 18.7%), biscuits (up 12.3%) and sweet confectionery (up 12.2%) (Table 5)

These changes largely reflect a more extreme version of the increase in sales between baseline and year 3 which were unaffected by COVID-19. In year 3, overall sales were up 3.4% compared to baseline when chocolate confectionery (up 16.3%) and sweet spreads and sauces (up 12%) showed the largest increases.

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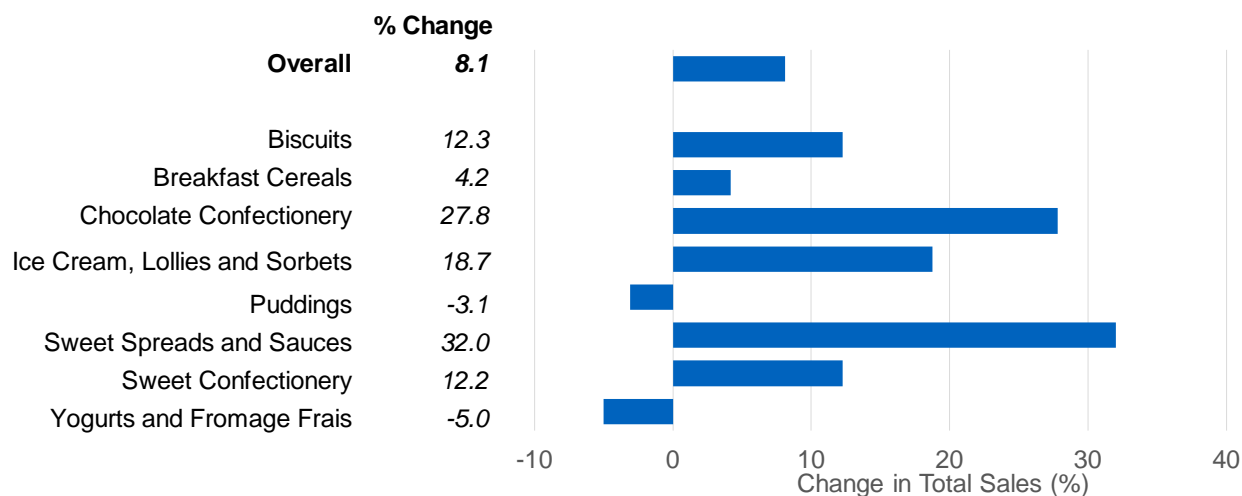
<sup>10</sup> The sugar content of each product is weighted according to its total sales in the calculation of the sales weighted average. Therefore, looking at how the proportion of sales each category contributes to the total and how this has changed between baseline and year 4 is a good proxy for seeing how the contribution of high and low sugar products will have changed over time.

**Figure 17: Total volume sales by category in baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: Cakes and morning goods are excluded from this chart. This is because there are a lot more products in the 2020 dataset compared to 2017 so a comparison of sales would show a large increase which would be due to an increase in data quality rather than an increase in sales.

**Figure 18: Percentage change in total volume sales by category between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: Cakes and morning goods are excluded from this chart. This is because there are a lot more products in the 2020 dataset compared to 2017 so a comparison of sales would show a large increase which would be due to an increase in data quality rather than an increase in sales.

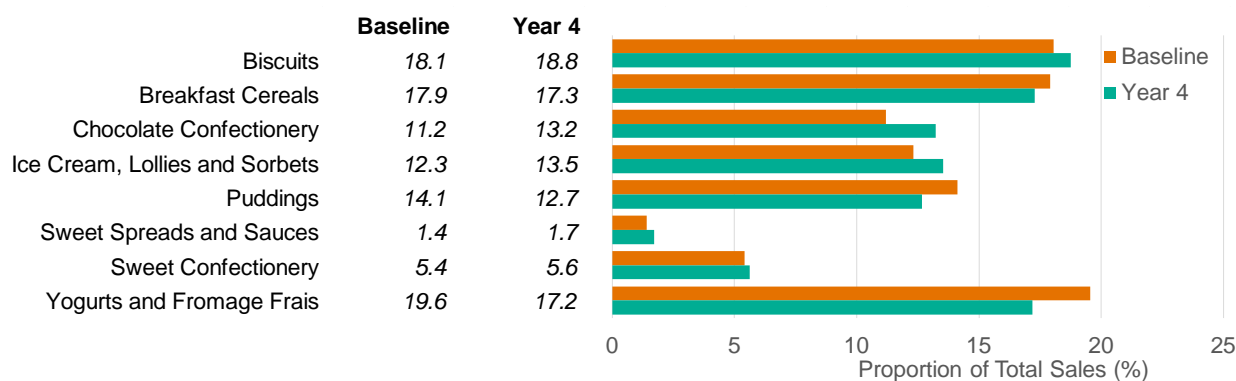
Figure 19 shows the proportion of sales each food category contributes to overall total volume sales and Figure 20 shows how this has changed over time.

For retailers and manufacturers, they show that in 2020:

- biscuits (18.8%), breakfast cereals (17.3%) and yogurts and fromage frais (17.2%) account for over half the sales from the 8 categories shown
- by contrast, sweet spreads and sauces account for only 1.7% of sales

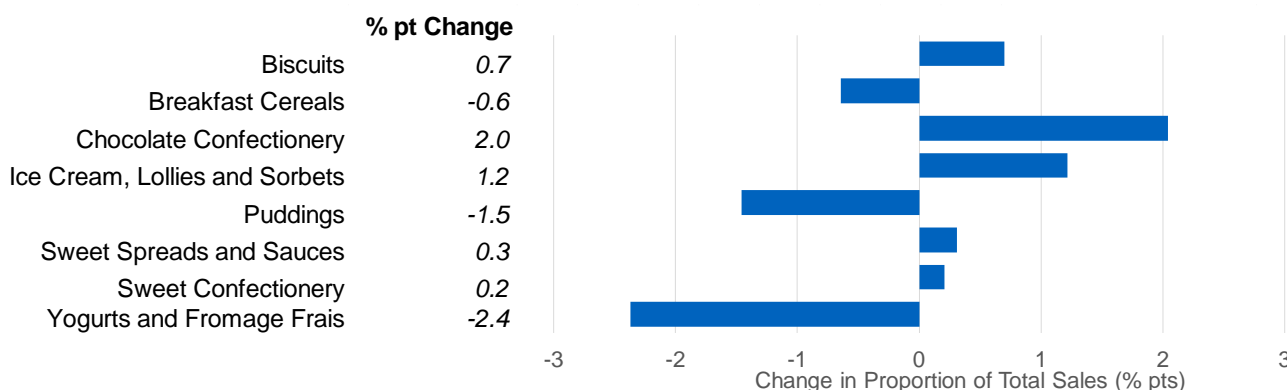
- the proportion of sales accounted for by yogurts and fromage frais, and breakfast cereals has fallen by 2.4 percentage points and 0.6 percentage points respectively, meaning that although these categories had large reductions in their total sugar sales weighted average per 100g, the impact of this improvement on the overall sugar reduction (across all categories) will have been diluted as their proportion of sales has reduced
- the proportion of sales accounted for by chocolate confectionery has increased by 2.0 percentage points which will increase the overall sales weighted average (across all categories) as it is one of the categories with the highest sugar content (Table 5)

**Figure 19: Percentage of total volume sales by category in baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: Cakes and morning goods are excluded from this chart. This is because there are a lot more products in the 2020 dataset compared to 2017 so a comparison of sales would show a large increase which would be due to an increase in data quality rather than an increase in sales.

**Figure 20: Percentage point change in the proportion of total volume sales by category between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: Cakes and morning goods are excluded from this chart. This is because there are a lot more products in the 2020 dataset compared to 2017 so a comparison of sales would



show a large increase which would be due to an increase in data quality rather than an increase in sales.

## **Analysis by socioeconomic status**

In this progress report, analysis has been undertaken for the first time looking at differences by socioeconomic status (SES) of households. The SES of a household is allocated based on the occupation of the main wage earner within the household, and the classification is the same as used elsewhere in this report for the analysis of the soft drinks industry levy (SDIL).

The groups considered are:

- A: higher managerial, administrative and professional workers
- B: intermediate managerial, administrative and professional workers
- C1: supervisory, clerical and junior managerial, administrative and professional workers
- C2: skilled manual workers
- D: semi-skilled and unskilled manual workers
- E: people on long term state benefits, casual and lowest grade workers, unemployed with state benefits only

The Kantar FMCG data assigns each household to a group based on the head of the household. Groups A and B are combined in the dataset.

Group E is quite different to the other groups in terms of the number of people in the household and the age of the main shopper. This group is made up of only 11.3% of households in the 2020 dataset. In year 4, 48% of the main shoppers in Group E were retired compared with 28.7% for the dataset as a whole. Group E had more single person households (55.3%) compared with 31.1% for all the groups combined, and fewer families<sup>11</sup> (11.3% of the households in the group) compared with 25.5% for all the groups combined.

The analyses presented here do not take into account differences in household structure and how this may be influencing the findings seen by socioeconomic group. In addition, the analyses do not consider price changes and how these could affect the results seen. Therefore, conclusions cannot be drawn on the specific effect of the voluntary sugar

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<sup>11</sup> A family is defined as a household containing children aged below 17 years old.

reduction programme on different socioeconomic groups as there are other effects taking place over the same time period.

## **Sales weighted average total sugar content per 100g for retailers and manufacturer branded products by socioeconomic status**

Figure 21 shows the change in the sales weighted average total sugar per 100g by socioeconomic group between baseline (2015) and year 4 (2020). It shows that the results were similar for the different SES groups for the majority of sugar reduction food categories.

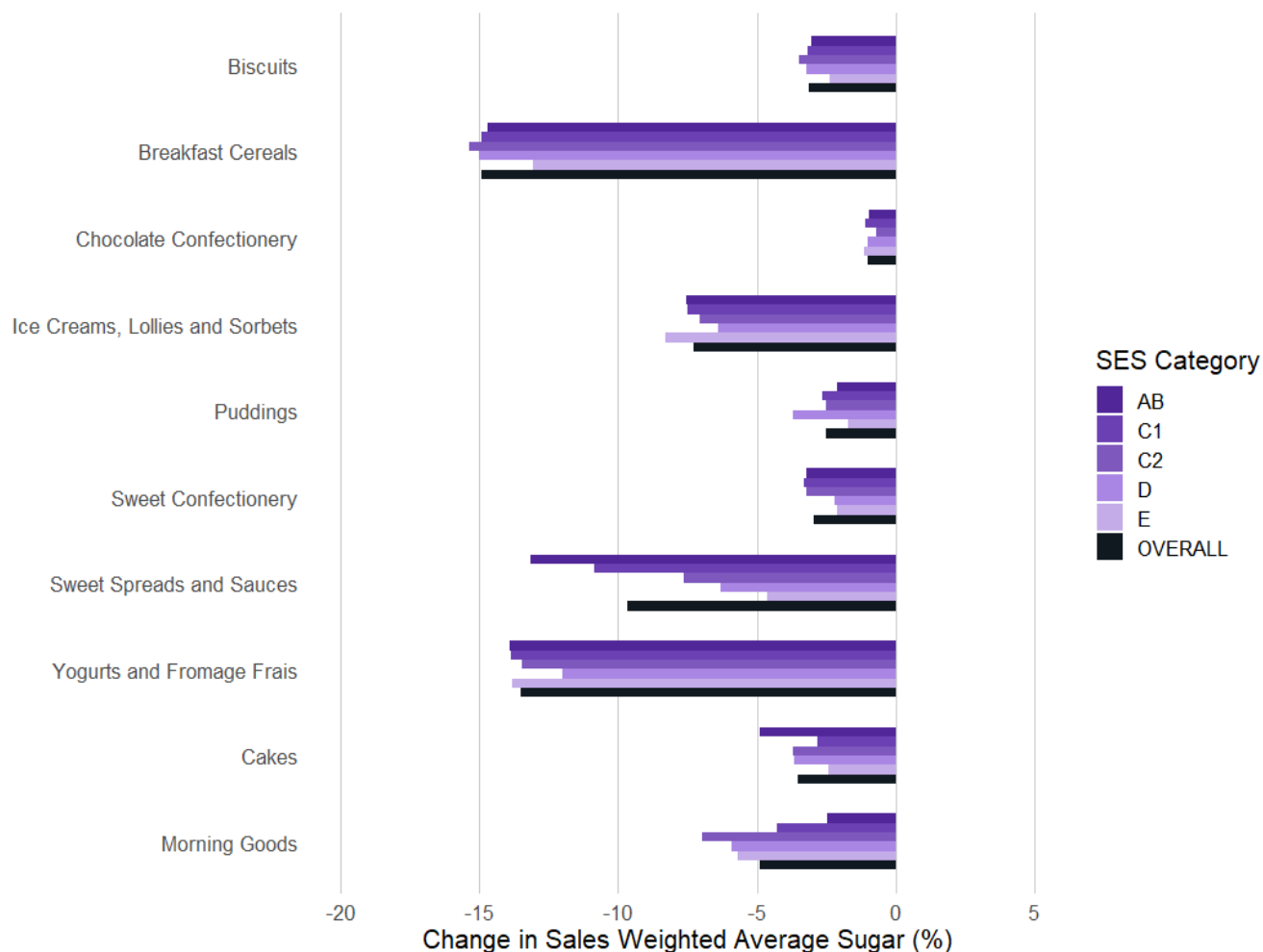
For biscuits for example, the sales weighted average total sugar per 100g for the different SES groups was between 31.3g in group E and 31.7g in C2 and D per 100g in baseline (2015), and between 30.5g in E and 30.7g in D per 100g in year 4 (2020). Therefore, the reduction was similar and ranged from 2.4% in group E to 3.5% in C2.

This pattern was similar for breakfast cereals, chocolate confectionery, ice creams, lollies and sorbets, puddings, sweet confectionery, yogurts and fromage frais and cakes.

There were however differences for some categories. For sweet spreads and sauces, sales weighted average total sugar per 100g was highest in groups C2 and D and lowest in groups AB and E for both baseline (2015) and year 4 (2020). The reduction over time was higher in more affluent households compared to less affluent households (13.2% reduction in group AB compared to 4.6% in E). This was caused by the more affluent groups increasing their purchasing of peanut butter, which has low levels of sugar, by more than they increased their sales of chocolate spread which makes up the majority of the remainder of this category. The less affluent groups have seen more equal increases in sales for peanut butter and chocolate spread.

For morning goods, the pattern in the change over time was different with the biggest reduction seen in the less affluent groups (C2 7.0%, D 5.9% and E 5.7%) compared to the more affluent groups (C1 4.3% and AB 2.5%).

**Figure 21: Percentage change in sales weighted average total sugar (g per 100g) by category by socioeconomic group between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



**Sales weighted average calories in products likely to be consumed on a single occasion (single serve) for retailers and manufacturer branded products by socioeconomic status**

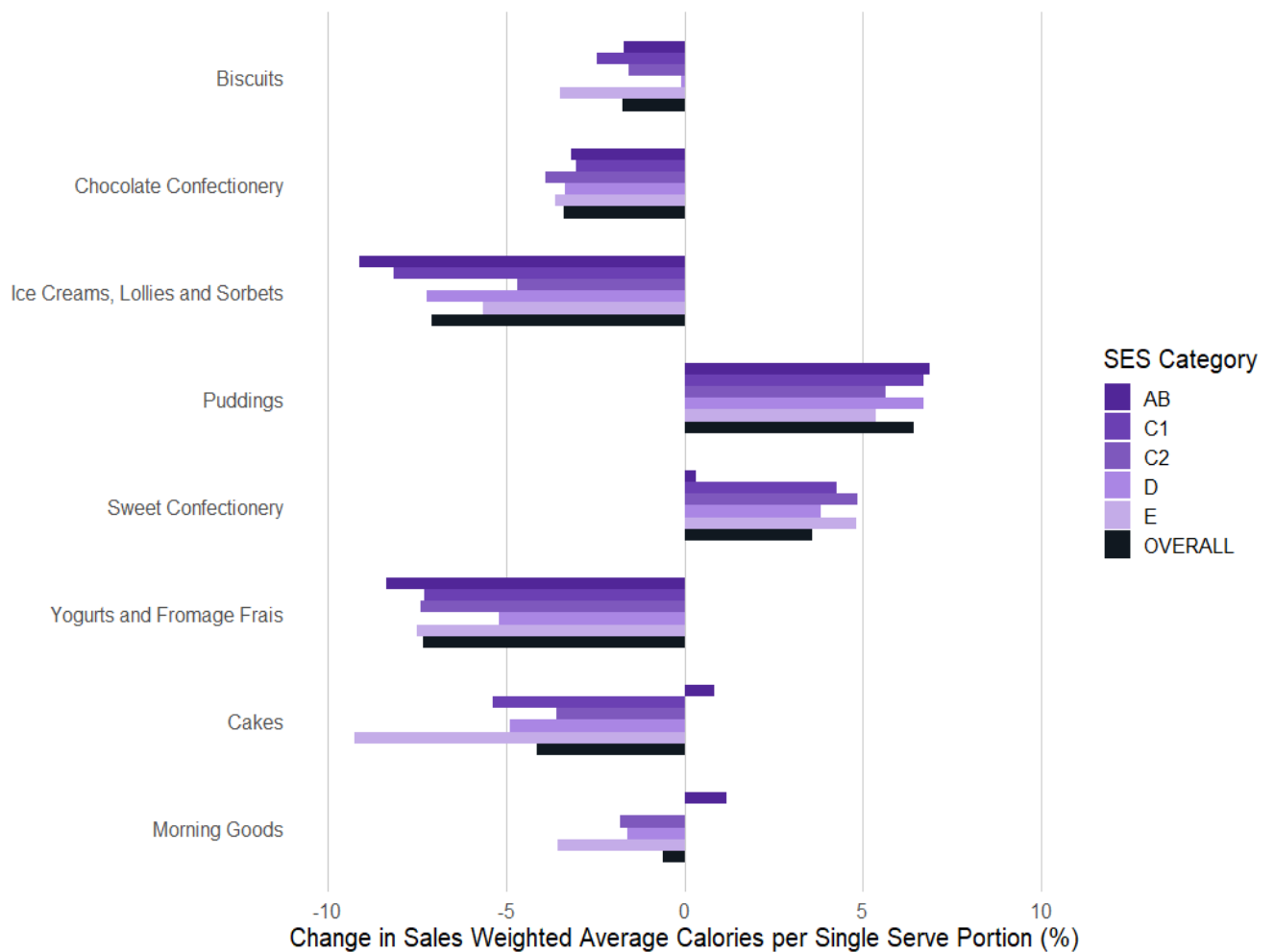
Figure 22 shows the change in the sales weighted average calories per single serve portion for retailer and manufacturer products by socioeconomic group for baseline (2015) and year 4 (2020). The change over time in the sales weighted average level of calories per single serve is similar across socioeconomic groups with some exceptions as shown.

For example, for cakes, the sales weighted average calories per single serve ranged from 124 kcals (group AB) to 145 kcals (group E) at baseline (2015). In 2020 (year 4), groups AB (125 kcals) and E (131 kcals) were still the lowest and highest but the difference was much smaller as there had been a small increase in group AB (0.8%) compared to a large decrease for group E (9.2%).

The results for morning goods showed a similar pattern to cakes where again there was a small increase in the sales weighted average for group AB (1.2%), and the largest reduction for group E (3.5%).

There is a different pattern for sweet confectionery as although all groups had seen an increase in sales weighted average calories per single serve, the increase for group AB was much lower (0.3%) compared to between 3.8% to 4.9% for the other groups.

**Figure 22: Percentage change in sales weighted average calories for products likely to be consumed on a single occasion by category by socioeconomic group between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



## Eating out of home sector

This section focuses on progress made by businesses operating in the eating out of home sector, which covers businesses such as:

- quick service restaurants
- casual dining restaurants
- contract caterers (foodservice)
- cafés and coffee shops
- sandwich and bakery led shops
- pubs
- vending
- retail food on the go
- takeaway and delivery services<sup>12</sup>

Due to limitations in the data, simple averages are the sole metric used to assess progress in this sector. More information is given in Appendix 2, however in summary, it is not possible to link purchases and nutrition data in the eating out of home sector with the same level of accuracy as for retailers and manufacturer branded products.

Simple averages for each category in the eating out of home sector are presented in this chapter, in addition to a comparison with the simple averages for retailers and manufacturer branded products as presented earlier.

### Quality of data

Most of the nutrition data from menus for the eating out of home sector was collected in early 2021 when restrictions were in place for the third national lockdown. During this period the majority of the eating out of home sector would have been closed although menus would have been available online which was the source for the data collection.

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<sup>12</sup> The data for the eating out of home sector only captures purchases which are not eaten at home, therefore very few purchases of takeaways and delivery services are included in this assessment of progress. However, the overall ambition remains inclusive of these business models.

Some of these menus may have been reduced as some businesses had not returned to offering their full menu since the first national lockdown started in March 2020.

There are fewer products in the eating out of home sector dataset compared with the data for retailers and manufacturer branded products. In particular, there were few products in the breakfast cereals, chocolate confectionery, sweet confectionery, and yogurts and fromage frais categories compared to future years. Additionally, some of the products in these categories available for purchase in the eating out of home sector would be the same as those available in the in home sector. Therefore, results for year 4 (2020) have not been shown for these categories and these products have been excluded from the overall total figures.

No data was collected for contract caterers in 2020.

### **Time periods covered**

No data is available for the baseline period of 2015, so comparisons are made between year 1 (2017) and year 4 (2020). This is primarily due to a change in data provider between 2015 and 2017 and more detail on this is given in the year 1 report ([Sugar reduction: report on first year progress, 2018a](#)). Therefore, for the eating out of home sector, year 1 is the baseline for the analysis in this report.

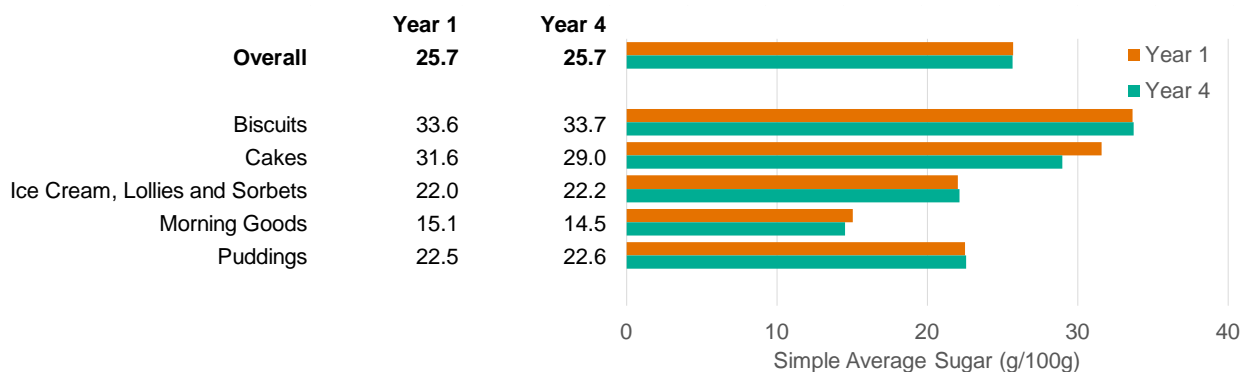
### **Simple average total sugar per 100g for the eating out of home sector products**

Figures 23 and 24 show the simple average total sugar at category level and overall for year 1 (2017 – baseline year for the analysis for this sector) and year 4 (2020), and the change during this period.

For businesses in the eating out of home sector:

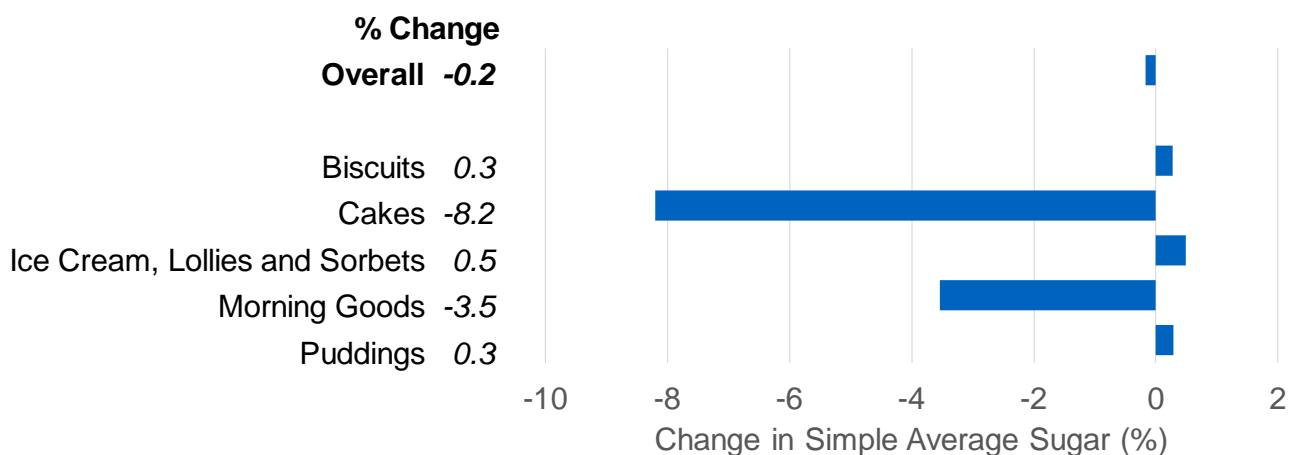
- overall there has been no change in the simple average sugar content which was 25.7g per 100g in 2017 and 2020
- the largest decreases were 8.2% for cakes and 3.5% for morning goods
- there was little change for the other categories (Table 8)

**Figure 23: Simple average total sugar (g per 100g) by category for year 1 (2017) and year 4 (2020) for products in the eating out of home sector**



Note: Data for breakfast cereals, chocolate confectionery, sweet confectionery and yogurts and fromage frais has been excluded as the number of products collected for 2020 was too small to provide robust analysis and comparisons with 2017.

**Figure 24: Percentage change in simple average total sugar (g per 100g) by category between year 1 (2017) and year 4 (2020) for products in the eating out of home sector**



Note: Data for breakfast cereals, chocolate confectionery, sweet confectionery and yogurts and fromage frais has been excluded as the number of products collected for 2020 was too small to provide robust analysis and comparisons with 2017.

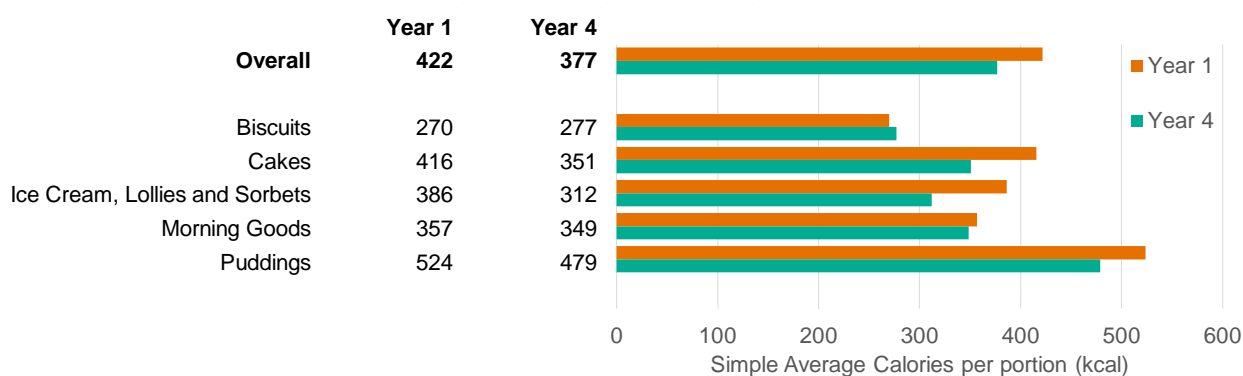
**Simple average calories in products likely to be consumed on a single occasion (single serve) in the eating out of home sector**

Figures 25 and 26 show the simple average calorie content of products likely to be consumed on a single occasion at category level and overall for year 1 (2017) and year 4 (2020), and the change during this period.

It can be seen that:

- overall there has been a decrease in average calories per single serve portion from 422 kcals in 2017 to 377 kcals in 2020 which represents a decrease of 10.7%
- ice creams, lollies and sorbets (down 19.2%), cakes (down 15.5%) and puddings (down 8.6%) showed the largest decreases
- morning goods has a smaller decrease of 2.3%
- biscuits had an increase of 2.6% (Table 9)

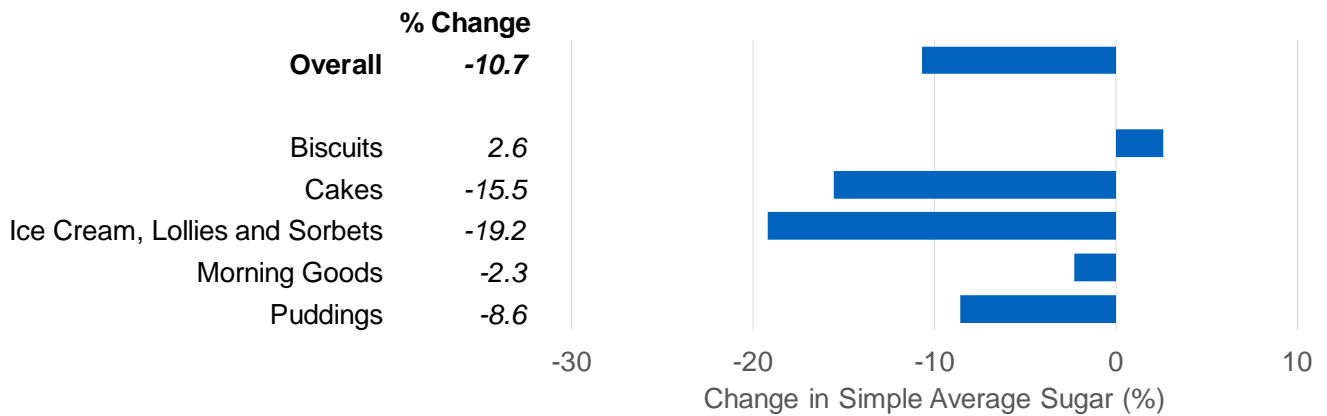
**Figure 25: Simple average calories (kcals) for products likely to be consumed on a single occasion by category for year 1 (2017) and year 4 (2020) for products in the eating out of home sector**



Note: Data for breakfast cereals, chocolate confectionery, sweet confectionery and yogurts and fromage frais has been excluded as the number of products collected for 2020 was too small to provide robust analysis and comparisons with 2017.



**Figure 26: Percentage change in simple average calories for products likely to be consumed on a single occasion by category between year 1 (2017) and year 4 (2020) for products in the eating out of home sector**



Note: Data for breakfast cereals, chocolate confectionery, sweet confectionery and yogurts and fromage frais has been excluded as the number of products collected for 2020 was too small to provide robust analysis and comparisons with 2017.

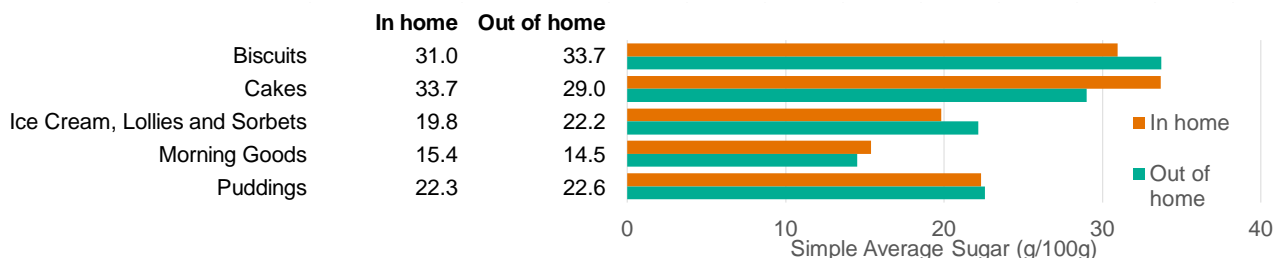
**Differences between the eating out of home sector and retailers and manufacturer branded products**

This section compares the simple average sugar content in the eating out of home sector with products sold through retailers and manufacturers as presented earlier in this report. Only simple averages should be used when comparing across the sectors, as due to the difficulty of linking sales and nutrition information, sales weighted averages are not available for the eating out of home sector. The simple average total sugar per 100g (Figure 27) and the simple average number of calories in products likely to be consumed on a single occasion (Figure 28) are shown for each sector.

It can be seen that:

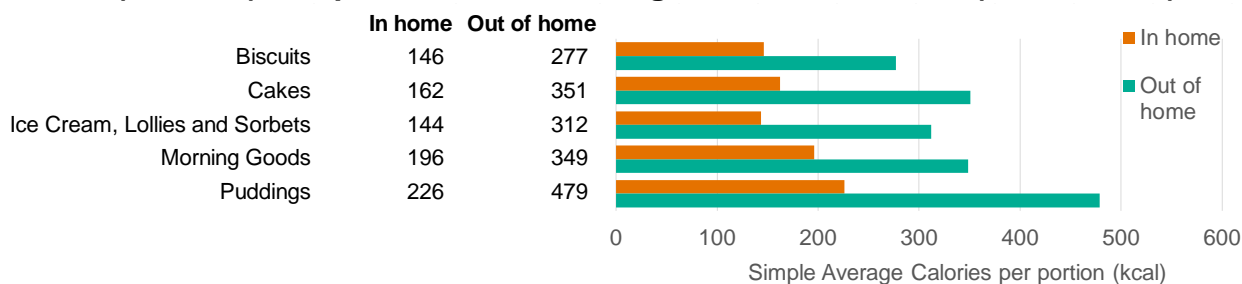
- for most categories, the simple average sugar content per 100g in products in the eating out of home sector is roughly the same as the simple average for retailers and manufacturer branded products, except for cakes
- calories in products likely to be consumed on a single occasion in the eating out of home sector are much higher than for retailers and manufacturer branded products across all categories (Tables 1, 3, 8 and 9)

**Figure 27: Simple average total sugar per 100g by category in year 4 (2020) for retailers and manufacturer branded products (in home) and products in the eating out of home sector (out of home)**



Note: Data for breakfast cereals, chocolate confectionery, sweet confectionery and yogurts and fromage frais has been excluded as the number of products collected for the OOH sector in 2020 was smaller than in previous years.

**Figure 28: Simple average calories for products likely to be consumed on a single occasion by category in year 4 (2020) for retailers and manufacturer branded products (in home) and products in the eating out of home sector (out of home)**



Note: Data for breakfast cereals, chocolate confectionery, sweet confectionery and yogurts and fromage frais has been excluded as the number of products collected for the OOH sector in 2020 was smaller than in previous years.

**Proportion of products likely to be consumed on a single occasion (single serve) for products in the eating out of home sector below the recommended calorie guidelines**

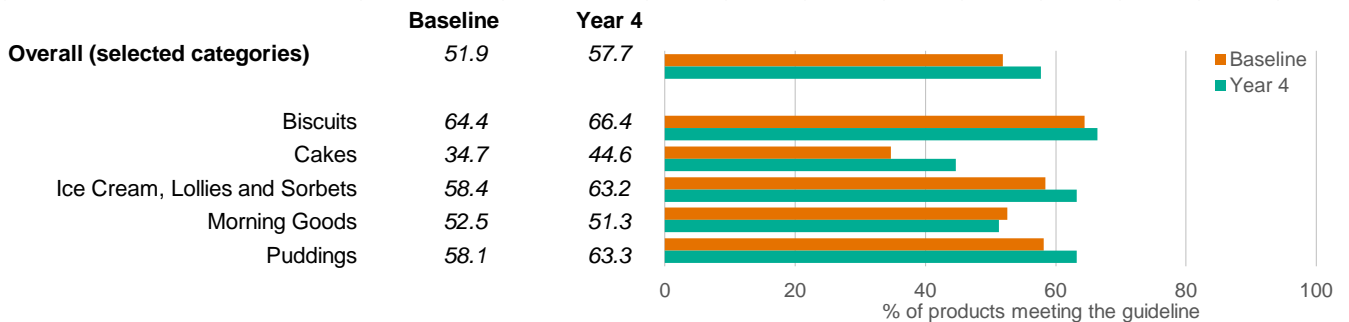
Figure 29 shows the proportion of products meeting the maximum calorie guidelines for the out of home sector.

It can be seen that:

- Overall, 57.7% of around 1,400 products in the eating out of home sector met the calorie benchmark in year 4 (2020) which is an increase from 51.9% in baseline (2015)
- The proportion of products meeting the guidelines by category ranged from 44.6% for cakes to 66.4% for biscuits

- Apart from morning goods, all categories were showing an improvement compared to baseline

**Figure 29: Proportion of products likely to be consumed on a single occasion meeting the maximum calorie guidelines by category in year 4 (2020) for products in the eating out of home sector (out of home) and retailers and manufacturer branded products**



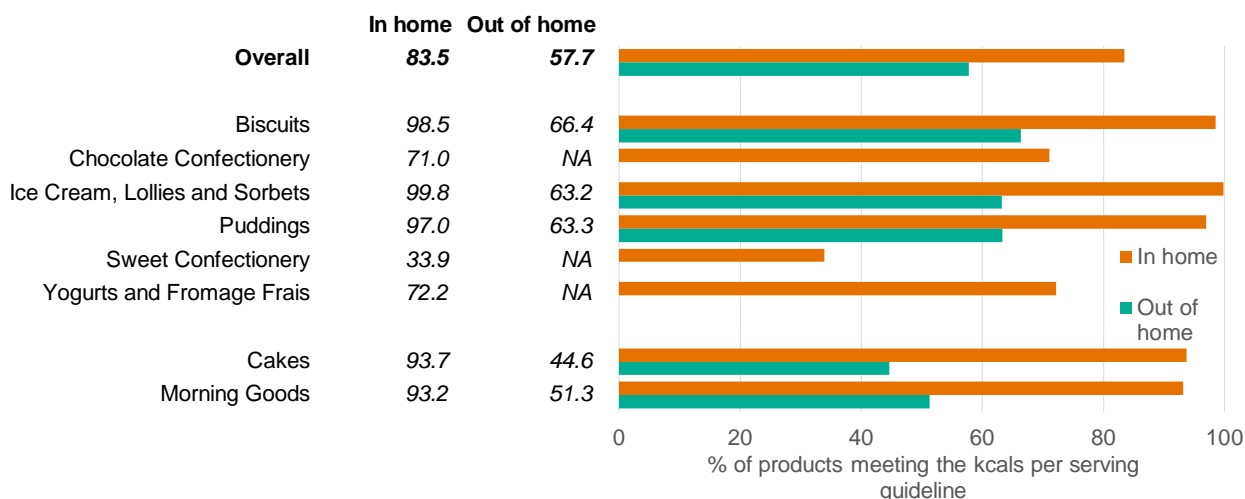
Note: Data for sweet confectionery, chocolate confectionery and yoghurts and fromage frais have been excluded for out of home as the businesses providing data for 2020 were quite different to those providing data in 2017. Breakfast cereals and sweet spreads and sauces do not appear in this table as they do not have single serve portions.

Figure 30 shows the proportion of products meeting the recommended calorie guidelines for the out of home sector and a comparison with retailer and manufacturer branded products.

It can be seen that:

- The proportion of products in the eating out of home sector meeting the guidelines was lower than the proportion of retailers and manufacturers branded products for all categories.

**Figure 30: Proportion of products likely to be consumed on a single occasion meeting the maximum calorie guidelines by category in year 4 (2020) for products in the eating out of home sector (out of home) and retailers and manufacturer branded products**

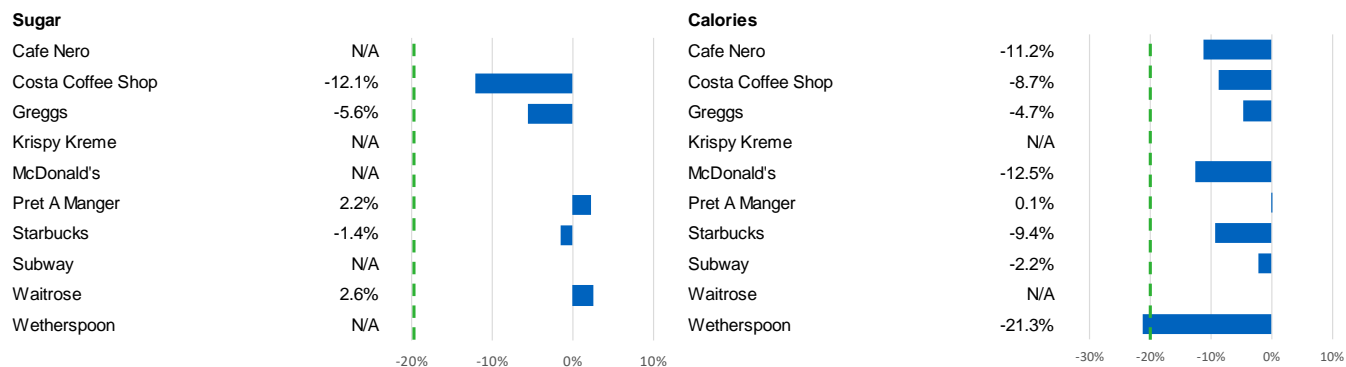


Note: Data for sweet confectionery, chocolate confectionery and yoghurts and fromage frais have been excluded for out of home as the businesses providing data for 2020 were quite different to those providing data in 2017. Breakfast cereals and sweet spreads and sauces do not appear in this table as they do not have single serve portions.

### Progress at business level

Figure 31 shows a comparison between year 1 (2017) and year 4 (2020) for the simple average total sugar per 100g at business level and calories in products likely to be consumed on a single occasion (based on most portions sold). The green dotted line represents the 20% sugar reduction ambition for 2020. It can be seen that no businesses have achieved this guideline so far in terms of sugar reduction, though it appears more progress has been made in terms of calories per single serve portion (Appendix Table 6).

**Figure 31: Changes in simple average total sugar per 100g and calories for products likely to be consumed on a single occasion by brand between year 1 (2017) and year 4 (2020)**



Note: NA refers to where data was not available for both years, or has been removed because there were concerns around the comparability of the results between baseline (2017) and year 2 (2020)

## Juice and milk based drinks

### Retailers and manufacturer branded products

#### Sugar content of juice and milk based drinks products

For milk based drinks (excluding fermented (yogurt) drinks), there are interim and overall ambitions of a 10% reduction in sugar content by 2019, and a 20% reduction in sugar content by 2021, respectively. These ambitions are either based on the simple average or sales weighted average sugar content depending on the category (see Table 1). For juices, there is a 5% ambition for sugar reduction in the sales weighted average in blended juices and an ambition for mono juices of no increase in the baseline simple average sugar content.

In this section, simple averages are presented first as this provides an overview for all categories.

Figure 32 shows that, for milk based drinks, there has been a reduction of more than 20% in the simple average sugar content (grams per 100 ml) in 5 of the 6 categories between baseline (2017) and year 2 (2020).

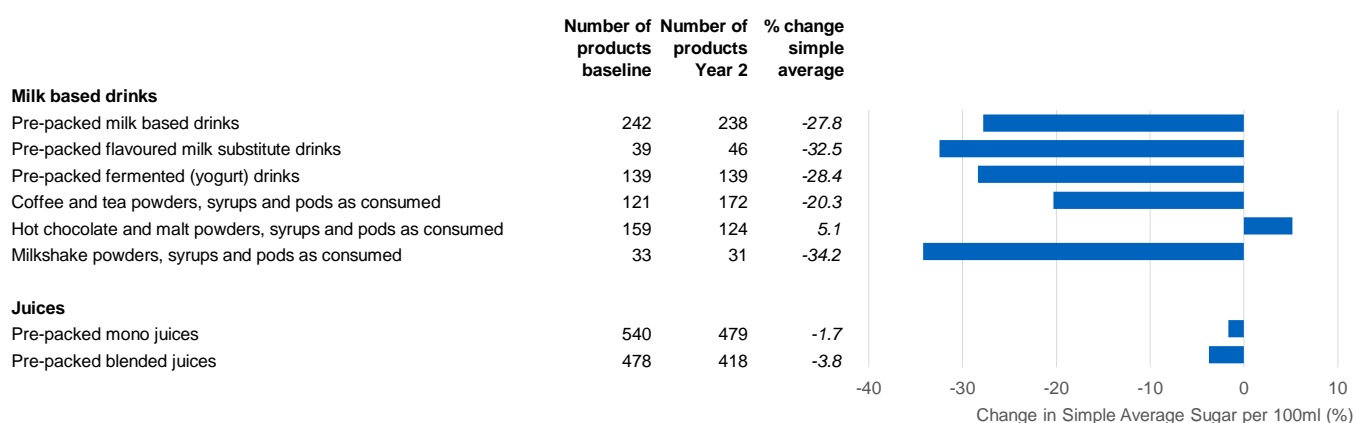
Specifically, for the simple average sugar content (g per 100ml):

- there were large reductions for milkshake powders, syrups and pods as consumed (down 34.2%), pre-packed flavoured milk substitute drinks (down 32.5%), pre-packed

fermented (yogurt) drinks (down 28.4%), pre-packed milk based drinks (down 27.5%) and coffee and tea powders, syrups and pods as consumed (down 20.3%)

- only hot chocolate and malt powders, syrups and pods (as consumed) have shown no progress (5.1% increase)
- progress was also seen for the 2 juice-based drinks categories, with a reduction of 3.8% for pre-packed blended juice and 1.7% average sugar content for pre-packed mono juice

**Figure 32: Percentage change in simple average sugar by juice and milk based drinks category between baseline (2017) and year 2 (2020) for retailers and manufacturer branded products**

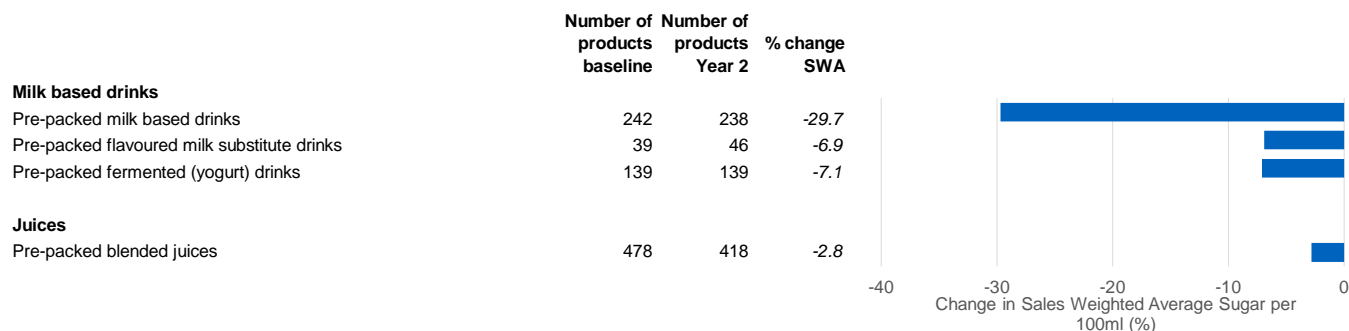


Note: The percentage change is based on added sugar rather than total sugar for the milk based drink categories, meaning the sugar allowance values are removed from both the baseline and Year 2 total sugar values before the percentage change is calculated.

The sales weighted average sugar content (g per 100ml) is being used to monitor progress for 4 categories. These are presented in Figure 33 which shows that:

- all 4 categories (3 milk based drinks and 1 juice-based drink) show a decrease in the sales weighted average sugar content
- the reduction in pre-packed milk based drinks was 29.7%
- the reduction in pre-packed fermented (yogurt) drinks and pre-packed flavoured milk substitute drinks was lower at 7.1% and 6.9% respectively
- the reduction in pre-packed blended juices was 2.8%

**Figure 33: Percentage change in sales weighted average (SWA) sugar by juice and milk based drinks category between baseline (2017) and year 2 (2020) for retailers and manufacturer branded products**



Note: The percentage change is based on added sugar rather than total sugar for the milk based drink categories, meaning the sugar allowance values are removed from both the baseline and Year 2 total sugar values before the percentage change is calculated.

### Progress at business level

The top selling 10 retailers and manufacturer branded businesses in each category (based on volume of sales) were analysed for changes in average sugar content between baseline (2017) and year 2 (2020). The percentage change in sales weighted average or simple average grams of sugar per 100ml at a business level is shown in Figure 34.

A restriction on the use of the data from Kantar FMCG meant that businesses were required to consent to have their individual business level results presented. Therefore, some data is missing from Figure 34 where permission was not given or no response received to the request, and some additional data has been removed if it was felt that there were concerns around the comparability of the results between baseline (2017) and year 2 (2020) data were not comparable<sup>13</sup>.

<sup>13</sup> Data for these businesses was still used to calculate category level averages.

**Figure 34: Changes in sales weighted average (SWA) and simple average sugar per 100ml by category and business between baseline (2017) and year 2 (2020) for retailers and manufacturers**

**Milk based drinks**

**Manufacturer or retailer**

	Number of products		% change <sup>1</sup>
	Baseline (2017)	Year 2 (2020)	SWA change <sup>2</sup>
<b>Overall pre-packed milk based drinks</b>			<b>-30%</b>
ALDI Stores Ltd	6	5	-4%
Arla Foods	20	25	-22%
ASDA	17	13	-42%
Co-op	3	4	-5%
Friesland Campina UK	29	25	-15%
Lidl GB	2	5	Non-comparable
Muller UK and Ireland	No permission	No permission	No permission
Sainsburys	6	5	-29%
Tesco Food Stores Ltd	10	10	-47%
WM Morrisons Supermarkets Plc	12	12	-52%

**Overall pre-packed flavoured milk substitute drinks**

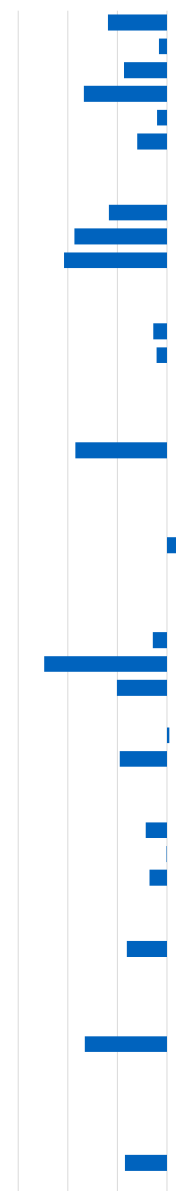
	Number of products		% change <sup>1</sup>
	Baseline (2017)	Year 2 (2020)	SWA change <sup>2</sup>
			<b>-7%</b>
Alpro UK Ltd	16	15	-5%
Arla Foods	0	1	N/A
ASDA	0	4	N/A
Califia Farms, LLC	0	6	N/A
Drinks Brokers Ltd	2	2	-46%
Hain Daniels	No permission	No permission	No permission
Mars Wrigley UK	0	2	N/A
Minor Figures Ltd	No response	No response	No response
Oatly UK	3	2	9%
Rebel Kitchen	No response	No response	No response

**Overall pre-packed fermented (yogurt) drinks**

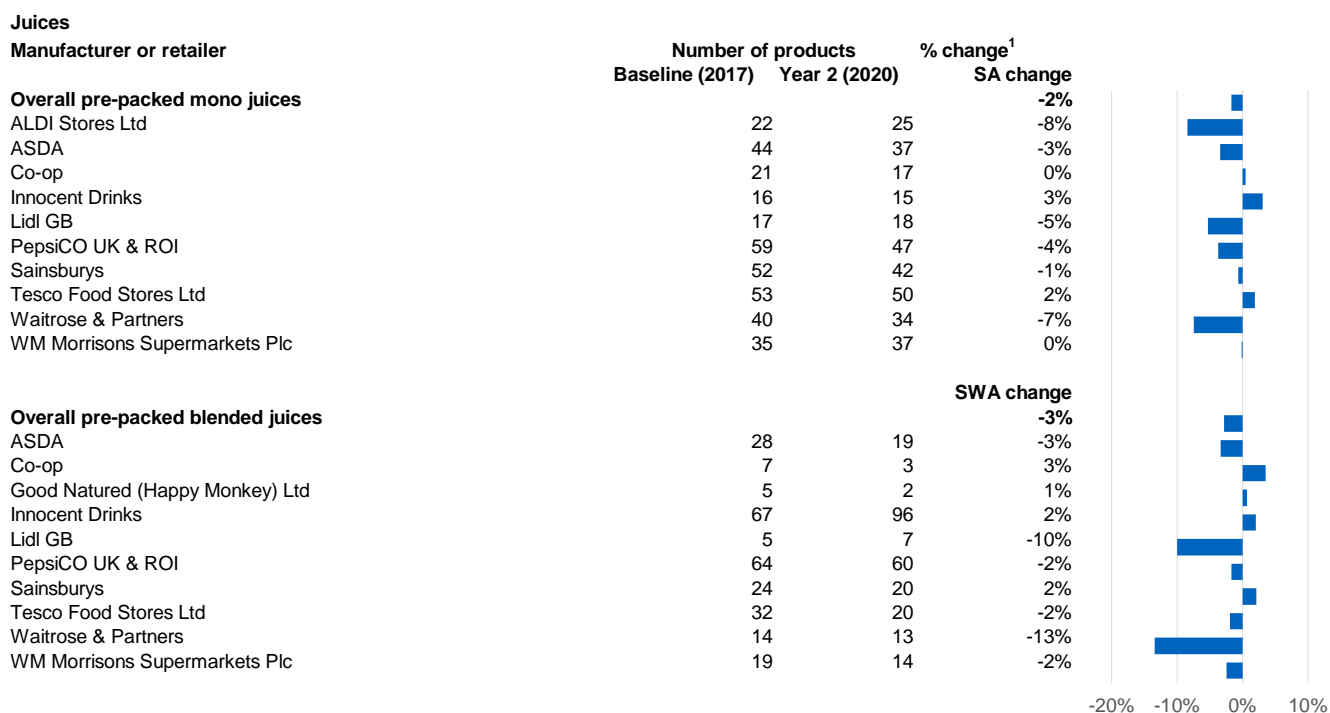
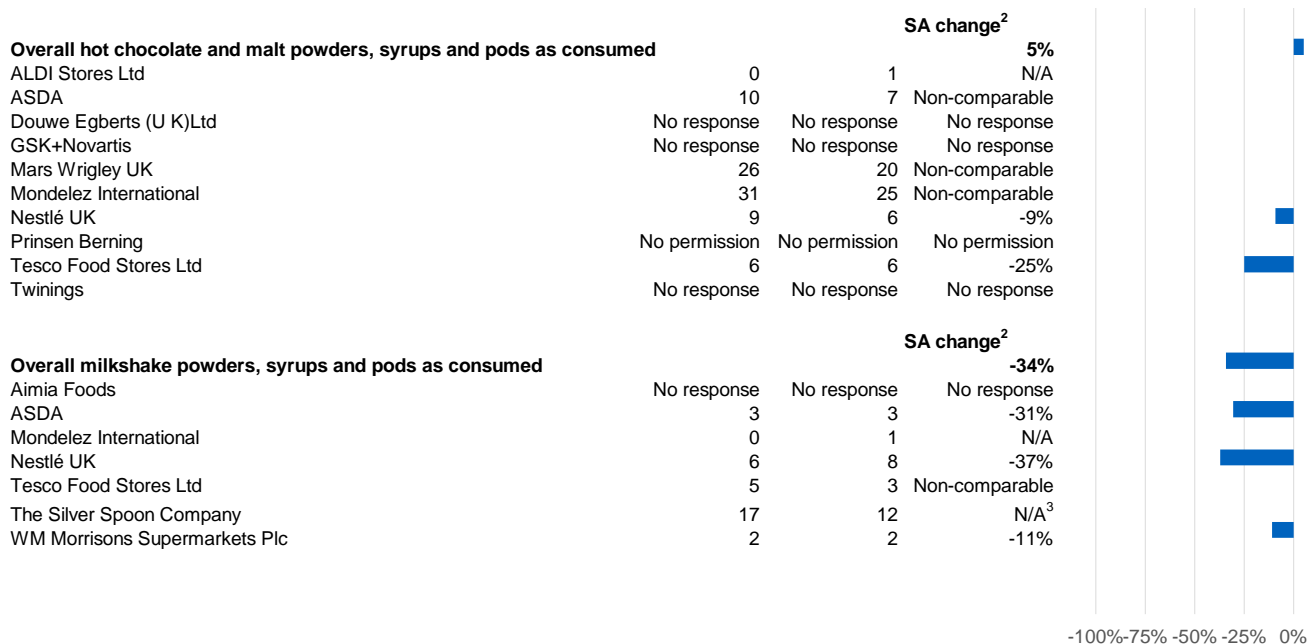
	Number of products		% change <sup>1</sup>
	Baseline (2017)	Year 2 (2020)	SWA change <sup>2</sup>
			<b>-7%</b>
ALDI Stores Ltd	5	6	-62%
ASDA	7	5	-25%
Bio-Tiful Dairy Ltd	No response	No response	No response
Danone Ltd	30	31	1%
Lactalis Nestle Chilled Dairy UK	3	2	-24%
Lidl GB	7	10	Non-comparable
Raisio	No response	No response	No response
Tesco Food Stores Ltd	7	7	-11%
Yakult UK Ltd	3	4	0%
Yoplait UK	5	11	-9%

**Overall coffee and tea powders, syrups and pods as consumed**

	Number of products		% change <sup>1</sup>
	Baseline (2017)	Year 2 (2020)	SA change <sup>2</sup>
			<b>-20%</b>
Aimia Foods	No response	No response	No response
ALDI Stores Ltd	2	9	Non-comparable
All About Food Limited	No response	No response	No response
ASDA	10	12	-41%
Asia UK Trading Ltd	No response	No response	No response
Douwe Egberts (U K)Ltd	No response	No response	No response
Euro Caps Bv	No response	No response	No response
Lidl GB	0	4	N/A
Nestlé UK	59	82	-21%
Royaltea Ltd	No response	No response	No response







Note 1: This is a change in sales weighted average for the categories with sales weighted average guidelines, and simple averages for the categories with simple average guidelines (all powders, syrups and pod categories).

Note 2: The percentage change is based on added sugar rather than total sugar for the milk based drink categories, meaning the sugar allowance values are removed from both the baseline and year 2 total sugar values before the percentage change is calculated.

Note 3: A percentage decrease was observed but cannot be accurately reported due to methodological limitations.

Note 4: Manufacturers and retailers are listed in alphabetical order within each category. They are not listed by volume of sugar sales.

### Calories likely to be consumed on a single occasion

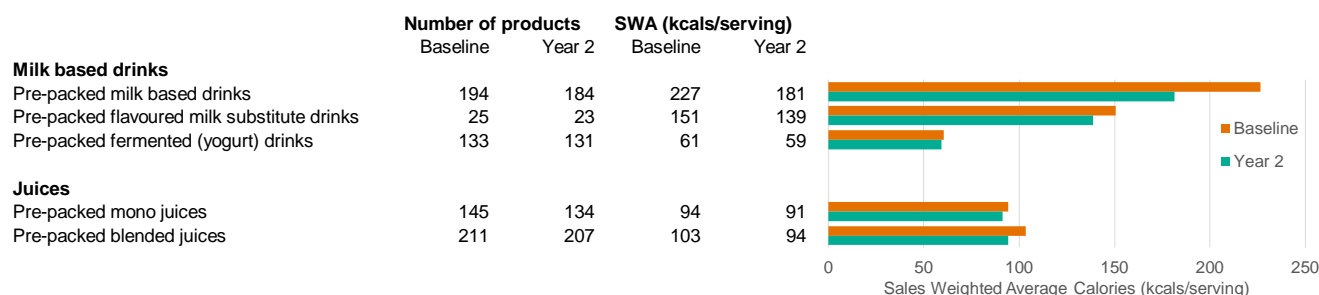
There are 5 juice and milk based drinks categories where the calories likely to be consumed on a single occasion are being monitored, and they have all shown a decrease in the sales weighted average sugar content between baseline (2017) and year 2 (2020).

The change in sales weighted average calories likely to be consumed on a single occasion (per single serving) is shown in Figure 35 and presented as a percentage change in Figure 36.

It can be seen that:

- pre-packed milk based drinks achieved the largest percentage decrease of 20.0% (from 227 calories to 181 calories per serving)
- all the other categories (pre-packed flavoured milk substitute drinks, pre-packed fermented (yogurt) drinks, pre-packed mono juices, and pre-packed blended juices) showed a reduction in the sales weighted average calories per serving of between 2.3% and 8.8%

**Figure 35: Change in sales weighted average (SWA) calories in products likely to be consumed on a single occasion by juice and milk based drink category for baseline (2017) and year 2 (2020) for retailers and manufacturer branded products**



**Figure 36: Percentage change in sales weighted average (SWA) of calories in products likely to be consumed on a single occasion by juice and milk based drink category between baseline (2017) and year 2 (2020) for retailers and manufacturer branded products**

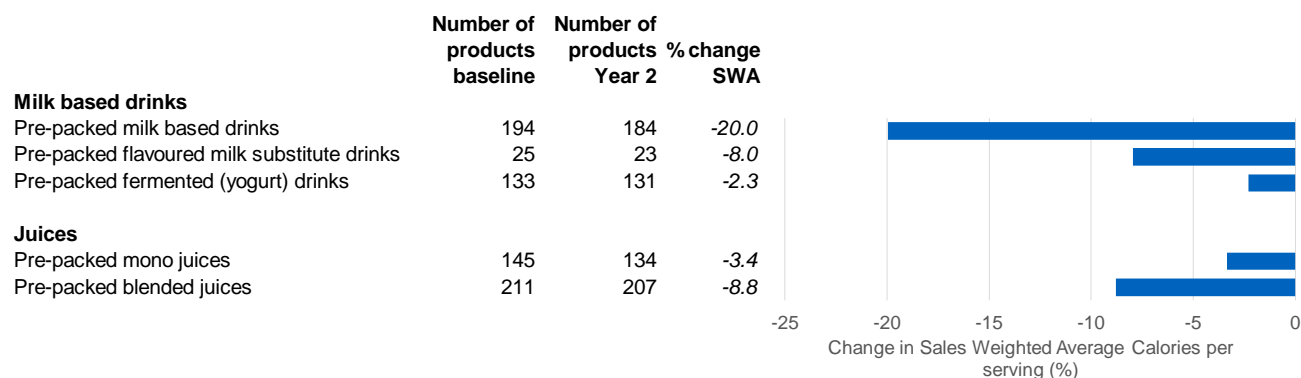
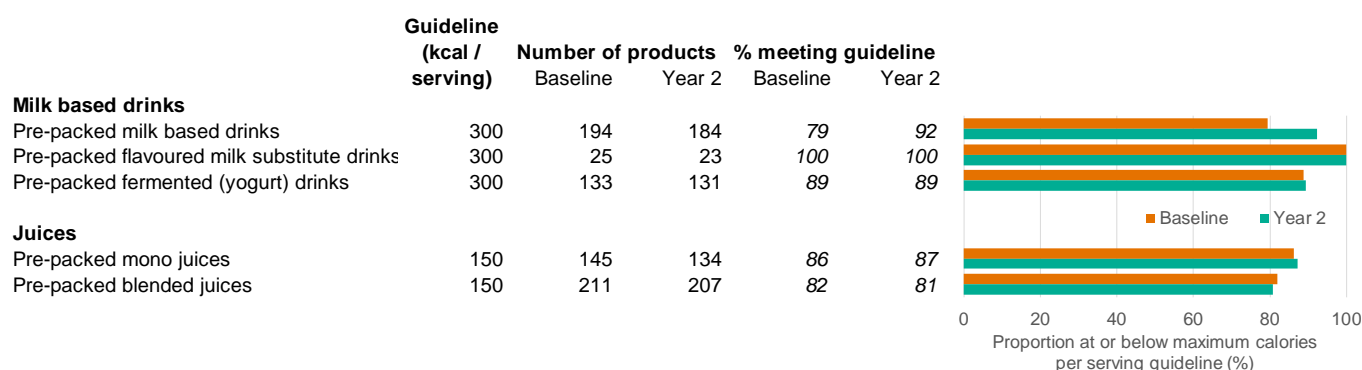


Figure 37 shows the proportion of products at or below the guideline for calories likely to be consumed on a single occasion (per single serving), for the different categories, and how this has changed between baseline (2017) and year 2 (2020).

It can be seen that:

- the proportion of pre-packed flavoured milk substitute drinks meeting the guideline has remained at 100%
- 3 of the remaining 4 categories have seen increases in the proportion of products that are at or below the guideline for calories per serving, with 1 (pre-packed blended juices) showing a decrease

**Figure 37: Proportion of products at or below the guideline for calories per serving for baseline (2017) and year 2 (2020) for retailers and manufacturer branded products**

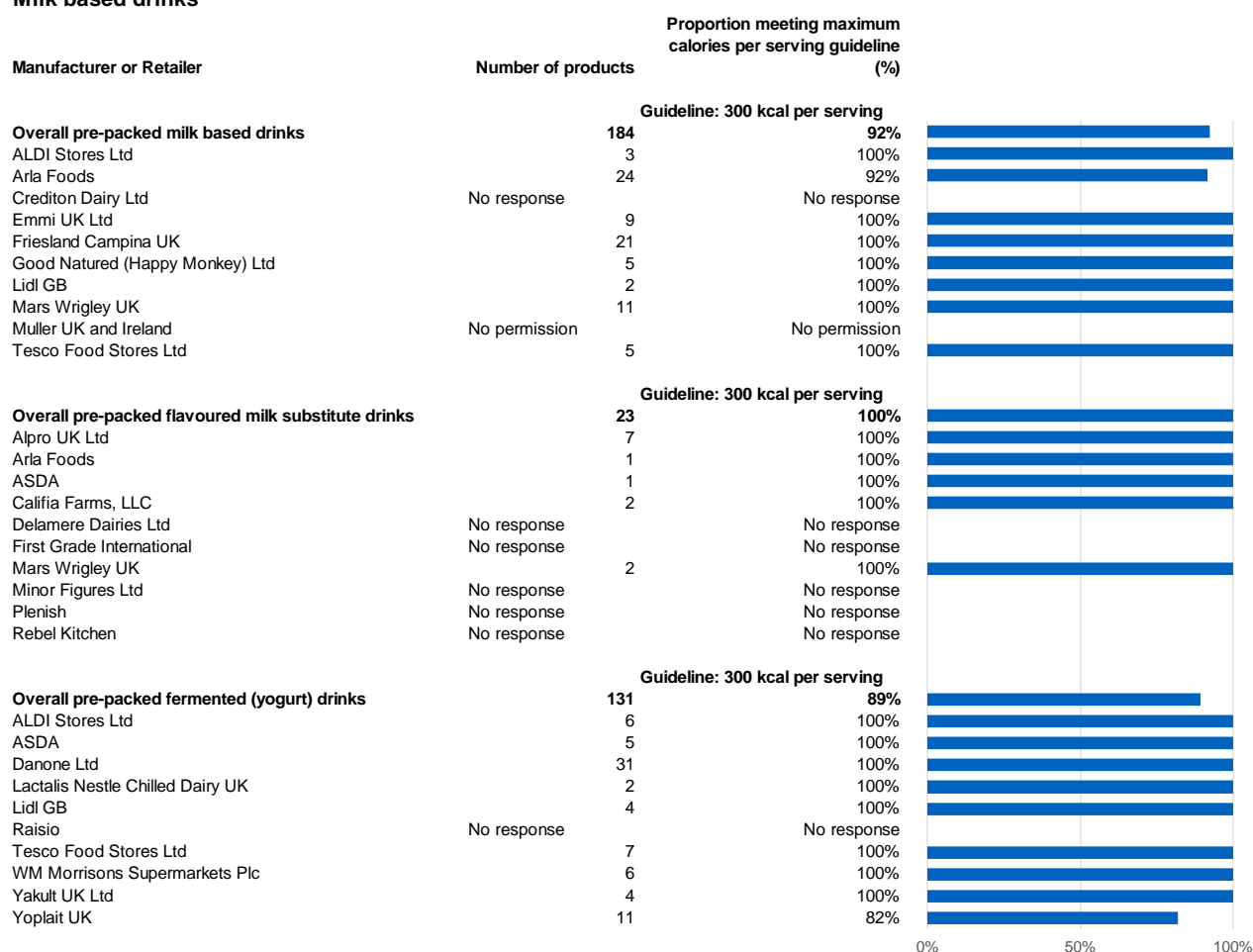


## Progress at business level

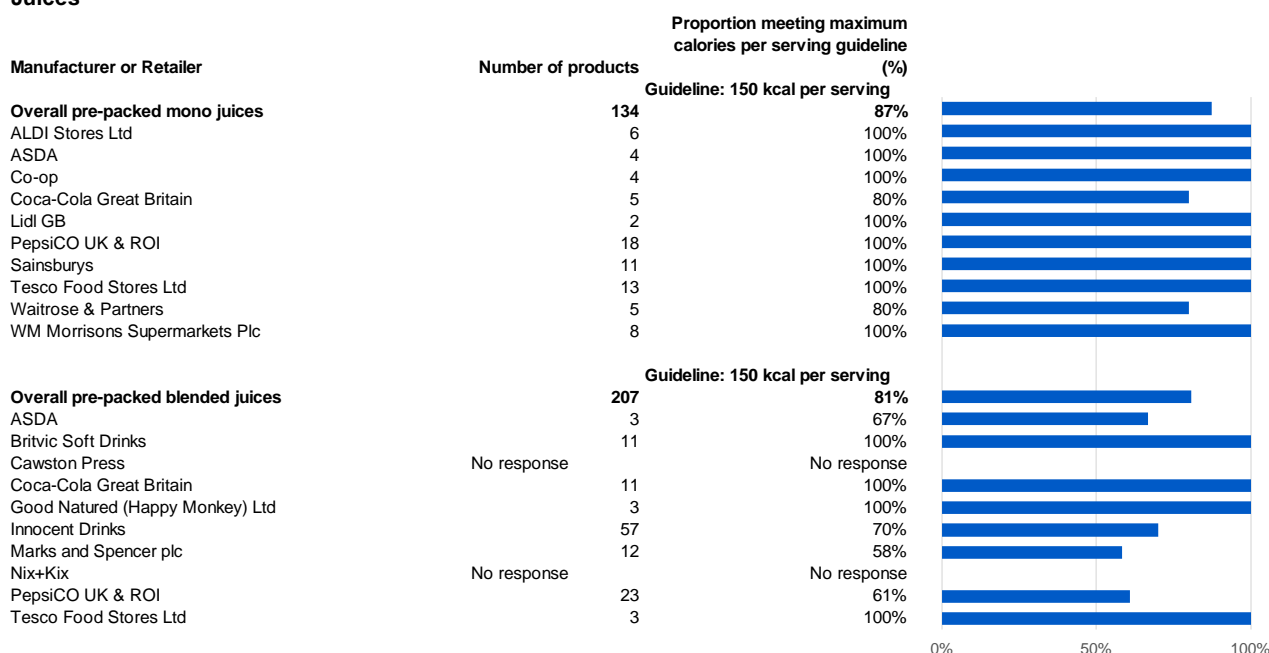
Figure 38 shows the proportion of retailers and manufacturer branded products meeting the maximum calories per serving guidelines in year 2 (2020) at a business level. The number of products used in the analysis is also present to aid interpretation. A higher proportion of businesses in the milk based drinks categories have all of their products meeting the maximum calories per serving guideline compared to juice-based drinks categories.

**Figure 38: Proportion of products meeting the maximum calories per serving guideline for products likely to be consumed on a single occasion by category and business in year 2 (2020) for retailers and manufacturers**

### Milk based drinks



## Juices



Note: Manufacturers and retailers are listed in alphabetical order within each category. They are not listed by number of servings sold.

## Eating out of home sector

### Sugar content of juice and milk based drinks products and calories likely to be consumed on a single occasion

Analysis of the eating out of home sector looks at the simple average of both sugar content (grams per 100ml) and calories likely to be consumed on a single occasion. For this sector, sales weighted averages cannot be calculated due to problems linking purchases and nutrition data, as explained previously.

Comparisons between baseline (2017) and year 2 (2020) should be treated with caution due to differing numbers and profile of products included in the analysis. Figure 39 shows the change in values for sugar content and calories likely to be consumed on a single occasion from baseline while Figure 40 shows the percentage change. The proportion of products at or below the guidelines for calories likely to be consumed on a single occasion (per single serve) are set out in Figure 41.

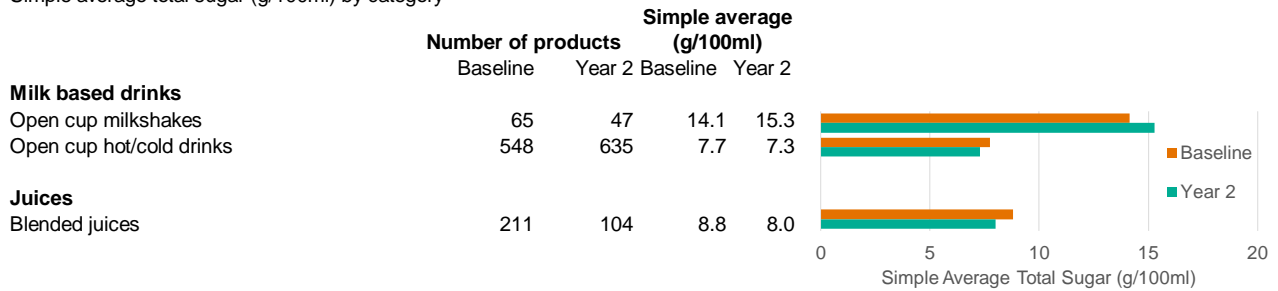
Figures 39, 40 and 41 show that:

- open cup milkshakes showed a 12.7% increase in sugar content and a 12.2% increase in calories per single serving from baseline
- by contrast, open cup hot or cold drinks showed a decrease in sugar content of 10.2%, but an increase in calories per single serving of 14.3%

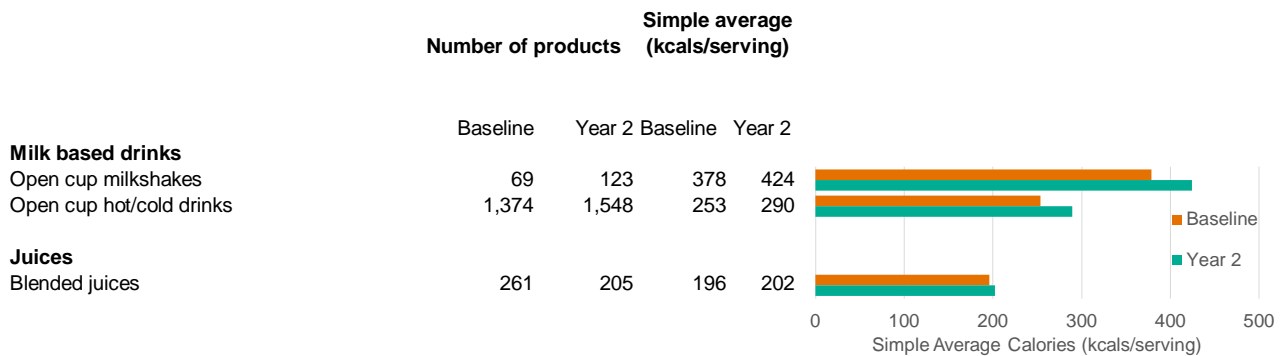
- over the same time, blended juice drinks showed a 9.4% decrease in sugar content and a 3.5% increase in calories per serving
- between baseline and year 1, all categories showed a decrease in the percentage of products at or below the maximum calories per serving guideline (open cup milkshakes 42% down to 20%, open cup hot or cold drinks from 69% to 53%, and blended juice drinks from 46% to 35%)

**Figure 39: Change in sugar content (g per 100ml) and calories per single serving in the eating out of home sector categories between baseline (2017) and year 2 (2020)**

Simple average total sugar (g/100ml) by category

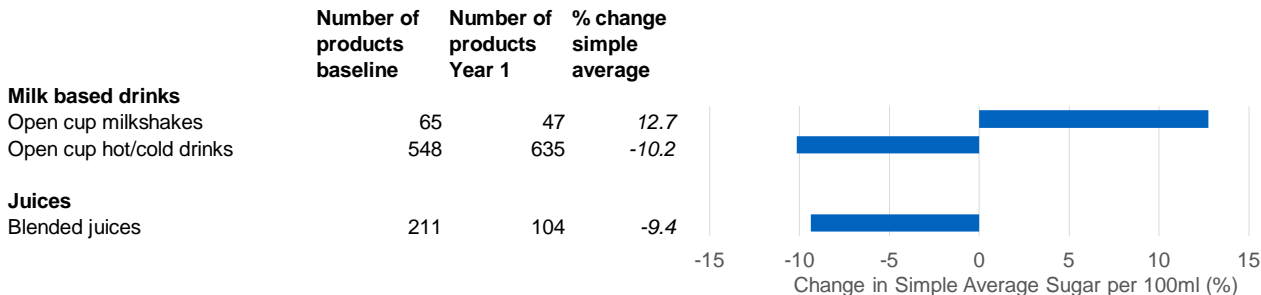


Simple average calories (kcal/serving) by category

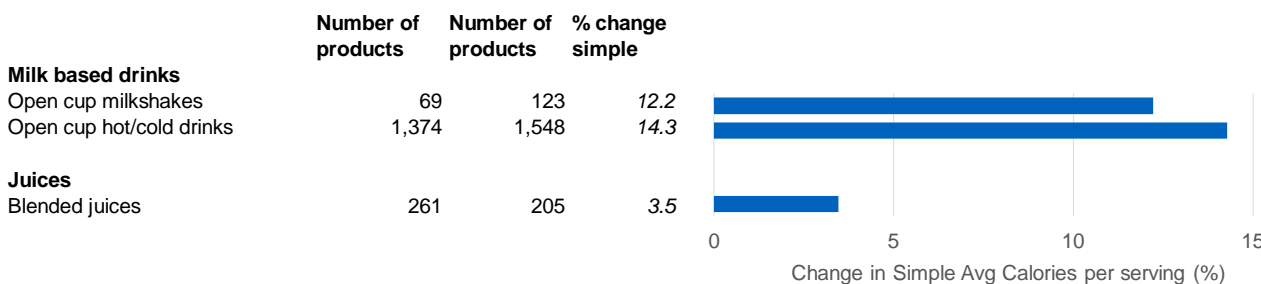


**Figure 40: Percentage change in sugar content (g per 100ml) and calories per single serving in the eating out of home sector categories between baseline (2017) and year 2 (2020)**

Percentage change simple average sugar (g per 100ml) by category



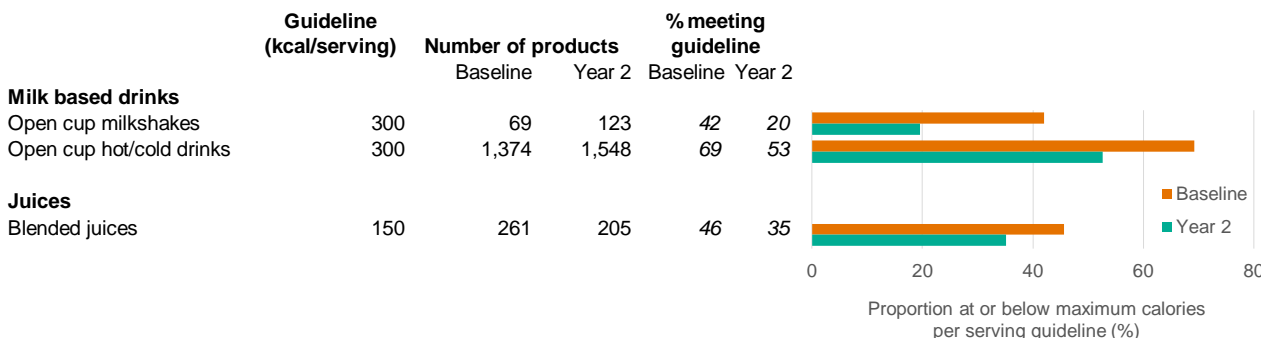
Percentage change simple average kcals per serving by category



Note: This is calculated using the adjusted simple average sugar values for the milk based drinks category, and the simple average total sugar for the blended juices category.

**Figure 41: Percentage of products at or below the maximum calories per serving guideline in the eating out of home sector categories between baseline (2017) and year 2 (2020)**

Proportion at or below maximum calories per serving guideline by category (%)



### Progress at business level

No business level analysis is included for 2020 (year 2) for the eating out of home sector. This is because the number of products for which data was collected was too small to produce robust business level changes over time or differences between businesses.

# Soft Drinks Industry Levy

## Introduction

The SDIL was announced in the Budget in March 2016 and came into law in April 2018 ([The Soft Drinks Industry Levy Regulations 2016](#))**Error! Bookmark not defined.** It applies to sugar sweetened beverages containing added sugar and was introduced as part of the government's initiative to tackle childhood obesity by encouraging manufacturers and retailers to reduce the sugar content in their drink products.

There are 2 rates of tax, depending on the sugar content:

- the 'standard rate' (18p per litre) applies to drinks with total sugar content between 5g and up to (but not including) 8g per 100ml
- the 'higher rate' (24p per litre) applies to drinks with total sugar content equal to or greater than 8g per 100ml

There is no tax applied to drinks with sugar content of less than 5g per 100ml.

All drinks subject to the SDIL, including those with a sugar content of less than 5g per 100ml, are included in the analysis in this section. It is important to include this lower sugar group of drinks so that consumers switching from higher sugar drinks and any reformulation of products can be monitored.

Unsweetened juice and sweetened milk based drinks are not in scope of the SDIL and form part of the sugar reduction programme. The government will next consider the exemption for sugary milk and milk-substitute drinks after the next round of monitoring data is produced for these products, later in 2022.

## Retailers and manufacturer branded products

As mentioned previously for the food categories included in the voluntary sugar reduction programme, some of the increases in sales will be affected by the first 6 months of the COVID-19 pandemic resulting in more food and drink being purchased for consumption in the home. This was partly due to some initial stockpiling and schools, workplaces and most businesses in the out of home sector either closing or operating through delivery.

Figure 42 shows the sales in litres of products subject to the SDIL for the baseline year (2015) and year 4 (2020) for retailers and manufacturer branded products. Figure 43 shows the proportion of these sales by the different levy rates.



It can be seen that:

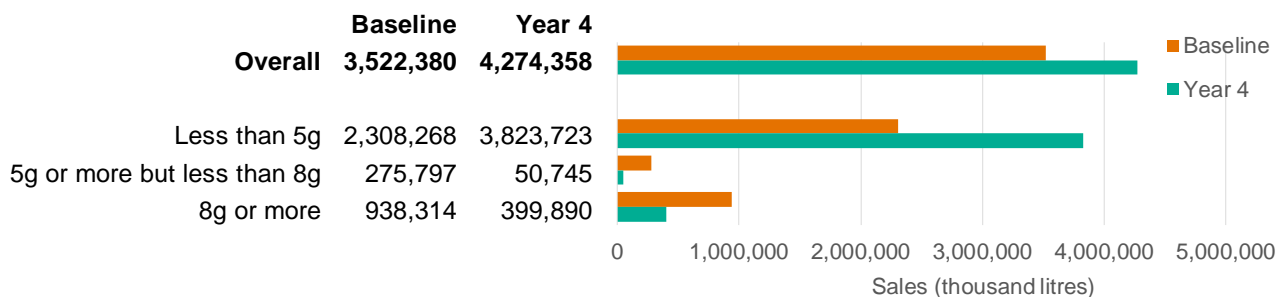
- overall, sales (in litres) of soft drinks classified within the 3 sugar tiers of the levy have increased by 21.3% from 3,522,380 thousand litres in 2015 to 4,274,358 in 2020, which was due to an increase in sales of drinks containing less than 5g of sugar per 100ml
- at the same time the total sugar sales from the soft drinks decreased by 34.3% from 135,391 tonnes in 2015 to 89,019 tonnes in 2020

These changes largely reflect a more extreme version of the increase in sales between baseline and year 3 which were unaffected by COVID-19. In year 3, overall sales for drinks subject to SDIL were up 14.9% compared to baseline and the total sugar sales from the soft drinks was down 43.7%.

Further results of this analysis are available in the supplementary data Table 7, which shows:

- the sales weighted average total sugar content fell from 3.8g per 100ml in 2015 to 2.1g per 100ml in 2020, which is a decrease of 46.0%
- the sales weighted average number of calories for products likely to be consumed on a single occasion fell from 64 kcals per single serve to 38 kcals, which is a fall of 40.5%
- there has been a large shift in sales towards lower sugar products, as sales (in litres) of products with no levy attached (less than 5g sugar per 100ml) have increased by 65.7%, while sales of products with a levy attached have fallen by 81.6% for those in the 5g to less than 8g per 100ml group and by 57.4% for those in the 8g or more per 100ml group
- the proportion of sales with no levy attached has also increased from 66% to 89% while the proportion of products with no levy attached has increased from 48% to 81%

**Figure 42: Sales (thousand litres) of drinks subject to the Soft Drinks Industry Levy by total sugar content per 100ml in baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



**Figure 43: Proportion of sales of drinks subject to the Soft Drinks Industry Levy by total sugar content per 100ml in baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**

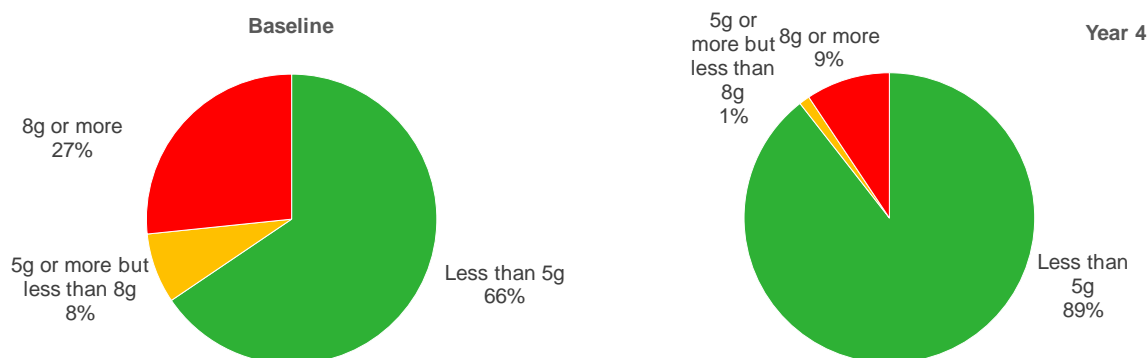
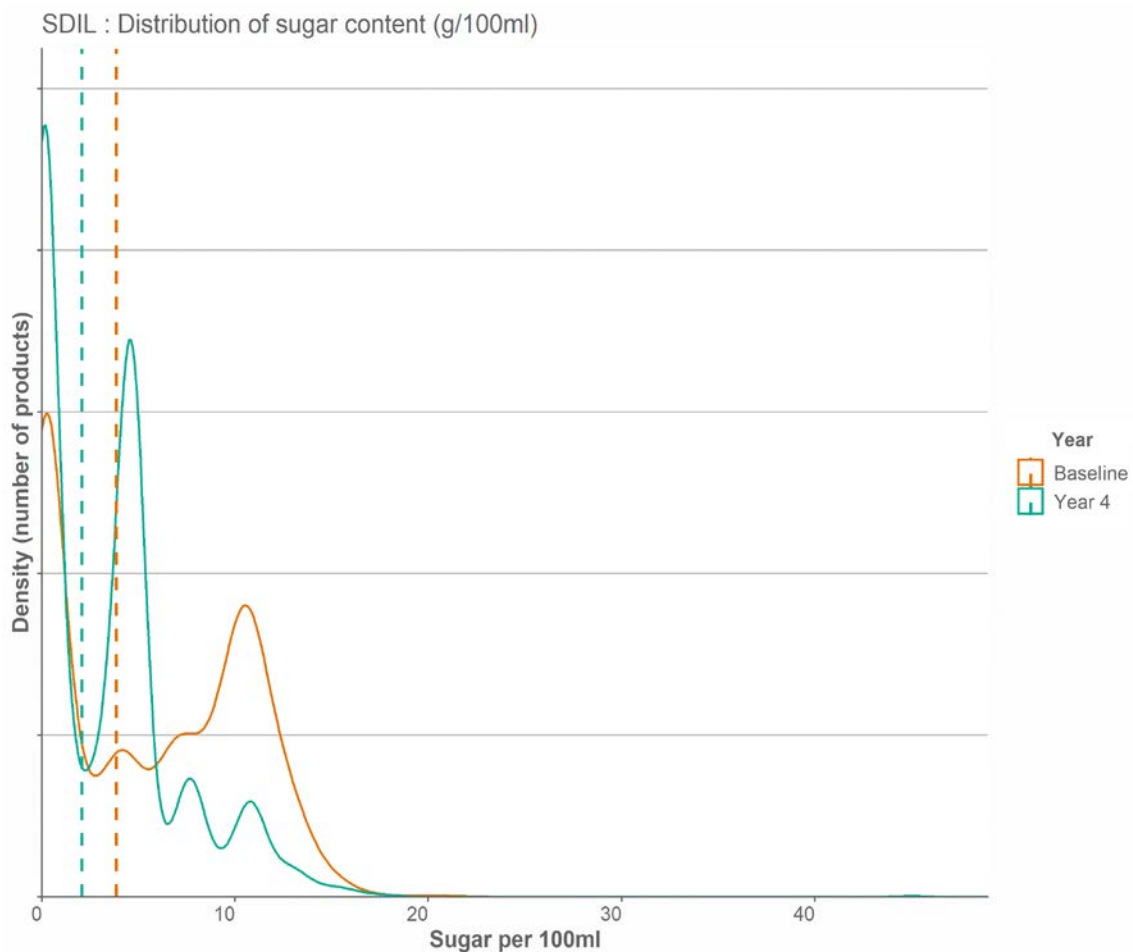


Figure 44 shows how the distribution of products purchased by their sugar content has changed over time. The curves show the number of products sold by their total sugar content per 100ml for baseline (2015) and year 4 (2020), and the vertical lines show the sales weighted average sugar content for the same time periods.

The general shift in the distribution to the left between 2015 and 2020 indicate that drinks being purchased are on average lower in total sugar per 100ml in year 4 than they were in the baseline year.

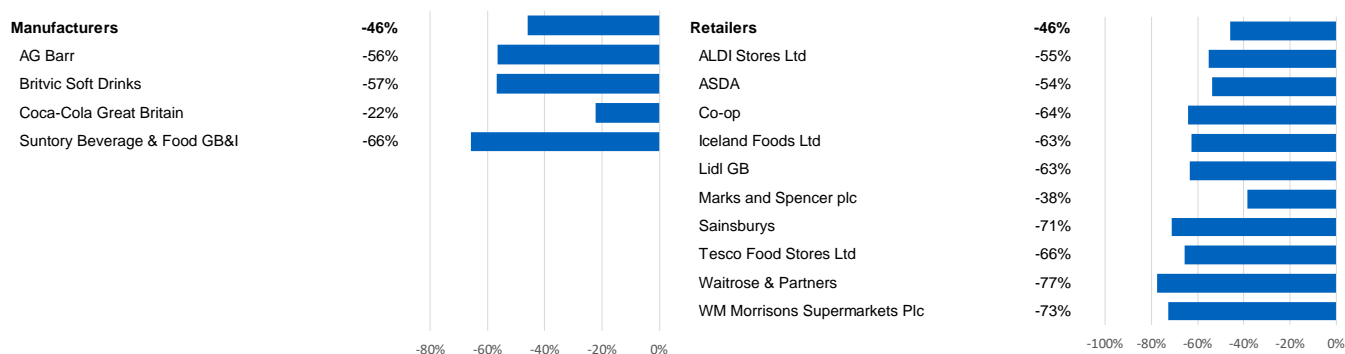
**Figure 44: Number of drinks subject to the Soft Drinks Industry Levy purchased by total sugar per 100ml for baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



Note: The lines on this chart are a smoothed line of best fit through the underlying data points which allow the general direction of change to be seen clearly. Therefore, the number of products for a particular sugar content per 100ml is an approximation rather than the exact number. In particular, there are steeper drops than this line indicates close to the sugar content levels where the levy increases.

Figure 45 shows a comparison between baseline (2015) and year 4 (2020) for the sales weighted average total sugar per 100ml at business level for drinks subject to the SDIL. While there is no comparable reduction ambition for soft drinks as there is for categories in the sugar reduction programme, all of the top selling brands have shown a decrease in their sales weighted average sugar content per 100ml (where figures are available) and many, predominantly retailers, have reduced this by more than 60% (Appendix Table 2).

**Figure 45: Changes in sales weighted average total sugar per 100ml of drinks subject to the Soft Drinks Industry Levy by business between baseline (2015) and year 4 (2020) for retailers and manufacturers**



Note: The overall percentage change is a combined figure for manufacturers and retailers.

### Eating out of home sector

Although data for the eating out of home sector is more limited, it is possible to look at changes in sugar and calories between year 1 (2017) and year 4 (2020) and the distribution of products and sales by the different sugar levy bands for drinks covered by the SDIL. However, comparisons should be treated with caution as there are a different number of products analysed in each year (more details are available in Table 10).

The main findings are:

- the simple average total sugar content fell from 5.8g per 100ml in year 1 to 3.2g per 100ml in year 4 (down 44.3%)
- the simple average calorie content for products likely to be consumed on a single occasion fell from 95 kcals to 59 kcals, which is a fall of 38.2%
- the equivalent year 4 simple averages for retailers and manufacturer branded products are 3.4g per 100ml and 64 kcals for products likely to be consumed on a single occasion (Table 7 and 10)

It is not possible to compare the level of sales (expressed as servings) in the eating out of home sector between 2017 and 2020 as they are based on a different number of products; 220 products in 2017 and 180 products in 2020.

## Retailers and manufacturer branded products – analysis by socioeconomic group

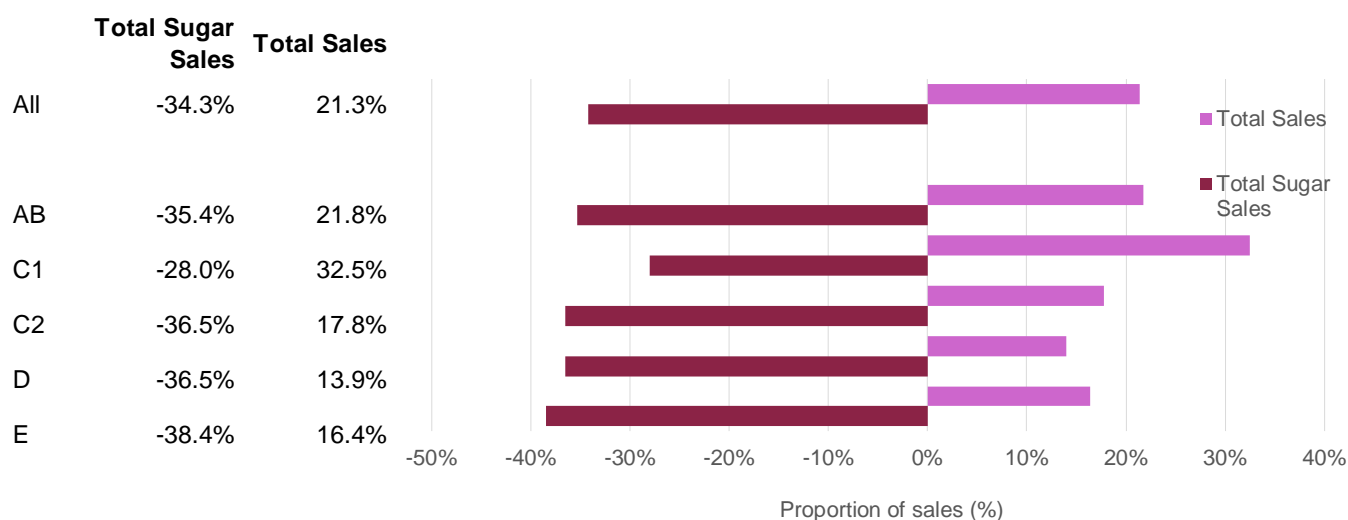
This section looks at changes in the sales of products subject to the SDIL by socioeconomic group of households for retailers and manufacturer branded products.

Figure 46 shows the percentage change in total volume sales of drinks that are subject to the SDIL by socioeconomic group, and the change in the total sugar in those drinks between baseline (2015) and year 4 (2020).

It shows that:

- overall there has been an increase of 21.3% in sales of all soft drinks included in the SDIL analysis, but a reduction in the total sugar sales from those drinks of 34.3%, reflecting the shift in sales towards lower sugar drinks
- all groups have shown an increase in volume of drinks purchased and a reduction in sugar purchased, but there are some differences by socioeconomic group
- the largest increase in sales was for Group C1 (up 32.5%) and group AB (up 21.2%)
- groups AB, C1 and C2, which contain over 82.8% of the families in the dataset, had increases in total sales of 21.8%, 32.5% and 17.8% respectively, and their decreases in total sugar purchased were 35.4%, 28.0% and 36.5% respectively

**Figure 46: Change in total volume sales (litres) of drinks subject to the Soft Drinks Industry Levy and change in total sugar content of those drinks by socioeconomic group between baseline year (2015) and year 4 (2020) for retailers and manufacturer branded products**

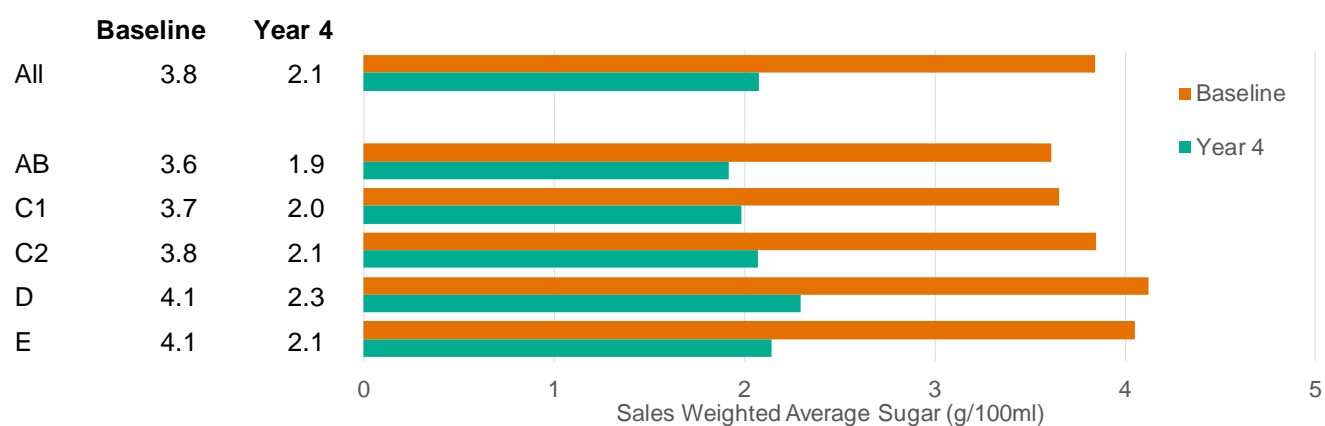


Figures 47 and 48 show the sales weighted average total sugar content per 100g both overall and at product category level for baseline (2015) and year 4 (2020), and the change between this period by socioeconomic group. Note that these figures do not take into account differences in the volume of drinks purchased by the different socioeconomic groups and only reflect the sugar content of an average drink purchased.

It can be seen for retailers and manufacturers that:

- in both baseline and year 4, the drinks purchased by those in the lower socioeconomic groups had a slightly higher average sugar content than the drinks purchased by those in the higher socioeconomic groups
- all socioeconomic groups have shown a reduction in sales weighted average total sugar content per 100ml by approximately the same amount across all groups (Table 7)

**Figure 47: Sales weighted average total sugar (g per 100ml) of drinks subject to the Soft Drinks Industry Levy by socioeconomic group in baseline year (2015) and year 4 (2020) for retailers and manufacturer branded products**



**Figure 48: Percentage change in sales weighted average total sugar (g per 100ml) of drinks subject to the Soft Drinks Industry Levy by socioeconomic group between baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**

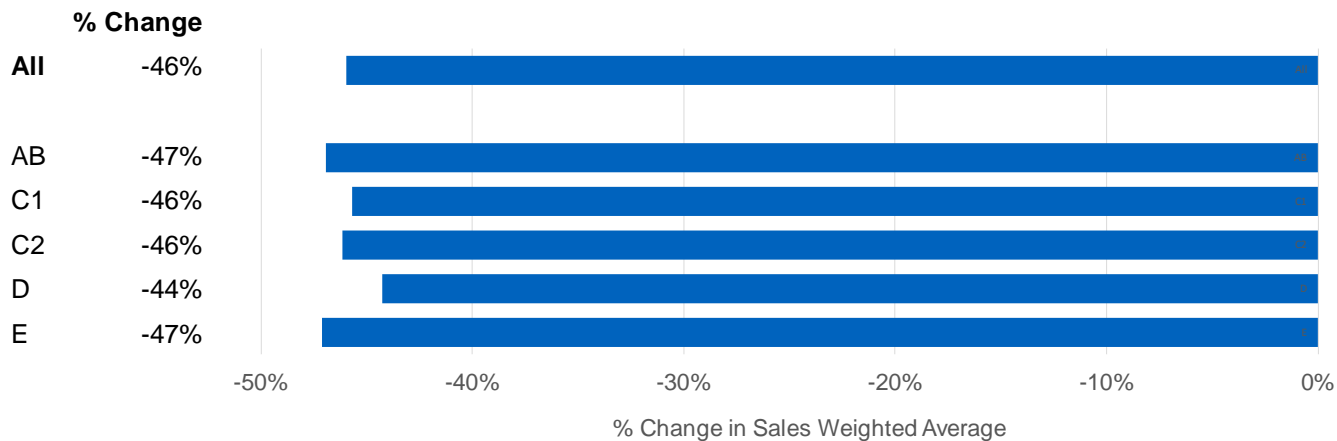
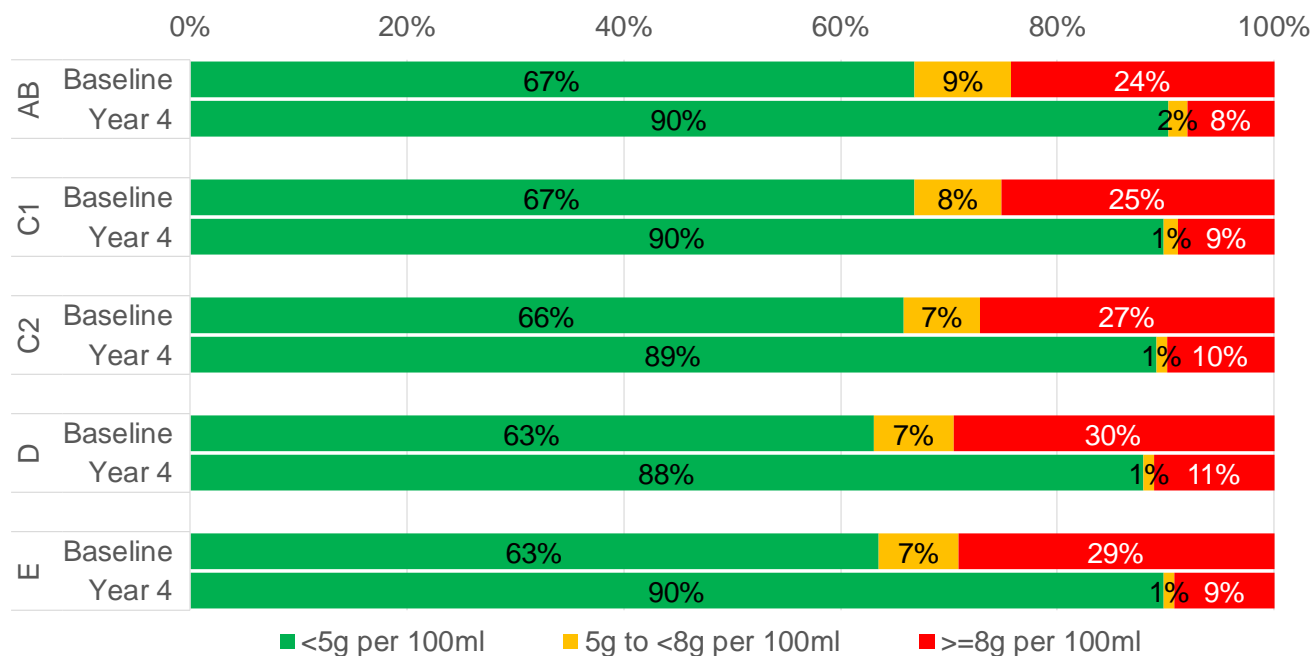


Figure 49 shows the proportion of sales of products subject to the SDIL for the baseline year (2015) and year 4 (2020) by socioeconomic group for retailers and manufacturer branded products by the different taxation levels. It can be seen that:

- there has been an increase in the proportion of sales with no levy attached (<5g per 100ml) for all socioeconomic groups
- the proportion of drinks purchased that have no levy attached is more similar across the groups in 2020 than baseline (Table 7)

**Figure 49: Proportion of sales of drinks subject to the Soft Drinks Industry Levy by total sugar content per 100ml by socioeconomic group in baseline (2015) and year 4 (2020) for retailers and manufacturer branded products**



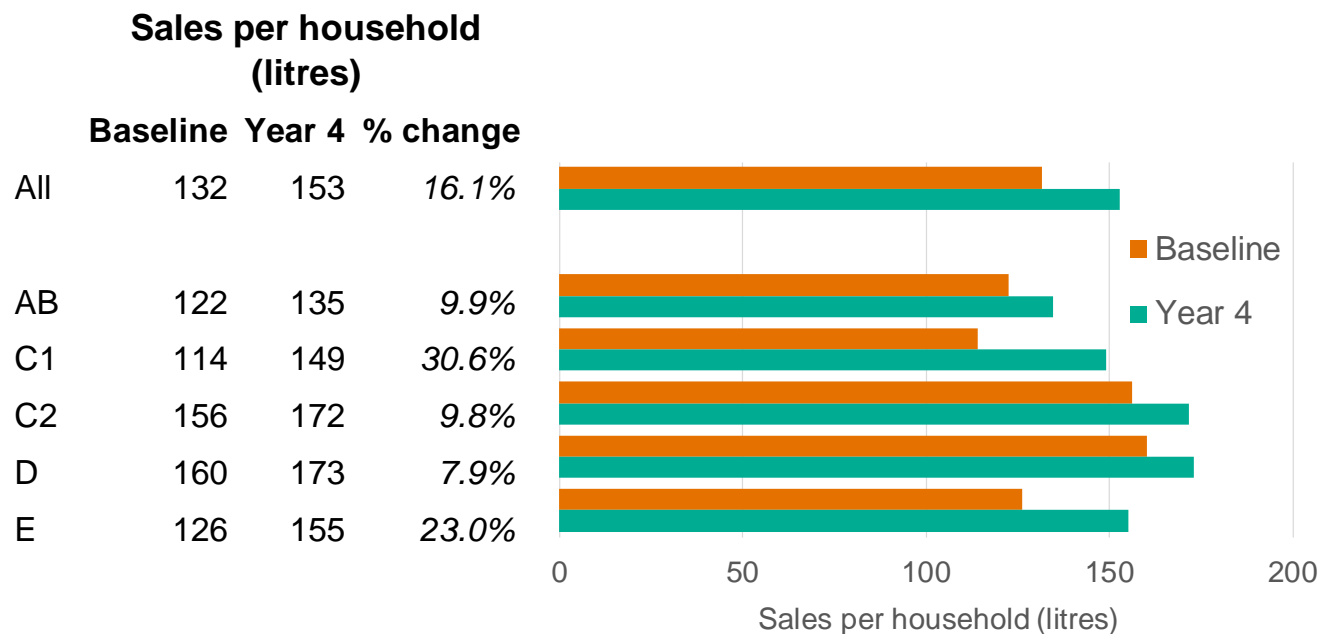
Figures 50 and 51 show the total purchases of drinks subject to the SDIL and the total sugar purchased from these drinks, per household by socioeconomic group. This allows disparities in volume and sugar sales by socioeconomic status to be examined as the data need have been adjusted for the size of each group (in terms of households).

They show that:

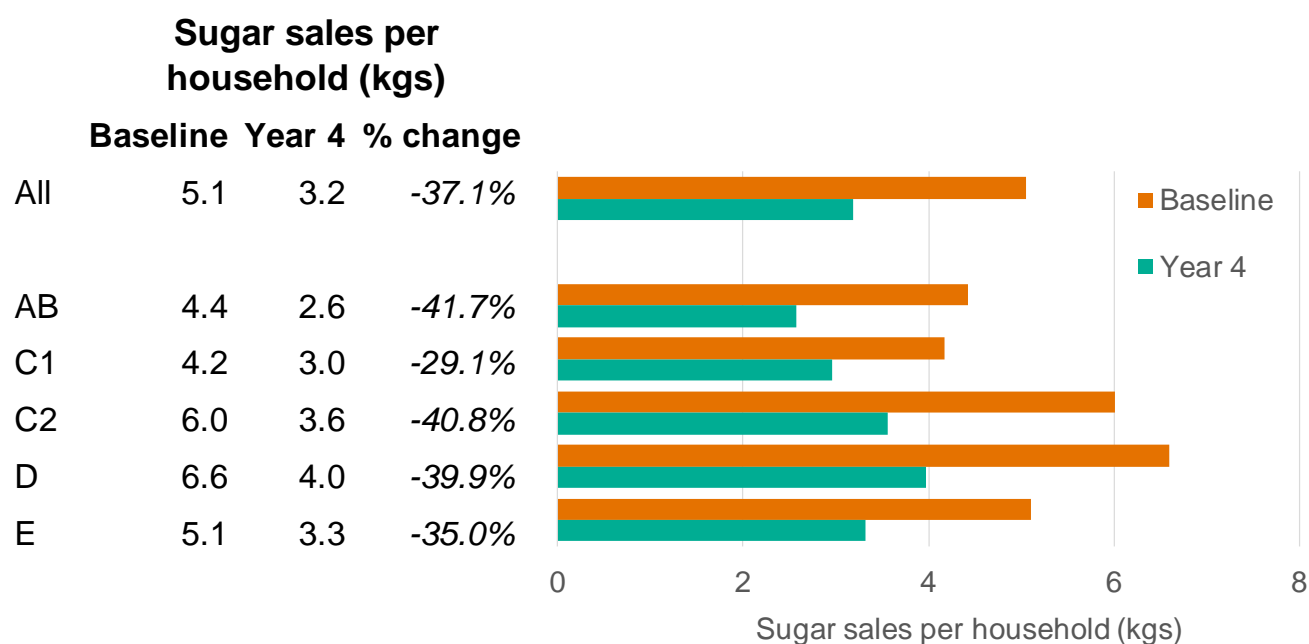
- groups C2 and D had the highest sales per household in year 4 (172 and 173 litres respectively), while group AB had the lowest sales per household (135 litres)
- the pattern was similar for sugar sales per household
- there has been an increase in the total drinks purchased per household and a reduction in the total sugar purchased per household, across all socioeconomic groups;
- group C1 had the highest increase in total sales per household (30.6%) and the lowest decrease in sugar sales per household (29.1%).



**Figure 50: Total volume sales (litres) per household of drinks subject to the Soft Drinks Industry Levy and change in total sugar sales per household from those drinks by socioeconomic group between baseline year (2015) and year 4 (2020), for retailers and manufacturer branded products**



**Figure 51: Total sugar sales (kgs) per household of drinks subject to the Soft Drinks Industry Levy and change in total sugar sales per household from those drinks by socioeconomic group between baseline year (2015) and year 4 (2020), for retailers and manufacturer branded products**



# Conclusions

The results presented in this report demonstrate that a voluntary sugar reduction and product reformulation programme can deliver progress, change and innovation. This is demonstrated by the reductions seen but particularly for retailer and manufacturer branded breakfast cereals, yogurts and fromage frais, milk based and Soft Drink Industry Levy drinks; and by some individual businesses and brands. Lower reductions are seen in some categories as reducing sugar in some food and drink can be more difficult than others due to the functional role it plays, for example, chocolate and sweet confectionery.

In tandem, however, there has been an increase in the sales of some higher sugar products, a previously seen trend that grew further during the COVID-19 pandemic. Taken together, these trends result in more sugar from these products being part of shopping baskets, compared to 2015. It also means that the sugar reductions achieved in other categories have not been reflected in the overall percentage reduction figure for the programme as a whole.

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# Appendix 1: Guide to the category tables and charts

A range of statistical tables and charts highlighting progress between the baseline year and 2020 are provided for each of the categories included in the sugar reduction programme. These are available in the supplementary excel tables. This Appendix explains how these tables have been created and how to interpret them. See Appendix 2 for further information about the data sources and methodology used.

For all tables, percentage changes have been calculated on unrounded figures.

## Main tables for retailers and manufacturer branded products

Table 1: Simple average and sales weighted average total sugar content (g per 100g) for retailers and manufacturer branded products

This table provides the simple average and sales weighted average total sugar content per 100g. Figures are given for baseline (2015) and year 4 (2020) as well as the percentage change for both metrics over this period.

Table 1a: Simple average and sales weighted average total sugar content (g per 100g) for retailers and manufacturer branded products by socioeconomic group

As table 1 broken down by socioeconomic group.

Table 2: Simple average and sales weighted average total sugar content (g per 100g) by retailers and manufacturer branded products

As Table 1, but with separate analysis of progress for retailers and manufacturers. The combined retailers and manufacturer figures from Table 1 are also included for comparison purposes.

Table 3: Simple average and sales weighted average calories in products consumed on a single occasion (single serve) for retailers and manufacturer branded products

This table provides simple average and sales weighted average calories per single serve portion for baseline (2015) and year 4 (2020), as well as the percentage change for both metrics over this period.

Table 3a: Simple average and sales weighted average calories in products consumed on a single occasion (single serve) for retailers and manufacturer branded products by socioeconomic group

As table 3 broken down by socioeconomic group.

Table 4: Simple average and sales weighted average calories in products consumed on a single occasion (single serve) for retailers and manufacturer branded products  
As Table 3, but with separate analysis of progress for retailers and manufacturers. The combined retailers and manufacturer figures from Table 3 are also included for comparison purposes.

Table 4a: Proportion of products likely to be consumed on a single occasion meeting the maximum calorie guidelines by category in year 4 (2020) for retailers and manufacturer branded products

This table provides a measure of compliance with the maximum calorie guidelines. It shows the proportion of products meeting the guidelines by category for retailers and manufacturer branded products

Table 5: Total volume sales and total sugar sales for retailers and manufacturer branded products

This table provides total volume sales and total sugar sales in tonnes for baseline (2015) and year 4 (2020). It also shows the proportion of sales each category contributes to the overall level. The percentage change in total volume and total sugar sales is given over this period along with the percentage point change in the contribution each category makes to the total.

Table 5a: Total volume sales and total sugar sales for retailers and manufacturer branded products by socioeconomic group

As table 5 broken down by socioeconomic group.

Table 6: Total volume sales and total sugar sales by retailers and manufacturer branded products

As Table 5, but with separate analysis for retailers and manufacturers. Also shown is the contribution of total category sales by retailers and manufacturers. The combined retailers and manufacturer figures from Table 5 are also included for comparison purposes.

Table 7: Sales (litres) and sales weighted average total sugar content (**g per 100ml**) and sales weighted average single serve calories per portion (kcal) for drinks covered by Soft Drinks Industry Levy (SDIL) for retailers and manufacturer branded products by socioeconomic group

This table provides information on sales in litres, sales weighted average total sugar content per 100ml, and calories per single serve portion for products covered by the SDIL by socioeconomic group. Figures are given for baseline (2015) and year 4 (2020) as well as the percentage change for these metrics over this period.

## **Main tables for the eating out of home sector**

Table 8: Simple average total sugar content (g per 100g) for the eating out of home sector  
This table provides the simple average total sugar content per 100g. Figures are given for baseline (2017) and year 4 (2020) as well as the percentage change for this metric over this period.

Table 9: Simple average calories in products consumed on a single occasion (single serve) for the eating out of home sector  
This table provides simple average calories per single serve portion. Figures are given for baseline (2017) and year 4 (2020) as well as the percentage change for this metric over this period. It also includes the equivalent simple averages for retailers and manufacturer branded products.

Table 9a: Proportion of products likely to be consumed on a single occasion meeting the maximum calorie guidelines by category in year 4 (2020) for the eating out of home sector  
This table provides a measure of compliance with the maximum calorie guidelines. It shows the proportion of products meeting the guidelines by category for the eating out of home sector

Table 10: Simple average total sugar content (g per 100ml) and simple average single serve calories per portion (kcal) for drinks covered by Soft Drinks Industry Levy (SDIL) for the eating out of home sector  
This table provides information on the simple average total sugar content per 100ml and single serve calories per portion for products covered by the SDIL for the eating out of home sector. Figures are given for baseline (2017) and year 4 (2020) as well as the percentage change for both metrics over this period. It also includes the equivalent simple averages for retailers and manufacturer branded products.

Table 11: Simple average total sugar content (g per 100g) and simple average single serve calories per portion (kcal) for products consumed on a single occasion (single serve) for contract caterers in the eating out of home sector  
This table provides the simple average total sugar content per 100g and single serve calories per portion for catering companies in the eating out of home sector for year 4 (2020). No comparison is made to baseline (2017) as the number of products for which data was collected in each year is very different.

## Appendix tables for retailers and manufacturers

### Appendix Table 1: Sales weighted average total sugar content (g per 100g) and sales weighted average single serve calories per portion (kcal) for retailers and manufacturer branded products

Appendix Table 1 provides information on the following metrics by category for baseline (2015), year 1 (2017), year 2 (2018), year 3 (2019) and year 4 (2020) and the percentage change over this period:

#### Sales weighted average total sugar (g per 100g)

- number of products with real nutrition information
- proportion of all products that have real nutrition information (% of all products in category)
- proportion of volume sales with real nutrition information (% of all sales in category)
- volume sales by category as a proportion of all sales (%)
- sales weighted average total sugar content (g per 100g)

#### Calories in products likely to be consumed on a single occasion (single serve)

- number of products with real nutrition information
- proportion of all products that have real nutrition information (% of all products in category)
- proportion of volume sales with real nutrition information (% of all sales in category)
- volume sales by category as a proportion of all sales (%)
- sales weighted average calories per portion (for single serve products - kcal)

### Appendix Table 2: Percentage change in sales weighted average total sugar for the top 10 manufacturers and top 10 retailers based on total sugar sales in the category

Appendix Table 2 provides information on the change in sales weighted average total sugar 100g between baseline (2015) and year 4 (2020) for the top 10 selling manufacturers and retailers defined by their total sugar sales.

Manufacturers and retailers are listed in alphabetical order in each category. They are not listed by volume of sugar sales. The list includes those who account for the top 80% of sugar sales in the category. For manufacturers, any businesses which did not have at least 1% of sales in both 2015 and 2020 were removed. A maximum of 10 manufacturers and 10 retailers are shown.

Aldi and Lidl brands, and all cakes and morning goods, are compared with a baseline of 2017 rather than 2015 as their data for the earlier year are not robust.

**Appendix Table 3: Percentage change in sales weighted average calories for products likely to be consumed on a single occasion for the top 10 manufacturers and top 10 retailers based on total servings in the category**

Appendix Table 3 provides information on the change in sales weighted average calories between baseline (2015) and year 4 (2020) for the top 10 selling manufacturers and retailers defined by their total sales.

As with Appendix Table 2, manufacturers and retailers are listed in alphabetical order within each category. They are not listed by volume of sugar sales. The list includes those who account for the top 80% of sugar sales in the category. For manufacturers, any businesses which did not have at least 1% of sales in 2015 and 2020 were removed. A maximum of 10 manufacturers and 10 retailers are shown.

Aldi and Lidl brands, and all cakes and morning goods, are compared with a baseline of 2017 rather than 2015 as their data for the earlier year are not robust.

**Appendix Table 4: Percentage change in sales weighted average of nutrients per 100g for top 20 manufacturer and retailer brands based on total sugar sales in a category**

Appendix Table 4 provides information on the change between baseline (2015) and year 4 (2020) for the top 20 selling manufacturer retailer brands defined by their total sugar sales. Brands are listed in alphabetical order within each category.

Aldi and Lidl brands, and all cakes and morning goods, are compared with a baseline of 2017 rather than 2015 as their data for the earlier year are not robust.

The metrics shown are the percentage change for:

- sugar (%)
- calories (%)
- saturated fat (%)



- salt (%)

### **Appendix Table 5: Calories in products consumed on a single occasion (single serve) for the top 30 products by total servings in a category**

Appendix Table 5 provides information on the change in calories per single serve portion between baseline (2015) and year 4 (2020) for the top 30 selling manufacturer and retailer products defined by sales in servings.

Aldi and Lidl brands, and all cakes and morning goods, are compared with a baseline of 2017 rather than 2015 as their data for the earlier year are not robust.

### **Product density curves**

This shows the product density curves for each category for total sugar per 100g and calories for products likely to be consumed on a single occasion. The curve is a smoothed line of best fit through the underlying data points which allow the general direction of change to be seen clearly. Therefore, the number of products for a particular content of sugar is an approximation rather than the exact number.

### **Appendix tables for the eating out of home sector**

#### **Appendix Table 6: Percentage change in simple average total sugar (g) and calories per portion (kcal) for the top eating out of home businesses based on total sugar sales in the category**

Appendix Table 6 provides information on the change in the simple average total sugar per 100g, between year 1 (2017) and year 4 (2020), for the top 10 selling businesses defined by their total sugar sales for brands with nutrition data.

### **Tables for juice and milk based drinks**

#### **Appendix Table 7: Simple average and sales weighted average sugar content per 100ml of milk based drink and juice categories for retailers and manufacturer branded products**

This table provides the simple average and sales weighted average total sugar content per 100ml for baseline (2017) and year 2 (2020). Figures are given for baseline (2017) and year 2 (2020) as well as the percentage change for both metrics over this period. The percentage change is based on added sugar rather than total sugar for the milk based drink categories.

**Appendix Table 8: Simple average and sales weighted average calories per serving of milk based drink and juice categories for retailers and manufacturer branded products**

This table provides the simple average and sales weighted average calories per serving for baseline (2017) and year 2 (2020). Figures are given for baseline and year 1 as well as the percentage change for both metrics over this period.

**Appendix Table 9: Percentage change in simple average or sales weighted average sugar per 100ml value for the top 10 manufacturers and retailers based on total sugar sales in the category**

This table provides information on the change in simple average or sales weighted average total sugar content per 100ml between baseline (2017) and year 2 (2020) for the top 10 selling manufacturer and retailer brands defined by their total sugar sales. The percentage change is based on added sugar rather than total sugar for the milk based drink categories. Brands are listed in alphabetical order within each category.

**Appendix Table 10: Proportion of products meeting the maximum calories per serving guideline in year 2 (2020) for the top 10 manufacturers and retailers based on total servings sold in the category**

This table provides information on the number and proportion of products meeting the maximum calories per portion guideline in year 2 (2020) for the top 10 manufacturers and retailers based on total servings sold. Brands are listed in alphabetical order within each category.

**Appendix Table 11: Simple average sugar content per 100ml of milk based drink and juice categories in the eating out of home sector**

This table provides the simple average total sugar content per 100ml for baseline (2017) and year 2 (2020) for the eating out of home sector. Figures are given for baseline and year 2 as well as the percentage change for this metric over this period. The percentage change is based on added sugar rather than total sugar for the milk based drink categories.

**Appendix Table 12: Simple average calories per serving of milk based drink and juice categories in the eating out of home sector**

This table provides the simple average calories per serving for baseline (2017) and year 2 (2020) for the eating out of home sector. Figures are given for baseline and year 2 as well as the percentage change for this metric over this period.

**Appendix Table 13: Percentage change in simple average total sugar per 100ml and proportion meeting maximum calories per portion guideline in the top eating out of home sector businesses based on total sugar sales for milk based drink and juice categories.**

This table provides information on the change between baseline (2017) and year 2 (2020) for the top eating out of home businesses defined by their total sugar sales for milk based drinks and juice products. Businesses are listed in alphabetical order within each category.

The metrics shown are the simple average sugar content grams per 100ml, percentage change in simple average sugar content (based on added sugar rather than total sugar for the milk based drink category), and the proportion of products at or below the maximum calories per portion guideline.

# Appendix 2: Details of the data sources and methods used to assess progress of the sugar reduction programme

Analysis has been undertaken to examine trends in the sugar and calorie content of products in the food categories included in the sugar reduction programme. For retailers and manufacturers the comparison is between baseline (2015) and year 4 (2020), and for the eating out of home sector it is between year 1 (2017) and year 4 (2020).

A list of the food categories included in the programme are:

- biscuits
- breakfast cereals
- cakes
- chocolate confectionery
- ice creams, lollies and sorbets
- morning goods
- puddings
- sweet confectionery
- sweet spreads and sauces
- yogurts and fromage frais

This report contains the second progress report for unsweetened juice and sweetened milk based drinks. For this analysis, the sources of data used are the same as for both the food categories and the SDIL, but the baseline year is 2017, and year 2 is the most recent year (2020).

An analysis has also been carried out to assess changes in the sugar content of drinks covered by the SDIL between 2015 and 2020.

## Data sources

### Retailers and manufacturer branded products

The baseline and year 4 estimates of sugar and calorie content by food group for retailers and manufacturers use data from Kantar FMCG's (formerly Kantar Worldpanel) take home consumer panel. Kantar FMCG is a global market research business which runs a continuous reporting panel of 30,000 households across Great Britain, recording details of all food and drink purchases brought into the home, including the volume of sales.

Kantar FMCG's sample of households reflects the demographic makeup of the British population. Demographic targets for the sample are based on region, social class, age of main shopper, household composition and household size. The data collected are weighted to provide a representative picture of total food and drink purchasing in Great Britain over the time period for which data are provided.

The 2020 dataset used for monitoring progress in year 4 of the sugar reduction programme covers purchases for the 52 weeks ending 6 September 2020, and nutrition data as held on Kantar's systems in March 2021. It includes total volume of sales in kilograms, litres or servings and nutrition data for individual food products per 100g, 100ml or serving as well as details of pack size (such as number of products included in multipacks). The baseline dataset covered the 52 weeks ending 31 January 2016.

Kantar FMCG aims to collect all nutrition data from food labels on individual products using fieldworkers, who visit key retail stores and capture the information provided on packaging on a rolling 4 monthly basis. This is an improvement from the data being collected every 6 months in the baseline year. Kantar FMCG also receive nutrition information from third parties; Brandbank on a continuous basis and mysupermarket.com at intervals throughout the year. Kantar received mysupermarket.com data up to June 2020 when the company ceased operating. In 2021, Kantar started to also supplement the collection of nutrition data by web scraping information from retailer websites starting with Sainsburys, Iceland and Tesco. For the 2020 data included in this report the nutrition data for around half of the food and drink products sold in those stores was collected via web scraping.

Due to the restrictions imposed by the 1st COVID-19 lockdown, Kantar fieldwork was halted between April and August 2020. During this period nutrition data continued to be collected from 3rd parties. Kantar fieldwork resumed in September 2020, with categories featured in the reformulation programme prioritised for fieldwork collection until December 2020. The most recent nutrition information from all sources is then used. If no nutrition information for a product was found in 2020 then the most recently collected nutrition information available from a previous year is used. Therefore, if the product has been reformulated since the last time nutrition information was collected then this reformulation

will not be captured in the analysis, but it will be included in future reports when the nutrition information is refreshed in the Kantar dataset.

Where Kantar FMCG can collect the nutrition data, usually for the majority of products in a category, this is termed 'real' (real and found) data. Where this is not possible, nutrition values are either copied across from similar products in the same brand (for example using a different pack size, known as 'cloned') or an average value for the category or product type is calculated and used instead. This is known as 'imputed' data. For 2020 Kantar FMCG undertook an exercise after the initial collection period had ended to update the nutrition information for some of the cloned data or older nutrition data, focussing particularly on the top sellers in each category.

Only real and cloned data has been used for the analyses in this report which present average nutrition information. This is because an imputed value would not take account of any recent reformulation of a particular product unless there has been wholesale reformulation within the product category. The imputed data is used in the analyses of sales volumes to ensure the total level of sales is reported.

## **Time periods covered for retailers and manufacturers**

For retailers and manufacturers, comparisons are made between the baseline (2015) and year 4 of the programme (2020) where possible. This is the case for most categories and businesses included in the report.

However, there are 3 instances where comparisons are made to a baseline of 2017 rather than 2015.

Data for cakes and morning goods has been gradually improved since the programme began and while limitations with the data for cakes and morning goods remain, the data included in the 2015 dataset for these categories had a substantially greater degree of limitation and so has not been used as the baseline for these categories. Improvements were made to the data for these categories in the 2017 dataset, and further improvements were made in subsequent years. Therefore, it was decided to use 2017 as the baseline period for both these categories.

While this approach also has some limitations, the 2017 data is more complete than the 2015 data for these categories so allows for more robust comparisons to be made. However, comparisons between 2017 and 2020 should still be made with caution, because data were collected for around 30% more cake products in 2020 compared with 2017 and around 50% more morning goods products.

The 2017 cakes and morning goods data has been used to estimate the data for 2015 in tables that include data for all categories combined so that progress can be measured

against a baseline. Therefore, any progress made between 2015 and 2017 for these categories will not be included.

There was no specific collection of nutrition data for Aldi and Lidl in 2015 so comparisons in the appendix tables use 2017 as the baseline for these retailers. However, the 2015 data for these retailers has been used in the calculation of the overall and category level figures in this report as including and excluding these data was shown to have little impact.

Due to an error with how nutrition information was labelled on Häagen-Dazs ice cream, data for 2015 cannot be used. As a result, any comparisons made for this range of products uses the 2017 data as a baseline and comparisons are made against this.

### **Eating out of home sector**

It is harder to find combined sales and nutrition information for foods consumed out of the home although many businesses do provide this on their websites, leaflets or menus. The government has announced that, as part of its obesity strategy, calorie labelling for the eating out of home sector will be mandatory but at the moment there is currently no legal obligation to provide nutrition information for foods consumed out of the home.

### **Sales data for foods in the eating out of home sector**

For the baseline data presented for 2015, PHE used data on food purchases collected by NPD from their Consumer Reports on Eating Share Trends (CREST) survey. Following a competitive tender process, the contract for providing sales data for the eating out of home sector for 2017, 2018 and 2019 was awarded to Lumina Intelligence (formerly MCA). Unlike the NPD sales data available for the 2015 baseline analysis, Lumina Intelligence's consumption data (based on the reported number of servings of product consumed<sup>14</sup>) is provided at individual business level which was invaluable to PHE in its monitoring of the programme. As a result, 2017 has been used as the baseline year for the eating out of home sector as opposed to 2015.

Lumina Intelligence's Eating Out Panel is a monthly tracker of consumer behaviour in relation to the eating out of home sector. Each year there are 72,000 in-depth online interviews conducted, equating to 6,000 per month. The panel is representative of the adult population in the UK in terms of age, gender and region. It is a continuous tracker interviewing respondents every day of the year, but not a continuous set of the same panel members.

The Eating Out Panel interviewees provided:

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<sup>14</sup> Note that additions to meals such as extra chips might not be recorded by the panel member.

- frequency of eating and drinking out generally and at different times of the day (breakfast, lunch, dinner and snacking)
- full detail of the most recent eating and drinking out occasions
- most recent breakfast, lunch and dinner visits within the last 2 weeks and snack visit on the previous day
- details requested include channel and operator brand, reason for eating out, what was eaten and how much money was spent per head per visit
- In addition to providing data from their existing Eating Out Panel, Lumina Intelligence also conduct 2 bespoke surveys which were:
  - a nationally representative survey of 5,000 parents in the UK to gather information about children's food and drink consumption in the eating out of home sector
  - a survey of 2,000 adults to collect information about drinking in the eating out of home sector on occasions where food is not consumed

All 3 datasets were combined for the 2017, 2018 and 2019 reports.

For 2020, data from Kantar FMCG was used. The service is based on a subset of the main take home panel, made up of 7,500 individuals who use a purpose-built app to input all of their food and drink purchased to be consumed out of the home app collection from a panel of 7500 individuals and collects paid for purchasing, which includes delivery and takeaways brought back into the home. For McDonald's, Burger King, and KFC panellists are shown standard menu items to record their purchases against. For all other outlets, panellists chose from meal type, i.e. burger – beef, burger – chicken. The panel reports on a continuous basis and is demographically representative of the Great British population.

### **Nutrition information for the eating out of home sector**

Nutrition information for the eating out of home sector was previously collected by PHE from businesses and additionally by Lumina Intelligence from company websites. From 2017 a far more comprehensive range of information has been collected, providing a more representative picture of the eating out of home sector compared with 2015. This was further improved upon in 2018 and 2019.

In 2020, nutrition information was collected by Kantar from company websites. PHE did not carry out a separate data collection as this would have been required when businesses were affected by the COVID-19 pandemic.



For the majority of products in the eating out of home sector there is no one-to-one mapping between the nutrition data that was collected and purchases by item. For example, a panellist may say that they had an ice cream in a restaurant, but the type of ice cream is not recorded. As the restaurant has several flavours of ice cream, all of which have different nutrition data, it is not possible to accurately match the nutrition data to the actual ice cream purchased. On other occasions, nutrition data may not be available for a particular operator but is available for the same type of product at similar operators.

As it is not possible to match purchases and nutrition information at product level, the decision was taken from 2018 to move to reporting simple averages using only the nutrition data provided to PHE by businesses (and additionally by Lumina Intelligence). This ensures that nutrition information is correctly ascribed to products and businesses. For 2020, just the nutrition data collected by Kantar FMCG was used.

## **Data cleaning and categorisation**

Before any analysis is carried out on either set of data it is cleaned and categorised.

Cleaning the data involves making several checks and adjustments to the nutrition data to ensure that it is as accurate as possible. This process includes checking the nutrition data of a product to see whether it relates to the product as sold or as consumed, decisions around whether to exclude products based on their sugar content and conversion or dilution factors being applied to some foods and drinks (for squashes and cordials for example).

The commercial datasets used from Kantar FMCG have quality control measures built into their production processes. In addition, PHE has carried out its own quality control checks of all data used and all analyses. These include:

- checking datasets for implausible values, and excluding those from the analysis
- checking the quality of certain variables by cross checking against other variables that show product detail in the datasets, or cross-referencing to other datasets
- specific data checks and questions sent to data suppliers as and when they arise

Products are categorised into one of the sugar reduction categories as described in the table below or classified as a soft drink in scope of the SDIL as set out by HM Treasury. Please refer to Table 1 of the methodology for more information on the categorisation of juice and milk based drinks.

<b>Product category</b>	<b>Category description</b>
Biscuits	All types of sweet biscuits; cereal bars and toaster pastries; breakfast biscuits; rice cakes; gluten free sweet biscuits; in-store bakery products.
Breakfast cereals	All breakfast cereals, for example: ready to eat cereals, granola, muesli, porridge oats, instant porridge, and other hot oat cereals.
Cakes	All types of cakes, ambient and chilled, including cake bars and slices.
Chocolate confectionery	Includes chocolate bars, filled bars, assortments, carob, diabetic and low-calorie chocolate and seasonal products.
Ice cream, lollies and sorbets	All types of ice cream, dairy and non-dairy, choc ices, ice cream-based desserts, milk ice lollies, ice lollies; low fat or low calorie ice cream; sorbet; frozen yogurt.
Morning goods	Includes croissants, crumpets, English muffins, pancakes, buns, teacakes, scones, waffles, Danish pastries, fruit loaves and bagels.
Puddings	All types of ambient, chilled and frozen large and individual pies, tarts and flans, cheesecake, gateaux, dairy desserts, sponge and rice puddings and seasonal products such as mince pies.
Sweet confectionery	Includes boiled sweets, gums, pastilles, fudge, chews, mints, rock, liquorice, toffees, chewing gum, sweet popcorn, nougat and halva, seasonal products.
Sweet spreads and sauces	Includes chocolate spread, peanut butter, ice cream and dessert sauces, dessert toppings and compotes, jam type spreads that do not fall under relevant legislation.
Yogurts and fromage frais	Includes all sweetened dairy and dairy alternative yogurt and fromage frais products and all yogurts containing low or non-caloric sweeteners.

At the same time, work has also been undertaken to determine which products can be included in the analysis of calories per single serve products. These products, which are likely to be consumed by an individual on a single occasion, have been identified for each category (except for breakfast cereals and sweet spreads and sauces) to study the distribution of calories per portion. A description of the types of products included in the portion size analysis is provided in the table below. Items sold both individually and in multipacks have been considered.

<b>Product category</b>	<b>Single serve items</b>
Biscuits	Includes: Biscuit and cereal bars, including two-finger Kit Kats, Penguin bars, etc mini bags ( $\leq 80g$ ) of biscuits, chocolate mallows, rice cakes large biscuits (for example giant custard cream) and individual cookies up to 80g

<b>Product category</b>	<b>Single serve items</b>
	<p>packets of 3 biscuits (for example short bread, bourbons), toaster pastries</p> <p>Excludes: all products below 10g or above 80g (for example roll packs, packet biscuits, large packs of rice cakes), selection and assortment boxes, boxes of cookies.</p>
Cakes	<p>Includes: single portions or slices of cake products, and single serve items in multipacks</p> <p>Excludes: all products below 10g (for example 'bitesize' products) or above 150g (for example large whole cakes, pies, tarts, Swiss rolls), small whole cakes marketed for sharing occasions.</p>
Chocolate confectionery	<p>Includes: individual chocolate bars (sold as single items or part of multi packs) (<math>\leq 80\text{g}</math>) mini and treat size bags (<math>\leq 80\text{g}</math>) duo, trio and bar and half chocolate chocolate lollipops single seasonal items (<math>\leq 80\text{g}</math>) (for example chocolate bunnies, Santa's or eggs)</p> <p>Excludes: all products below 10g or above 80g (for example moulded chocolate bars or slabs, sharing bags), boxes or tins of chocolate, seasonal products sold as multiple miniature items (for example chocolate coins, Christmas tree decorations, advent calendars).</p>
Ice cream, lollies and sorbets	<p>Includes: miniature ice creams, ice cream in a cone or on a stick, lollies, choc ices, ice cream or sorbet cups or tubs (<math>\leq 120\text{g}</math>)</p> <p>Excludes: all products exceeding 120g.</p>
Morning goods	<p>Includes: morning goods sold as single items or single serve items in multipacks</p> <p>Excludes: all products below 10g (for example 'bitesize' products) or above 150g; all pancakes and small waffles (people generally consume more than one); finger buns.</p>
Puddings	<p>Includes: individually wrapped puddings, puddings in multipacks (for example 2 pack sticky toffee puddings)</p> <p>Excludes: all products below 35g (for example 'bitesize' products) or above 200g, patisserie or party selections.</p>
Sweet confectionery	<p>Includes: lollipops, tubes and packs of sweets (<math>\leq 100\text{g}</math>) multipacks where individual items are less than or equal to 100g</p> <p>Excludes: all products below 10g or above 100g, products sold in pellets or pieces, wafers or cones.</p>

<b>Product category</b>	<b>Single serve items</b>
Yogurts and fromage frais	Includes: yogurts between 100 and 200g Excludes: all products below 100g or above 200g.

## **Analysis**

For retailers and manufacturer branded products, 3 metrics have been calculated for each product and category, where possible, using the most recent data. These are: sales weighted averages (SWA) of total sugar content (g per 100g); simple averages of the total sugar content of products sold; and calories in products likely to be consumed in a single occasion (single serve). The value for 2020 is then compared with the baseline year (2015 for all categories apart from cakes and morning goods where a 2017 baseline is used, due to poor data quality in 2015) and a percentage change between the years is calculated. This is done for the whole category, as well as for manufacturers and retailers individually. In addition, an estimate has been made of the total tonnes of sugar sold and of how this is split between the different sugar categories included in the programme.

For retailers and manufacturer branded drinks in scope of the SDIL, the SWA and simple average total sugar content and calories in products likely to be consumed on a single occasion have been calculated for each of the different levy categories (less than 5g per 100ml, 5g or more but less than 8g per 100ml and 8g or more per 100ml) and overall for the most recent year of data available. As with the food categories, these have been compared with the 2015 data and a percentage change calculated. In addition, an analysis by socioeconomic group has been conducted.

For the eating out of home sector, the simple average total sugar content and calories per serving for products sold have been calculated. These have been compared with the data available for 2017 (the baseline for the eating out of home sector) and percentage changes have been calculated. The data has been presented alongside the simple average for the retailers and manufacturer branded products to provide some context.

The simple average total sugar content of products sold have also been used to look at the drinks included in the SDIL which are purchased in the eating out of home sector. As for retailers and manufacturer branded products, the 3 different categories of the levy have been presented in addition to the percentage change.

For both sectors, the proportion of products meeting the maximum calorie guidelines has been calculated for 2020.

This analysis for assessing progress in juice and milk based drinks, detailed further down in Appendix 2, is broadly the same.

Several supplementary tables have also been produced. For retailers and manufacturer branded products these include:

- an overview of the category (Appendix Table 1)
- a table looking at the change in SWA total sugar content for those manufacturers and retailers that make up the majority of the market share (80%) for each category (Appendix Table 2)
- an equivalent table for calories for products likely to be consumed on a single occasion (Appendix Table 3)
- the SWA of sugar content and nutrient changes for the top 20 brands (based on total tonnes of sugar sold) by category (Appendix Table 4)
- the average of calories per portion for the top 30 products (based on total servings sold) by category (Appendix Table 5)

For the eating out of home sector, due to the limitations of the data, only 1 supplementary table has been produced. This looks at the change in simple average total sugar content and calories per single serving for the top 10 businesses (based on total tonnes of sugar sold, Appendix Table 6).

Monitoring the change per single serving is more appropriate than monitoring averages expressed in g per 100g or 100ml or calories per 100g or 100ml, because averages per 100g or 100ml will not pick up any reformulation work which was solely based on reducing product size.

This is best explained by using an example. Consider a product which weighs 50g and contains 10g of total sugar and 200 kcals, equating to a sugar and calorie content per 100g of 20g and 400 kcals respectively. If it was reformulated solely by reducing the product size to 40g and reducing the sugar and energy content proportionately to 8g of sugar and 160 kcals, then the averages per 100g remain at 20g of sugar and 400 kcals so it would appear as if no progress had been made. This change, however, would be picked up in the analysis of calories per single serve portion.

## **Product category-specific considerations and exceptions**

### **Breakfast cereals and sweet spreads and sauces**

Both categories have been excluded from the analysis of calories per single serve. This is because no standard portion sizes have been set for these categories, as consumers take multiple servings from individual packs and it is not possible to measure single portions from these.

### **Cakes and morning goods**

Volume of sales of cakes and morning goods in the Kantar FMCG dataset are generally presented in terms of portions or servings and information on portion size is not routinely available for many products. To estimate sugar content (g per 100g) for many products in these categories the portion size is needed and must be collected through fieldwork in retail stores. Kantar FMCG conducted these exercises in 2017, 2018, 2019 and 2020. In 2019, a particular emphasis was placed on collecting the weights of more seasonal products. In 2020, fewer seasonal products were weighed as it was not possible to carry out fieldwork throughout the year due to restrictions relating to the COVID-19 pandemic. Cake mixes have been excluded from the analysis as nutrition information is predominantly provided 'as sold', which skews sugar content in the category towards the higher end.

Information on the difficulties associated with collecting data on cakes and morning goods was mentioned previously and an explanation given for why 2020 data in this category is compared with 2017 as the baseline.

### **Ice creams, lollies and sorbets**

Analysing the nutrient data for ice creams, lollies and sorbets is more problematic than it is for some other categories covered by the programme. This is because the nutrition information given on pack for these products can be expressed as either grams of total sugar per 100 ml or grams of total sugar per 100g, rather than always being stated as grams of total sugar per 100g (as it is for the other categories). Some businesses may add air to their products which makes the total sugar content lower when expressed per 100ml than per 100g. Therefore, an adjustment needs to be made to ensure comparisons are on a like-for-like basis.

The analysis included for ice creams, lollies and sorbets in the year 1 progress report was based on the year 1 (2017) dataset and used conversion factors to change any on pack nutrition information per 100ml to per 100g. The conversion factors went some way to accommodate the different types of ice cream by using different factors for soft scoop or premium ice cream for example, but there were some concerns expressed from stakeholders about the accuracy of this process.

This process was modified for the year 2 report. The nutrition information was used as provided on pack regardless of whether it was expressed per 100g or per 100ml. While this was a more simplistic method it did allow the sugar content of ice cream, lollies and sorbets to be tracked over time as long as the ratio of products where this information is in ml or grams stayed roughly constant over time.

However, in the 2018 (year 2) Kantar FMCG dataset there were more products with nutrition information expressed in millilitres (around 30% of all ice cream products) than there were in 2015 (around 10%). This was primarily due to the data provider changing from using nutrition information per 100g as the default if it was provided in both units in 2015 and 2017 to using nutrition information per 100ml as the default in 2018.

If this was not adjusted for it would give a misleading comparison and may lead to an artificial decrease in sugar content in products over the analysis period, which would reflect the shift to more products having their nutrition information expressed as grams of total sugar per 100ml, rather than any real reduction in sugar content.

This change was adjusted for by scaling up the influence of the nutrition information expressed per 100ml in 2015 and 2017 (by weighting) and scaling down the influence of the information expressed per 100g for the same years, so it matches as much as possible the distribution of products in 2018.

For 2019 (year 3) and 2020 (year 4) this process has evolved further to help increase the accuracy of reporting in this category. This has been achieved by:

1. Scaling factors (proportion of grams (g) vs millilitres (ml) products in 2019 used to weight previous year's data to enable comparability):
  - a. In the year 2 report, these were only created at an overall level for sugar and calories and applied to all data at a manufacturer, retailer and business level when presenting more granular data.
  - b. In the year 3 report ([Sugar reduction: Report on progress between 2015 and 2019](#), 2020b) onwards, separate scaling factors are created for manufacturer or retailer and business level tables to ensure sales are not falsely inflated or deflated at a more granular level.
2. Applying scaling factors to simple average calculations:
  - a. In the year 2 report, simple averages were calculated by dividing the sum of the ice cream products sugar per 100g value by the sum of the scaling factors derived from the proportion of ice cream sales in g vs ml, that is, the calculation was using sales data which should only be adjusted for

when calculating SWA not simple average. This approach was aiming to adjust the simple average calculations to reflect the changing proportion of g vs ml products throughout the years, but rather than adjusting for the count of products in g vs ml, instead adjusted for the sales of these products.

- b. In the year 3 report onwards, a count-specific weight (created at an overall, manufacturer vs retailer, and business level as per point 1 above) has been created for the simple average calculations, based on the ratio of the count (not sales) of ice creams products measured per 100g vs per 100ml, and the following weighted mean formula is used to calculate the simple average: *Weighted mean = sum( X \* weight) per sum(weight)*.

### 3. Conversion factors (single serve analysis specific):

- a. In the year 2 report, to calculate per serving information of ice cream products, per 100g or 100ml nutrition information and pack weight was used and the standard approach used for all other categories. However, due to ice creams being measured in both g and ml a problem would arise if a product's nutrition information was in g, but its pack size was in ml or vice versa, and per serving information would be calculated using a mix of units which resulted in less accurate per serving values.

4. In the year 3 report onwards, to reduce the number of products with a g vs ml discrepancy, the first step was to attempt to use the pack weight information in a product's description field as this would sometimes contain the pack weight value in both g and ml. Then to enable products with nutrition information in g and pack size in ml or vice versa to be used in the single serve analysis and have more accurate single serve values, conversion factors would have been applied to the per 100 nutrition information to convert from g to ml or ml to g ensuring the nutrition information unit matched the pack weight unit. Conversion factors were derived based on the ice cream subcategory defined by Kantar, and from previously used conversion factors produced for the year 1 report in addition with cross-checking products online to ensure accuracy.

A further issue for ice cream is that there was an error with how nutrition information was labelled on Häagen-Dazs ice cream in 2015 and therefore data for this brand from that year cannot be used. As a result, any comparisons made for this range of products uses the 2017 data as a baseline and comparisons are made against this.



## **Puddings**

Quick-set jellies, powdered desserts and custards have been excluded from the analysis for the pudding category because nutrition information is predominantly provided 'as sold', which skews sugar content in the category towards the higher end. Some products from this category are also part of the weighing exercise Kantar FMCG undertake each year (for more information on this please see the sections on cakes and morning goods). It should also be noted that the weighing exercise for 2019 included more seasonal products meaning that mince pies were included in the analysis for the first time. This has had an impact on results in this category and these have been noted throughout the report. In 2020, fewer seasonal products were weighed as it was not possible to carry out fieldwork throughout the year due to restrictions relating to the COVID-19 pandemic, but this will not have had a major impact on mince pies as the Christmas period at the end of 2019 will not have been affected.

A small number of products in this category are also part of the weighing exercise for cakes and morning goods which was explained earlier. Therefore, the business level analyses presented in Appendix Tables 2 and 3 for puddings also contains an additional column to show the results excluding mince pies so users of this report can make a more valid comparison.

## **Soft Drinks Industry Levy**

Where nutrition information for dilutable fruit squashes has been provided 'as sold' (assumed for squash products with more than 12.5g sugar per 100g), this has been converted to nutrition information 'as consumed' by dividing by a factor of 5 to account for dilution. The cut off of 12.5g and dilution factor were agreed by examining the nutrition information and dilution instructions for a sample of products online.

## **Chocolate and sweet confectionery**

Chocolate and sweet confectionery has been excluded from analysis of the eating out of home sector due to the data between the 2 years not being comparable. This is because the nutrition information collected in 2017 and 2020 was from different businesses which resulted in misleading results for the category as a whole.

## **Yogurts and fromage frais**

Some errors are known to be present in the nutrition information for certain products such as implausible sugar content. Yogurts and fromage frais is the only category where a minimum sugar content of 3.8g per 100g was agreed due to the naturally occurring lactose present; all products with a sugar content lower than this have been excluded from the analysis. Natural yogurts and unsweetened yogurts are excluded from the category and,

therefore also excluded from the analysis. In this progress report, sugar content, sugar SWAs and simple averages for yogurts are presented without any adjustment for lactose.

This current report provides an assessment of the changes in milk based drinks for the first time. This also includes an analysis of changes in fermented (yogurt) drinks, which are a subset of the yogurt and fromage frais category.

Yogurts and fromage frais has been excluded from analysis of the eating out of home sector due to the data between the 2 years not being comparable. This is because the nutrition information collected in 2017 and 2020 was from different businesses which resulted in misleading results for the category as a whole.

### **Aldi & Lidl**

As reported in the year 1 progress report, it was not possible to report on progress for Aldi and Lidl due to lack of baseline data. Data is now available for these retailers for 2017 and 2020 and therefore progress reported for these retailers and their products will compare year 1 (2017) with year 4 (2020).

### **Milk based drinks**

The sugar allowances for milk based drinks vary by category as detailed in Table 2.

**Table 2: Sugar allowances for milk based drinks by category**

<b>Category</b>	<b>Sugar allowance per 100ml</b>
Pre-packed milk based drinks Milkshake powders, syrups and pods (as consumed) Open cup milkshakes (eating out of home sector)	5.2g
Coffee and tea powders, syrups and pods (as consumed)	1.5g
Hot chocolate and malt powders, syrups and pods (as consumed)	2.8g
Pre-packed fermented (yogurt) drinks	3.8g
Open cup hot or cold milk based drinks (eating out of home sector)	3.8g
Pre-packed milk substitute drinks	2.0g

When calculating the percentage change from baseline (2017) to year 2 (2020) a similar calculation takes place so the percentage change in added sugar content is compared and not total sugar. For example, for pre-packed milk based drinks, 5.2g sugar is removed from both the baseline and year 1 sales weighted average sugar per 100ml values before calculating the percentage difference between these values.

The milk based drinks categories for the eating out of home sector contain a combination of cow's milk and milk substitute products within the same categories. Therefore, an average sugar allowance was created for these categories which may vary between baseline and subsequent years depending on the ratio of cow's milk to milk substitute products included in the analysis.

The following is an example of applying sugar allowances to an eating out of home sector category which contains a combination of cow's milk and milk substitute products to calculate percentage reduction guidelines.

The example is based on the open cup milkshake category:

1. For the guideline reduction to be based on added sugar rather than total sugar, an average sugar allowance needs to be calculated which is then removed from the baseline (2017) simple average total sugar per 100ml value. This allowance is specific to each year's dataset (as the category may have differing proportions of cow's milk vs milk substitute products for example 60:40 in baseline vs 70:30 in year 2) and is calculated by summing the product specific sugar allowances (5.2g for cow's milk products and 2.0g for milk substitute products) and dividing by the number of products in the category.
2. For example, using a hypothetical category with 30 cow's milk products and 20 milk substitute products, the average sugar allowance would be:  $((30 * 5.2) + (20 * 2.0))$  per 50 = 3.9g sugar per 100ml. This allowance is then removed from the category's baseline simple average sugar per 100ml value, which for this example is 10g per 100ml:  $10 - 3.9 = 6.1$ g added sugar per 100ml.
3. The 20% reduction guideline for added sugar is then calculated by reducing the baseline added sugar value (6.1g per 100ml) by 20% to give 4.9g per 100ml ( $6.1 * 80\% = 4.9$ ). This is the guideline for added sugar.
4. To obtain the guideline value for total sugar, 3.9g sugar (the average sugar allowance) is added back in to give 8.8g per 100ml ( $4.9 + 3.9 = 8.8$ ).

When calculating the percentage change from baseline (2017) to year 2 (2020) a similar calculation takes place so the percentage change in added sugar is compared as opposed to total sugar. This requires the average sugar allowance for the category in the year 2 dataset to be calculated as in step 1. This allowance is then removed from the year 2 simple average sugar per 100ml value before calculating the percentage difference between these values. For example, if there was a 70:30 split of cow's milk to milk substitute products in year 1, the average sugar allowance for year 1 would be 4.2g sugar per 100ml  $((70 * 5.2) + (30 * 2.0))$  per 100 = 4.2g.

## **Data limitations for food categories**

### **Retailers and manufacturer data**

The data received from Kantar FMCG is based on a survey sample. Consequently, there is a degree of uncertainty present in the results calculated but there are no confidence intervals associated with the estimates so the statistical significance of the changes cannot be assessed.

Kantar FMCG's fieldworkers enter stores to collect nutrition information on a rolling 4-month basis but this does not update all products in the dataset each time. This means that some reformulation changes may not be picked up and reported on in the year that they occur.

### **Eating out of home sector data**

Only simple averages are published due to problems linking purchases and nutrition data, as explained previously. Comparisons between year 1 (2017) and year 4 (2020) should also be treated with caution due to differing numbers and profile of products included in each year's analysis.

## **Data limitations for juice and milk based drinks**

The sugar allowance values for milk based drinks (both for retailers and manufacturer branded product data and the eating out of home sector data) are specific to the category, rather than the product, as the sugar allowance values at the product level to inform the calculations were not available. However, these allowances were established in collaboration with relevant trade bodies and industry therefore are as accurate as possible.

### **Retailers and manufacturer branded products**

For the powders, syrups and pods milk based drinks category, there is an assumption that the consumer will make the product according to the manufacturer's instructions, with the exact ratio of powder, syrup or pod to milk, and that they will be using the type of milk stated in the instructions, for example semi skimmed milk. This category cannot accurately have sales information adjusted to 'as consumed' values because of limitations in the dataset meaning that simple average reduction ambitions are used as opposed to sales weighted average.

### **Eating out of home sector**

For open cup milk based drinks there is an assumption that the drink will be made identically to the drink on which the nutrition information is calculated, with the same ratio

of each ingredient used. There is also the assumption that the consumer does not add additional ingredients, for example sugar or milk after they have received the drink.

Data quality and availability of the data for the eating out of home sector has improved from baseline to year 2 meaning there are a larger number of drinks included in the year 2 analysis than at baseline. These drinks could have existed at baseline, but if their nutrition information was not available to PHE at this time they would not be included in the analysis. This should be considered when comparing results between baseline and year 2.

Further detail on the limitations of this data are available in the technical guidelines ([Sugar reduction guidelines for industry: juice and milk based drinks, 2018b](#)).

## **Quality assurance**

As previously mentioned, the commercial datasets used from Kantar FMCG have quality control measures built into their production processes and the data has also been cleaned by PHE. In addition to this, the analysis has been independently replicated and business specific results have been examined to ensure they are plausible and comparable.

Specific data checks and questions were sent to data suppliers as and when they arose where there were anomalies or other queries over the collection of certain variables or the viability of data collection from certain outlets.

## **Impact of changes in sales on sales weighted averages**

The SWA total sugar g per 100g and calories for products likely to be consumed on a single occasion presented in this report are determined by either the sugar or calorie content respectively, and the volume of sales of each product expressed in tonnes. The sales volume determines the contribution (or weight) each product makes to the overall sugar or calorie SWA. Therefore, a top selling product would make a higher contribution to the SWA than a lower selling product. It is also the case that an increase in sales of a product with a higher sugar content relative to other products can cancel out any contribution of the reduction in the sugar content of that product to the change in the SWA.

This is demonstrated by the following example: consider there are 3 chocolate confectionery products A, B and C, which have the following sales (in tonnes of product sold) and sugar content per 100g in periods 1 and 2 respectively.

The table shows that between the 2 periods there was an increase in sales for product A of 35% and a decrease in sugar content for product A of 4%.

	Period 1		Period 2		Change	
Product	Sales (tonnes)	Sugar (g per 100g)	Sales (tonnes)	Sugar (g per 100g)	Sales (%)	Sugar (%)
A	1,000	50	1,350	48	35	-4
B	500	30	500	30	0	0
C	100	20	100	20	0	0

The impact on the SWA sugar per 100g is as follows:

$$SWA = \frac{\sum sales \times sugar}{\sum sales}$$

$$SWA \text{ in period 1} = \frac{(1000 \times 50) + (500 \times 30) + (100 \times 20)}{(1000 + 500 + 100)} = 41.9 \text{ g/100g}$$

$$SWA \text{ in period 2} = \frac{(1350 \times 48) + (500 \times 30) + (100 \times 20)}{(1350 + 500 + 100)} = 41.9 \text{ g/100g}$$

This example shows that even though product A has been reformulated to contain less sugar, the overall SWA sugar content in g per 100g across the 3 products has remained the same. This is because sales for product A have increased and product A has a higher sugar content than products B and C. Overall this increase in sales has cancelled out the impact of the decrease in sugar content in product A.

In other words, even though product A has less sugar in period 2, there are more high sugar products in total sold in period 2 than in period 1.

Whilst this is a theoretical example designed to show the impact of a change in sales, the results in this report have been impacted in this way.

As seen in the results section in Figure 2, there was a decrease of 0.4% in the SWA total sugar per 100g for chocolate confectionery. However, Figure 19 showed there has been an increase of 1.4 percentage points in the proportion of total sales that are chocolate confectionery. Therefore, when looking at the overall change for all categories, as chocolate is a relatively high sugar product, this increase in sales will offset some of the reduction in total sugar content per 100g for chocolate.

This can also work the other way around if the proportion of products sold that have low sugar content decreases over time. Between 2015 and 2020, there was a decrease of 0.6 percentage points in the proportion of sales from breakfast cereals, so some of the 14.7%

reduction in SWA total sugar per 100g for breakfast cereals will be nullified when looking at the average across all categories. This is because breakfast cereals in general have lower sugar content than the average of all categories included in the analysis.

The impact of the shift in sales of different categories of products on the overall SWA for all categories combined between 2015 and 2020 has been estimated as follows.

The average (mean) sugar content of each food product was weighted by its total sales volume in weight (kilogrammes) to give more influence to products with higher sales. The following calculation was performed for all products to produce the overall SWA sugar per 100g in each of 2015 and 2020.

$$SWA = \frac{\sum sales \times sugar}{\sum sales}$$

The ideal way to unpick the impact of the change in sales would be to do the same calculation but use sales data from 2015 to weight the 2020 nutrition information, i.e. hold sales constant at 2015 levels. However, this is not possible as some products in the 2015 dataset will have been discontinued so will not have any 2020 nutrition information, and some products in the 2020 dataset will have been introduced since 2015 and will therefore not have a 2015 sales volume.

Therefore, it is necessary to do this calculation at category level and apply 2015 category level volume sales to both 2015 and 2020 SWAs for each category.

The formula used to calculate the SWA for 2015 is as follows.

$$SWA_{2015} = \frac{\sum (Sales_{2015 \text{ Brk crls}} \times SWA_{2015 \text{ Brk crls}}) + \dots + (Sales_{2015 \text{ Yog}} \times SWA_{2015 \text{ Yog}})}{\sum (Sales_{2015 \text{ Brk crls}} + \dots + Sales_{2015 \text{ Yog}})}$$

The formula for 2020 is similar but uses 2015 volume sales to weight the 2020 nutrition information, i.e. it holds the sales at 2015 levels.

$$SWA_{New2020} = \frac{\sum (Sales_{2015 \text{ Brk crls}} \times SWA_{2020 \text{ Brk crls}}) + \dots + (Sales_{2015 \text{ Yog}} \times SWA_{2020 \text{ Yog}})}{\sum (Sales_{2015 \text{ Brk crls}} + \dots + Sales_{2015 \text{ Yog}})}$$

The percentage change given by holding sales at 2015 levels will then be:

$$\left(\frac{SWA_{2020}}{SWA_{2015}} - 1\right) \times 100$$

However, as the SWA2020 value will be different to the value published in this report (because the calculation is done at category rather than product level), it is also important to see what the SWA2020 value would be if it was calculated using 2020 category level sales. i.e.

$$SWA\ Old_{2020} = \frac{\sum(Sales_{2020\ Brk\ crls} \times SWA_{2020\ Brk\ crls}) + \dots + (Sales_{2020\ Yog} \times SWA_{2020\ Yog})}{\sum(Sales_{2020\ Brk\ crls} + \dots + Sales_{2020\ Yog})}$$

The impact of the change in sales between 2015 and 2020 can then be seen by looking at the difference in the percentage change in SWA between the 2 measures calculated using category level sales. This is given by:

$$\left(\left(\frac{SWA\ New_{2020}}{SWA_{2015}} - 1\right) \times 100\right) - \left(\left(\frac{SWA\ Old_{2020}}{SWA_{2015}} - 1\right) \times 100\right)$$

This analysis showed that the impact of the change in sales between 2015 and 2020 at category level had deflated the change in SWA sugar g per 100g by 2.9% points. This implies that the quoted reduction in SWA sugar g per 100g between 2015 and 2020 of 3.5% could be around 6.4% if sales had remained at 2015 levels.

As the calculation is performed at category and not product level then this method only gives an approximate measure of the impact of the change in sales on the change in SWA between 2015 and 2020.

This is because all products within the same category are treated as having the same sugar content as the sales weighted average for all products in that category. In other words, no distinction is made between high and low sugar products within a category.



# Appendix 3: Case studies

## Data collection

As is the case in previous reports, OHID acknowledges that not all reformulation progress will be captured in the data used to assess progress in this year 4 report. In May 2021, businesses were therefore invited to submit case studies with supporting quantitative data for each of the sugar reduction categories included in their portfolio and soft drinks which are monitored as part of the Soft Drinks Industry Levy across 2 specific time periods. The quantitative data was required to include portion size changes (in grams) and the total energy (kcalper100gkcal per 100g) and sugar content of products (g per 100g) before and after the reformulation process.

Through the submission of case studies, OHID was aiming to enable businesses to highlight the success of any reformulation activity not captured in the datasets. This can be used as evidence to demonstrate progress towards the 20% sugar reduction ambition which was due to be achieved by 2020.

The time periods covered by this year 4 report are:

- between year 3 and year 4 (9 September 2019 to 9 September 2020), and post year 4 (9 September to 31 December 2020) for food categories and SDIL
- Pre-baseline (prior to 10 September 2017), between year 1 and year 2 (9 September 2019 to 6 September 2020), and post year 2 (7 September 2020 to end February 2021) for juice and milk based drinks

## Data received

Following the requests made, in scope information was received from 26 businesses:

- 2 out of home businesses, 5 retailers and 19 manufacturers.
- 4 businesses reported reformulation in both food categories and juice and milk based drinks, 17 businesses reported on reformulation in food categories, 5 businesses reported on juice and milk based. No businesses reported reformulation under SDIL.

The narrative and supporting quantitative data for each of the case studies was reviewed by 3 OHID nutritionists. The narrative was revised and edited by OHID only so that the information submitted from all businesses would be presented in a standard format. No calculations were performed by OHID on the supporting data received. All sales weighted

averages, simple averages, percentages and sugar tonnage figures used in the case studies were provided by the relevant business.

Some case studies referenced products that were scheduled to launch either as new products, or as a relaunch of an existing product following reformulation, in 2019 to 2020. While these actions may now have been completed, it was agreed that the narrative for both these instances would continue to be described as being achieved in the future as this is how the data was presented when first submitted to OHID such as “In 2021 xx products will be reformulated” and “In 2021, xx products are scheduled to launch”.

Where businesses included more than 1 product within a category, the sugar content of products before and after reformulation was declared as ranges where possible, for example “the sugar content ranging from 8g to 10g sugar per 100g before reduction, compared with 6g to 8g sugar per 100g after reduction”

One case study is defined as any products reformulated within one category, by a business. If the product is further reformulated in a later time period, this is not counted as an additional case study.

## **Excluded case studies**

24 studies were not included on the following basis:

- duplications where reformulation was originally presented in the year 1 and year 2 sugar reduction progress report
- where there was limited, or no, data supplied to support the case study information
- information that was submitted for products that fall outside of the categories which form part of the OHID sugar reduction programme or outside of the dates specified in this report

OHID is responsible for monitoring the reformulation progress for products which are covered by the Soft Drinks Industry Levy, so case study information relating to these products were included in the report where they met the relevant criteria.

## **Case study checks by business**

As the information to be presented in the report was revised from what was submitted, 26 businesses were invited to review their case studies ahead of their inclusion in the report. A non-response was considered as approval for the information to continue to be included in the report if sufficient data was provided.

Of those contacted:

- 8 businesses confirmed they were happy for the standardised case study information to be included in the report
- 1 business did not respond but had not provided sufficient data for inclusion, so this case study was excluded
- 17 businesses responded to request revisions were made to how the information was presented

General updates or other changes requested were not actioned. There were no businesses that declined to have their case study information included in the report.

## Summary of data presented

A total of 55 case studies across 25 businesses are included below.

### 1. Aldi UK

Category	Details (9 September 2019 to 31 December 2020)
Breakfast cereals	In April 2020, Harvest Morn Clusters were reformulated, reducing the sugar content of Honey Nut and Chocolate varieties by 22% from 23g to 17.9g sugar per 100g and by 27% from 30g to 22g sugar per 100g, respectively. In December 2020, Harvest Morn Frosted Flakes were reformulated, reducing the sugar content by 13.7% from 25.8g to 22.5g sugar per 100g.

### 2. Azzurri (Zizzi)

#### Foods & SDIL

Category	Details (9 September 2019 to 31 December 2020)
Ice cream	<p>Between October and December 2019, Zizzi's Silver Pail's gelatos were reformulated reducing the sugar content by an average of 10%. The recipe of 6 ice creams have been reformulated (strawberry, chocolate, vanilla, honey and vegan gelato, and lemon and strawberry sorbets), reducing the sugar content across these products from 7 to 12g sugar per serving before reformulation, compared with an average of 6.3 to 10.8g sugar per serving after reformulation. Further reformulation aims to reduce this average to 7.84g sugar per serving across the range.</p> <p>Zizzi will conduct further reformulation to reduce the sugar content by 20% in 2022 on their bestselling adult and children's desserts.</p>

#### Juice and milk based drinks

Category	Timeframe	Details
Juice based drinks	9 September 2019 to 6 September 2020	In January 2020, Benson's orange juice, lemonade and apple juice were reformulated reducing the sugar content of all three juices from 5.3g to 4.9g sugar per 100ml.

### 3. Baker & Baker

Category	Details (9 September 2019 to 31 December 2020)
Cakes	From September 2019, Baker & Baker launched a new range of branded muffins with 21% less sugar than the previous range. This was achieved through both reformulation and a reduction in product size. The average sugar content was reduced from 31.7g to 25g sugar per serving. The average calorie content of the range was also reduced, from 459 kcals to 372 kcal per serving, which equates to a 19% reduction.

### 4. Bidfood

Category	Details (9 September 2019 to 31 December 2020)
Cakes	Three recipes from the Everyday Favourites cake range (carrot, coffee & walnut and Victoria sponge) reduced their sugar content through reformulation and a reduction in portion size. This delivered a 31.7% reduction in sugar per 100g and 11% reduction in calories per serving. The sugar content on average reduced from 35.5g to 23.8g sugar per 100g, and from 462 kcals to 416 kcals per serving.
Puddings	Five recipes from the Everyday Favourites gateau range (whole and pre-cut coffee and mandarin, whole and pre-cut triple chocolate and pre-cut chocolate orange) were reformulated achieving a 18.7% reduction in sugar per 100g and 13% reduction in calories per serving. The sugar content on average reduced from 24.7g to 20g sugar per 100g. This was due in all cases to a reduction in sugar content, and in the case of the chocolate orange gateau cake, to a reduction in portion size.

### 5. Caffé Nero

Category	Timeframe	Details
Milk based drinks	9 September 2019 to 6 September 2020	<p>In 2019, the syrups used in iced milk based beverages were reformulated achieving an average sugar reduction of 20% across the range.</p> <p>In April 2020, the vanilla milkshake recipe was reformulated reducing the sugar content from 15g to 12g sugar per 100ml, and the calories from 241 kcals to 208 kcals per serving.</p>

## 6. Califia Farms

Category	Timeframe	Details
Milk based drinks	Pre-baseline (prior to 10 September 2017)	Both the Mocha Noir Cold Brew Coffee with almond drink and Mocha Cold Brew with almond drink were reformulated. The sugar content of the Mocha Noir Cold Brew Coffee and Mocha Cold Brew Coffee reduced from 4.4g and 5.8g sugar per 100ml before reformulation, compared with 3.7g and 4.9 sugar per 100ml after reformulation, respectively. The sugar content was reduced through removing coffee flavourings. This also delivered a reduction in calories from 112 kcals to 103 kcals per serving for the Mocha Noir Cold Brew Coffee, and a reduction from 96 kcals to 87 kcals per serving for the Mocha Cold Brew Coffee.

## 7. Danone

Category	Details (9 September 2019 to 31 December 2020)
Yogurts	<p>In October 2019, Danone reduced the sugar in its Activia Breakfast Topper Honey through reformulation and delisting the products containing the highest level of sugar in the range. The average sugar content was reduced from 14.1g to 11g sugars per 100g, which equates to a 22% reduction. As part of this reformulation the cereal topper fibre content was increased from 0.7g to 1.95g fibre per 100g.</p> <p>In July 2020, Danone began to reformulate their Actimel kids range to reduce sugars by 24% from 11.2g sugar per 100g to 8.5g sugar per 100g. This delivered a calorie reduction from 74 kcal per serving to 62 kcal per serving.</p>

## 8. De-Vau-Ge

Category	Details (9 September 2019 to 31 December 2020)
Breakfast cereals	<p>In February 2020, Harvest Morn Golden Puffs were reformulated reducing the sugar content from 21g to 20.8g sugar per 100g. This delivered a reduction from 370kcal to 343kcal calories per 100g.</p> <p>In November 2020, Harvest Morn's Choco Pillows were reformulated reducing the sugar content from 24g to 21.5g sugar per 100g. This delivered a reduction from 453kcal to 423kcal calories per 100g.</p>

## 9. Friesland Campina

Category	Timeframe	Details
Milk based drinks	Pre-baseline (prior to 10 September 2017)	In 2015 to 2016, a new line of no added sugar Yazoo flavoured milk drinks was launched containing less sugar than the standard range. Sweetness was enhanced by using lactose reduced milk only and not by adding artificial sweeteners. The sugar content across the range reduced from 9.6g to 4.6g sugar per 100ml. This delivered a reduction in calories from 120 kcals to 92 kcals per serving (200ml).
	9 September 2019 to 6 September 2020	Between September 2019 and September 2020, Yazoo flavoured milk drinks were reformulated reducing the sugar content from 9.6g to 8.7g sugar per 100ml.

## 10. Froneri

Category	Details (9 September 2019 to 31 December 2020)
Ice cream	<p>In January 2020, Froneri launched Rowntree's Fruit Stack Ice Lolly which is a lower sugar product containing 16g of sugar per 100g.</p> <p>In October 2020, Rowntree's Orange Push Up Ice Lolly was reformulated reducing the sugar content by 8% from 13.1g to 12g sugar per 100g. It also delivered a calorie reduction of 5%, from 77 kcal to 73 kcal per serving. The overall sugar content of this product was reduced and fructose was added to replace the sweetness.</p>

## 11. General Mills

Category	Details (9 September 2019 to 31 December 2020)
Cakes	In 2020, Fibre One reformulated 4 of its brownies, including the bestselling Chocolate Fudge Brownie. The sugar content of this product was reduced by 33%, from 30.5g to 20.3g sugar per 100g. This delivered a reduction in calories from 87 kcals to 83 kcal per serving and has been accompanied by an increase in fibre of 18%, from 21.4g to 25.3g fibre per 100g.

## 12. Haribo

Category	Details (9 September 2019 to 31 December 2020)
Sweet confectionery	Between October and December 2020, Haribo launched Fruitifest to extend its range of reduced sugar options. The new product contains 32g sugar per 100g, compared to 42g to 70g sugar per 100g in Haribo's standard products. Fruitifest also contains 5g fibre per 25g serving.

## 13. Innocent

Category	Timeframe	Details
Juice based drinks	9 September 2019 to 6 September 2020	<p>In March 2020, Innocent made the following changes to their products. Innocent reduced the sugar in its Super Smoothie range through both reformulation and a reduction in product size. The sugar content was reduced by 6% compared to the previous range. Portion size reduction from 360ml to 300ml resulted in an overall reduction in the calories per serving by 22% so that all products provide less than 180 kcal per serving (150ml). Cacao (360ml) was removed as an option and Blue Spark (300ml) was launched that has 18% less sugar per 100ml and 27% less calories per serving (150ml).</p> <p>The Innocent Shots range was launched being the lowest in sugar and smallest serving size (100ml) across their range, containing 7.7g sugar per 100ml and 36 kcal per serving.</p> <p>The average serving size of Innocent Kids Smoothies was reduced from 180ml to 150ml. This delivered a reduction of 92 kcals to 76 kcal per serving which equates to a 17% reduction in both sugar and calories per serving (150ml).</p>



<p>Post September 2020 (7 September 2020 to end February 2021)</p>	<p>In September 2020, Innocent launched a new innocent plus recipe that has 12% less sugar (8.3g sugar per 100ml compared with 9.4g sugar per 100ml in the standard innocent plus range), and 2 super smoothie recipes for kids that have 14% less sugar (8.7g sugar per 100ml compared with 10.1g sugar per 100ml in the standard innocent kids range). Both products provide 60 kcal or less per serving. Vitamin D and iron have been added to both recipes and the kids super smoothie is also fortified with iron.</p> <p>In February 2021, Innocent reformulated their original smoothie range, reducing the sugar content by 4.4% from 11.3g to 10.8g sugar per 100ml.</p> <p>In February 2021, Innocent also launched 2 super smoothie light recipes (berry &amp; tropical) that have 30% less sugar (7g sugar per 100ml compared with 10g sugar per 100ml in the standard range), and a reduction in calories from 83 to 56 kcal per serving (150ml). The sugar content was reduced through selecting fruits that naturally contain less sugar and adding a small amount of water.</p>
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#### 14. Jordans Dorset Ryvita

Category	Details (9 September 2019 to 31 December 2020)
<p>Breakfast cereals</p>	<p>In October 2019, Dorset Cereals reformulated 8 muesli recipes reducing their sugar content from an average of 18.1g to 15.8g, equating to a total sugar reduction of 21% SWA since 2015. This reduction was achieved by removing the small number of ingredients containing added sugars and reducing the use of fruits with a higher sugar content.</p> <p>Jordans has been reformulating to reduce the sugar content of its products since 2012. Between September 2019 and August 2020, Jordans continued to reformulate their baked cereals which resulted in a 4% reduction in sugar content from a SWA of 19.2g to 18.5g sugar per 100g, equating to a total sugar reduction of 14% SWA since 2014.</p>

## 15. Lactalis Nestle Chilled Dairy

### Foods & SDIL

Category	Details (9 September 2019 to 31 December 2020)
Puddings	In April 2020, Milkybar Little Treats were reformulated reducing the sugar content by 21% from 18.3g to 14.4g sugar per 100g. Calories per serving were reduced by 22% and the portion size was reduced from 60g to 55g.
Yogurts	In November 2020, Munch Bunch Squashum Fruit Yogurts were reformulated reducing the sugar content from 11.8g to 9.5g sugar per 100g. This delivered a 20% reduction in sugar per 100ml and an 11% reduction in calories per serving.

### Juice and Milk Based Drinks

Category	Timeframe	Details
Milk based Drinks	9 September 2019 to 6 September 2020	In November 2019, Munch Bunch Squashums Drinky Strawberry was reformulated reducing the sugar content from 12.7g to 10.7g sugar per 100g. This delivered a 15% reduction in sugar per 100g and a 12% reduction in calories per serving.
	Post September 2020 (7 September 2020 to end February 2021)	In October 2020, Munch Bunch Squashums Drink Strawberry was further reformulated reducing the sugar content from 10.7g to 8.8g sugar per 100g. This delivered a 18% reduction in sugar per 100g and a 4% reduction in calories per serving.

## 16. Lidl

Category	Details (9 September 2019 to 31 December 2020)
Breakfast cereals	<p>In August 2020, a new Low Sugar Granola, containing 2.9g sugar per 100g, was launched.</p> <p>Between September and November 2020, 9 breakfast cereals (Cereal Crunch Honey, and Chocolate, Cereal Crisp Assorted Strawberry, and Maple and Pecan, Crunchy Oat Granola Raisin and Almond, and Tropical, Special Muesli Fruit and Nut, and Swiss Style No Added Sugar and Original) were reformulated, reducing the sugar content by 3 to 28%. The sugar content across the products reduced from 17.1g to 27.9g sugar per 100g before reformulation, compared with 11.9g to 25.1g sugar per 100g after reformulation.</p> <p>Also in September 2020, 2 breakfast cereals (Premium Muesli Assorted Berries and Cherries, and Really Nutty) were reformulated, achieving a 2% and 11% reduction, reducing the sugar content from 39g and 21.5g sugar per 100g before reformulation, to 38.3g and 19.1g sugar per 100g after reformulation, respectively.</p> <p>Between September to December 2020, 2 Super Fruit and Nut Granola in Super Nutty and Super Berry flavours were reformulated reducing the sugar content by 7% and 8%, respectively. The sugar content reduced from 19.7g and 21.5g sugar per 100g before reformulation to 18.4g and 19.8g sugar per 100g after reformulation, respectively.</p>
Biscuits	<p>In November 2019, Wild Berry Strawberry Jaffa Cakes were reformulated reducing the sugar content by 15% from 55g to 47g sugar per 100g.</p> <p>From January to July 2020, Ginger Nuts and Toffee Hitz biscuits were reformulated achieving a 19% and 9% reduction in sugar, respectively. The sugar content reduced from 34g and 37.5g sugar per 100g before reformulation to 27.5g and 34.1g sugar per 100g after reformulation, respectively.</p> <p>In March 2020, 3 Bake Cookie Assortment flavours were reformulated achieving a 21% to 25% reduction in sugar. The Double Chocolate, Triple Chocolate and White chocolate flavours reduced from 41.1g, 40.4g and 42.8g sugar per 100g, respectively, before reformulation, to each containing 32g of sugar per 100g after reformulation.</p> <p>In May 2020, Chocolate Ginger Biscuits were reformulated reducing the sugar content by 5% from 41.9g to 39.8g sugar per 100g.</p>
Cakes	<p>Between September 2019 and January 2020, 6 cake recipes (Chocolate and Vanilla, and Vanilla Madeira Jumbo Cake, Lemon, and Marble Foil Wrapped Cake, Angel cake and Walnut cake) were reformulated, reducing the sugar content by 0.3% to 20%. The sugar content across the products reduced from 28g to 37.9g sugar per 100g before reformulation, compared with 27.9g to 34.8g sugar per 100g after reformulation. The pack size of the Angel cake was also reduced from 298g to 250g.</p>

	<p>In November 2019, Mini Marzipan Butter Stollen was reformulated reducing the sugar content from 31.5g to 30.5 sugar per 100g.</p> <p>In December 2019, (Lidl's) Confiserie Firenze's Chocolate Cake was reformulated reducing the sugar content by 5% from 24.3g to 23.1g sugar per 100g.</p> <p>In February 2020, the recipe of 3 (Lidl) Deluxe Cakes were reformulated (Hand Finished Carrot, Coffee and Walnut, and Chocolate Cake), achieving a 2-23% sugar reduction across products. The sugar content reduced from 33.6g to 40.7g sugar per 100 before reformulation, compared with 31.5g to 33g sugar per 100g after reformulation. The pack size of the Indulgent Cupcake Platter was also reduced from 768g to 753g.</p> <p>In May 2020, Chocolate Mini Rolls were reformulated reducing the sugar content by 9% from 45g to 41g sugar per 100g.</p>
Chocolate confectionery	<p>In May 2020, Caramel Minis and Chocolate Coated Peanuts in Shell were reformulated, achieving a 5% and 7% sugar reduction across both products, respectively. The sugar content reduced from 60g and 60.3g sugar per 100g before reformulation, compared with 57g and 56.2g sugar per 100g after reformulation, respectively. The pack sizes of Caramel Minis and Coconut Minis were reduced from 350g to 250g.</p>
Ice cream	<p>In September 2019, 3 ice cream recipes (Vanilla, Praline &amp; Cream and Strawberry Cheesecake) were reformulated, achieving 9% to 11% sugar reduction across the products. The sugar content of the products reduced from 16.95g to 21.9g sugar per 100g before reformulation, compared with 15.5g to 19.5g sugar per 100g after reformulation.</p>
Morning goods	<p>In February 2020, Toasting Waffles were reformulated reducing the sugar content by 16% from 33g to 27.6g sugar per 100g.</p> <p>In March 2020, Pain Aux Raisin and Chocolate Hazelnut Croissant were reformulated reducing the sugar content by 8% and 29%, from 20.1g and 17.8g sugar per 100g before reformulation, compared with 18.4g and 12.7 sugar per 100g after reformulation, respectively. The product weight of the Chocolate Hazelnut Croissant and the Pain Aux Raisin were also reduced from 83g and 106g before reformulation, to 78g and 97g after reformulation, respectively.</p>
Puddings	<p>Between September 2019 and December 2020, 4 Cheesecakes (Strawberry, Blackcurrant, Toffee and Lemon) and two Desserts with Cream (Double Choc and Double Toffee) were reformulated, achieving 11% to 25% sugar reduction across the products. The sugar content of the products reduced from 14g to 26g sugar per 100g before reformulation, compared with 12g to 20.6g sugar per 100g after reformulation.</p> <p>In December 2019, Triple Chocolate Gateau was reformulated reducing the sugar content by 2% from 24.3g to 23.8g sugar per 100g.</p> <p>In April and May 2020, both the Bramley Apple Pies and Cherry</p>

	<p>Bakewell's were reformulated, achieving a 19% and 2% sugar reduction, respectively. The sugar content of the products reduced from 32g and 35.3g sugar per 100g before reformulation, compared with 25.9g and 34.6g sugar per 100g after reformulation, respectively.</p> <p>In December 2020, Sticky Toffee Pudding was reformulated reducing the sugar content by 16% from 37g to 31.2g sugar per 100g.</p>
Sweet spreads and sauces	<p>Between October and November 2019, Crunchy and Smooth Peanut Butter were reformulated reducing the sugar content by 12% and 38%, from 7.6g and 10.6g sugar per 100g before reformulation, to 6.7g and 6.6g sugar per 100g after reformulation, respectively. Duo Chocolate Hazelnut Spread and Chocolate Hazelnut Spread were also reformulated, reducing the sugar by 21% and 13%, from 56.9g and 51g sugar per 100g before reformulation, to 45g and 44.6g sugar per 100g after reformulation, respectively.</p>
Yogurts	<p>In September 2019, 10 yogurts were reformulated (Coconut and Vanilla, Lemon, and Strawberry Fat Free Greek Strawberry, and Rhubarb Proviact, Proviact Fat Free Peach, and Cherry, Stracciatella Assorted Yogurts and Honey, and Coconut Greek Yogurt with Flavouring) reducing the sugar by 2% to 22%, from 6.7g to 17.2g sugar per 100g before reformulation, to 5.2g to 13.6g sugar per 100g after reformulation.</p> <p>In October 2020, the sugar in Fromage Frais Fruit Tubes (multiflavoured pack) was reduced through both reformulation and a reduction in product size. The portion size was reduced from 40g to 37g, and the average sugar content was reduced by 28%, from 13.9g to 10g sugar per 100g.</p>

## 17. Nestle

### Food and SDIL

Category	Details (9 September 2019 to 31 December 2020)
Biscuits	<p>In June 2020, Kit Kat 2 Finger was reformulated reducing the sugar content by 3% from 51g to 49.4g sugar per 100g. The sugar content was reduced through replacing some of the sugar in the wafer with heat-treated flour. This reformulation equates to the removal of 271 tonnes of sugar from the UK diet per year.</p>
Chocolate confectionery	<p>In June 2020 all variants of the Kit Kat 4 Finger, and Kit Kat Chunky, were reformulated reducing the sugar content by 3%. The sugar content of all variants of the Kit Kat 4 Finger reduced from 51g to 49.4g sugar per 100g. The average sugar content of the Kit Kat Chunky reduced from 52.8g to 51.3g sugar per 100g. This reformulation equates to the removal of 240 tonnes of sugar from the UK diet per year.</p> <p>In December 2020, Smarties were reformulated reducing the sugar content by 4.5% from 65.8g to 62.8g sugar per 100g. This also delivered a 3% reduction in calories per serving. This reformulation equates to the removal of 160 tonnes of sugar and 790 million calories from the UK diet per year.</p>

## Juice and Milk Based Drinks

Category	Timeframe	Details
Milk based drinks	Pre-baseline (prior to 10 September 2017)	<p>In 2014, Nescafé Original 3 in One Coffee Mix was reformulated, reducing the sugar content by 15% from 5.4g to 4.6g sugar per 100g.</p> <p>In 2016, Nescafé Café Menu Double Choca Mocha was reformulated, reducing the sugar content by 6% from 5.2g to 4.9g sugar per 100g.</p>
	9 September 2019 to 6 September 2020	<p>In September 2019, Nescafé launched three low sugar Gold Lattes (Almond, Oat and Coconut) which contain 2.4g sugar per 100ml and an average of 64 kcals per serving. The sugar content was partially reduced through using a dairy free, vegan creamer which contains no lactose.</p> <p>In October 2019, Nescafé Dolce Gusto Marrakesh Style Tea Pods, and 3 Latte Macchiato Pods (Original, Vanilla and Caramel) were reformulated, reducing the sugar content by 8% to 30% from 3.6g to 4.7g sugar per 100ml before reformulation, to 3.1g to 3.5g sugar per 100ml after reformulation.</p> <p>In December 2019, Nescafé Original 3 in One and 3 in One Caramel were reformulated, reducing the sugar content by 4% to 9% from 4.6g and 4.7g sugar per 100ml before reformulation, to 4.4g and 4.3g sugar per 100ml after reformulation, respectively. This reformulation equates to the removal of around 60 tonnes of sugar and 500 million calories from the UK diet per year.</p> <p>Between December 2019 and June 2020, 3 flavours of Nestlé's Professional Nescafé Gold &amp; Go range (Latte, 3 in 1, Cappuccino Decaf Unsweetened Taste) were reformulated, reducing the sugar content by 8 % to 23%, from 2.5g to 3.8g sugar per 100ml before reformulation, to 1.4g to 3.5g sugar per 100ml after reformulation.</p> <p>In January 2020, Nesquik launched their All Natural Chocolate Milkshake Powder which contains 6.5g sugar per 100ml.</p> <p>In June 2020, Nescafé Dolce Gusto Nesquik Hot Chocolate Pods and Aero Hot Chocolate Powder were reformulated, reducing the sugar content by 5% and 14% from 5.8g and 5.9g sugar per 100ml before reformulation, to 5.5g and 5.1g sugar per 100ml after reformulation,</p>

Category	Timeframe	Details
		<p>respectively.</p> <p>In June 2020, 3 Nestlé Professional Hot Chocolates (Aero, Milano and Nestlé) were reformulated, reducing the sugar content by 7% to 22%, from 5.9g to 10.4g sugar per 100ml before reformulation, to 4.6g to 9.7g sugar per 100ml after reformulation.</p> <p>In June 2020, Nescafé reformulated 11 flavours of their Gold Frothy Coffees (Mocha, Cappuccino, Cappuccino Unsweetened Taste, Cappuccino Decaf Unsweetened Taste, Latte, Cappuccino Decaf, Double Chocolate Mocha, Vanilla Latte, Caramel Latte, Toffee Nut Latte and Irish Latte), reducing the sugar content by 5% to 34%, from 1.7g to 5.3g sugar per 100ml before reformulation, to 1.6g to 4.9g sugar per 100ml after reformulation. This reformulation equates to the removal of over 500 tonnes of sugar and 2.5 billion calories from the UK diet per year.</p>
	Post September 2020 (7 September 2020 to end February 2021)	In January 2021, Nescafé launched 3 low sugar plant based Dolce Gusto Flat White Coffees (Coconut, Oat and Almond) which contain 0.4g to 1.2g sugar per 100ml. The sugar content was reduced through using a dairy free creamer which contains no lactose.



## 18. Pepsico

Category	Timeframe	Details
Juice based drinks	9 September 2019 to 6 September 2020	<p>The sugars in all Naked products are naturally occurring sugars and not added. In Quarter 2 of 2020, Naked launched their Zing smoothies range which had an average of 8.9g sugars per 100ml. The three new flavours, Mango, Tropical and Strawberry, contain 8.4g, 9.8g and 8.5g sugars per 100ml, respectively. At the same time, Naked reformulated Green Machine and Mango Machine smoothies reducing the sugars from 11g and 9.6g sugars per 100ml before reformulation, respectively with both products containing 8.6g sugars per 100ml after reformulation. This achieved an 18kcal and 12kcal per serving reduction, respectively. Overall, the portfolio achieved a 11% reduction in SWA sugars per 100g.</p> <p>In Quarter 1 of 2020, Naked delisted Protein Pomegranate that contained 13g sugars per 100ml.</p>
	Post September 2020 (7 September 2020 to end February 2021)	<p>In Quarter 4 of 2020, Naked delisted both their Lean Peach and Ginger (5.7g sugars per 100ml) smoothie and their product with the highest level of sugars, Tropical Punch (14g sugars per 100ml).</p>

## 19. Pladis

Category	Details (9 September 2019 to 31 December 2020)
Biscuits	<p>In January 2020, McVitie's reformulated nine biscuits (Rich Tea, Digestives, Milk and Dark Chocolate Digestives, Milk Chocolate Caramel, Hobnobs, Milk and Dark Chocolate Hobnobs, and Ginger nuts) reducing the sugar content across the range by 2.2% to 10.2%, from 16.6g to 33g sugar per 100g before reformulation, compared with 15.1g to 32.3g sugar per 100g after reformulation. This reformulation equates to the removal of over 900 tonnes of sugar from the UK diet per year.</p>
Cakes	<p>In September 2020, McVitie's reformulated their Blackcurrant Jaffa Cake Bars, reducing the sugar content by 10.2% from 47.2g to 42.4g sugar per 100g.</p>

## 20. Premier foods

Category	Details (9 September 2019 to 31 December 2020)
Biscuits	In December 2020, Kipling launched 30% reduced sugar Viennese Whirls containing 17.6g sugar per 100g, compared with 26.5g sugar per 100g in the standard Viennese Whirls. The sugar content was reduced by developing a no-added-sugar cream.
Puddings	In January 2020, Ambrosia launched a new Light 30% less sugar and fat Devon Custard that has 33% less sugar than the standard custard (7.4g compared with 11g sugar per 100g). The sugar content was reduced through replacing some of the sugar with starch.

## 21. Sainsbury's

Category	Details (9 September 2019 to 31 December 2020)
Ice cream	In 2020, Sainsbury's began reformulating a number of their ice cream and lolly recipes which were scheduled for launch in Spring 2021. For example, Vanilla Ice Cream tubs (900ml) were reformulated, reducing the sugar by 15% from 19.9g sugar per 100g to 16.9g per 100g. The Sainsbury's Indulgent Milk Chocolate Ice Creams (4x110ml) and Fruit Spiral Lollies (5x70ml), were reformulated, reducing the sugar by 20% and 38%, from 28.6g and 19.6g sugar per 100g before reformulation, to 22.7g and 12.1g sugar per 100g after reformulation, respectively. The sugar content of the Vanilla Ice Cream and the Fruit Spiral Lollies was reduced through replacing bulk sugar with glucose syrup. The sugar content of the Indulgent Milk Chocolate Ice Creams was reduced through using fructose and milk solids.

## 22. Tesco

Category	Details (9 September 2019 to 31 December 2020)
Breakfast cereals	In March 2020, Tesco's Choco Snaps Cereal was reformulated reducing the sugar from 32.1g to 27.4g sugar per 100g, which equates to 14.7% reduction per serving (30g).
Biscuits	In February 2020, Tesco's Milk Chocolate Digestives were reformulated reducing the sugar content by 2% from 25g to 24.5g sugar per 100g. This reformulation equates to the removal of 200 million calories per year.
Ice cream	In September 2019, Tesco reformulated five flavours of their 3 Pack Ice Cream Sticks recipes, reducing the average sugar content by 15.2%, from 27.94g to 23.68g sugar per 100g. The sugar content was reduced through making the chocolate coating thinner and increasing the aeration of the ice cream.
Morning goods	In November 2020, Tesco's Plain and Sultana Scones were reformulated reducing the sugar content by 26% from 20.2g to 14.85g sugar per 100g. The sugar content was reduced through reducing the amount of sultanas and added sugar in the recipe.
Puddings	In September 2019, Tesco Finest 6 All Butter Pastry Deep Filled Mince Pies were reformulated, reducing the sugar content on average by 2.61% from 38.3g to 36.2g sugar per 100g. This delivered a 12kcal reduction per serving. The sugar content was reduced and lemon and orange zest, tangerine oil and brandy levels were increased to balance the flavour.
Yogurts	In January 2020, Creamfields Low Fat Berry Medley Yogurts were reformulated reducing the sugar content by 12% from 10.9g to 9.57g sugar per 100g. This delivered a 17% reduction in calories.

## 23. The Collective

Category	Details (9 September 2019 to 31 December 2020)
Yogurts	Between October to December 2020, the portion size of Kefir Vanilla and Kefir Coconut Yogurts reduced from 150g to 133g, which achieved a reduction in calories from 149kcal and 162kcal per serving before reformulation, to 132kcal and 144kcal per serving after reformulation, respectively. Across both products, this delivered a 4.8% reduction in calories per serving.

## 24. Unilever

Category	Details (9 September 2019 to 31 December 2020)
Ice cream	Between October 2019 and June 2020, Magnum Mint and Almond Ice Creams were reformulated, reducing sugar by 9% to 10%, from 21g to 23g sugar per 100ml before reformulation, to 19g to 21g sugar per 100ml after reformulation.
Biscuits	Between Quarter 4 of 2019 and Quarter 3 of 2020, Graze reformulated their cereal bar range, including five Oat Boosts recipes (Cocoa Orange, Banana, Honey, Lemon and Blueberry and Cocoa Vanilla), as well as their Lively Lemon Flapjack, reducing sugar by 32% to 60% across these products, from 20.3g to 29.3g sugar per 100g before reformulation, to 9.8g to 16.7g sugar per 100g after reformulation. The sugar reduction was facilitated through the use of chicory root, which provides natural sweetness.

## 25. Waitrose

### Foods & SDIL

Category	Details (9 September 2019 to 31 December 2020)
Breakfast cereals	In November 2019, Waitrose Essential Cornflakes was reformulated, reducing the sugar content by 7.6% from 6.6g to 6.1g sugar per 100g. The sugar content was reduced through removing dextrose. The salt content was also lowered by 13%.  In February 2020, Waitrose Essential Multigrain Hoops were reformulated, reducing the sugar content by 8.2% from 17g to 15.6g sugar per 100g.
Biscuits	In July 2020, Waitrose Essential Shortcake Biscuits were reformulated, reducing the sugar content by 8.65% from 18.5g to 16.9g sugar per 100g.
Chocolate confectionery	In May 2020, Waitrose reformulated two chocolate bar recipes, Dark Chocolate with Hazelnuts, and with Raisins and Almonds, reducing the sugar content from 38.9g and 46.1g sugar per 100g before reformulation, to 35.7g and 43.2g sugar per 100g after reformulation, respectively. The portion size was also reduced from 200g to 180g.
Puddings	In November 2019, Waitrose Essential Custard was reformulated, reducing the sugar content from 10.8g to 10.2g sugar per 100ml. This reformulation equates to the removal of 552 kg of sugar per year.

## Juice and Milk Based Drinks

Category	Timeframe	Details
Juice based drinks	9 September 2019 to 6 September 2020	In November 2019, Waitrose Essential Chilled Cranberry Juice Drink (1L) was reformulated, reducing the sugar content from 2.4g to 1.1g sugar per 100ml. The sugar content was reduced through removing grape juice. This reformulation equates to the removal of 5871kg of sugar per year.

# **Appendix 4: Stakeholder engagement March 2021 to March 2022**

This brief update forms part of the regular updates on the reduction and reformulation programme, which includes the main actions that PHE, and more recently OHID, have taken forward covering the period from 1 March 2021 until the end of March 2022. Proactive stakeholder engagement with businesses has been put on hold during the COVID-19 pandemic and government has only met with businesses at their request. Next steps have also been included for the salt and calorie reduction and reformulation programmes, and the forthcoming guidelines for commercial baby food and drinks.

Stakeholder engagement during this period has been more limited than usual due to the COVID-19 pandemic and the challenges experienced by the food and drink industry in response to social distancing restrictions. The timeframe also covers the transition period of this work from PHE to OHID, which further limited engagement with stakeholders.

## **List of stakeholder engagement March 2021 to March 2022**

### **Manufacturers**

Bakkavor Desserts

Ella's Kitchen Organic

Innocent

Jordans Ryvita Dorset Cereals

KIND

Mars Food UK

PepsiCo

Weetabix

### **Out of Home, takeaway and delivery businesses**

Just Eat

KFC

Mitchells and Butlers

Subway

**Trade associations**

British Retail Consortium

British Specialist Nutrition Association Limited

Cereal Partners Worldwide

Food and Drinks Federation

**Non-governmental organisations**

Action on Salt and Sugar

Obesity Health Alliance

OHID have requested data to contribute to an assessment for the drinks in scope of the sugar reduction programme and the SDIL, and those included in the calorie and salt reduction progress reports that are due for publication in 2022.

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