

**Project Code**

**FSS/2020/057**

**August 2021**

**ESTIMATION OF FOOD  
AND NUTRIENT INTAKES  
FROM FOOD PURCHASE  
DATA IN SCOTLAND**

**2001-2018**

**Authors**

**Karen L Barton<sup>1</sup>**

**Catriona Ronald<sup>1</sup>**

**Advised by**

**Anne Savage<sup>2</sup>**

<sup>1</sup>Division of Engineering and Food Science,  
and <sup>2</sup>Division of Health Sciences,  
School of Applied Sciences,  
Abertay University,  
Bell Street,  
Dundee  
DD1 1HG



## Acknowledgements

The authors would like to acknowledge the contribution of Dr Anne Savage (statistician) and Food Standards Scotland staff, in particular Alana McDonald and Gillian Campbell, and thank them for their support and guidance throughout the project.

The authors would also like to thank the staff of Defra, York for their invaluable help with interpreting the food data of the Living Costs and Food Survey (LCFS), in particular Andrew Scaife and David Lee. In addition, we thank the staff at the Office for National Statistics (ONS), Newport, Wales for their assistance in providing data on sampling and income variables, in particular Paul Bloomfield, Lyndsey Williams, and Jo Bulman.

This work was carried out using LCFS data from the UK Data Archive, University of Essex (<http://www.data-archive.ac.uk/>). Additional variables on sampling and income were provided by ONS.

# Executive Summary

## **Introduction**

In 2016, Revised Dietary Goals for Scotland were published, updating the 2013 Scottish Dietary Goals. These goals encompassed recommendations for intakes of both foods and nutrients, the same as the 2013 goals for energy, energy density, fruit and vegetables, oily fish, red meat, total fat, saturated fat, trans fatty acids, and salt. The goal for sugar as non-milk extrinsic sugars (NMES) was changed to *free sugars* and reduced; the goal for fibre as non-starch polysaccharides (NSP) was changed to *AOAC fibre* and increased; and a new goal was added for total carbohydrate based on recommendations from the Scientific Advisory Committee on Nutrition (SACN).

Progress towards the goals is monitored using a combination of surveys, but principally via secondary analysis of the Living Costs and Food Survey (LCFS) data from 2001 to 2018, following the endorsement of the 2004 Working Group Report on Monitoring Scottish Dietary Targets which concluded that it was the most appropriate method for Scotland at that time. The major exceptions to this are energy, trans fatty acids, and salt. LCFS is not used to monitor energy intakes because, as with all dietary intake monitoring, it could be subject to under-reporting. Trans fatty acid intake has been monitored using NDNS, and salt intake is monitored using urinary sodium surveys.

The results presented in this report support work by Food Standards Scotland and the Scottish Government to facilitate improvements to the diet in Scotland to promote health and wellbeing and reduce the levels of overweight and obesity and diet-related disease.

## **Objective**

The purpose of this work was to obtain robust estimates of food consumption and nutrient intakes for 2016, 2017, and 2018 in Scotland in order to continue to monitor progress toward the 2016 Scottish Dietary Goals. Furthermore, the main contributors to intakes of energy, fat, saturated fat, free sugars, and fibre were explored.

## **Methods**

LCFS data for each year, in raw form, were obtained from the UK Data Archive, University of Essex. Data on sampling methodology were obtained from the Office for National Statistics (ONS). Food consumption and nutrient intake in Scotland calculated in the previous reports (covering 2001 to 2015) was updated by the addition of the years 2016, 2017, and 2018. It should be noted that due to changes in the LCFS, these 3 years had a reduced sample size of households compared to previous years, however the sample was still representative of the Scottish population. Adjustments were made to allocate the correct proportion of each food to the appropriate food group and to account for waste. In addition, the contribution that food groupings made to intakes of energy, fat, saturated fat, free sugars, and fibre was also calculated. Data were analysed weighting to the Scottish population and taking account of sampling methods. Results are presented as population means (i.e. including consumers and non-consumers) for household and eating out foods combined.

## Key Findings for 2001-2003 to 2016-2018: Scottish Dietary Goals

- There was little progress towards meeting the 2016 Scottish Dietary Goals over the 18-year period except for a significant decrease in free sugars intake.
- **Energy density** did not change; average energy density is 38% higher than the goal.
- **Fruit and vegetable** consumption did not change; average consumption is 34% lower than the goal.
- **Oil rich fish** consumption did not change; average consumption is 76% lower than the goal.
- **Red and processed meat** consumption decreased; average consumption met the goal.
- **Total fat** (as a percentage of food energy) increased significantly, but **saturated fat** (as a percentage of food energy) did not change; mean intakes of both total and saturated fat remain higher than the goals (40% and 15% respectively).
- **Free sugars** (as a percentage of total energy) significantly decreased; however mean intake remains two and a half times (168%) higher than the goal.
- **Fibre** intake significantly decreased; average intake is 48% lower than the goal.
- **Carbohydrate** intake did not change; average intake is 11% lower than the goal.

## Mean food consumption and nutrient intakes in relation to the Scottish Dietary Goals from 2001-2003 to 2016-2018

|                                                     | 2016 Scottish Dietary Goal                                                             | 2001-2003 | 2016-2018 | Change between 2001-2003 and 2016-2018 <sup>1</sup> | Progress Towards SDG |
|-----------------------------------------------------|----------------------------------------------------------------------------------------|-----------|-----------|-----------------------------------------------------|----------------------|
| <b>Total Energy</b><br>(kcal/day)                   | A reduction in calorie intake by 120 kcal per person per day                           | 2126      | 1893      | ↓                                                   | N/A <sup>2</sup>     |
| <b>Energy density</b><br>(kcal/100g)                | Average energy density of the diet to be lowered to 125 kcal/100g                      | 171       | 172       | No Change                                           | Goal not met         |
| <b>Fruit and Vegetables</b><br>(g/day)              | At least 5 portions per person per day (>400 g/day)                                    | 256       | 265       | No Change                                           | Goal not met         |
| <b>Oil rich fish</b><br>(g/week)                    | Increase to one portion per person (140g) per week                                     | 29        | 33        | No Change                                           | Goal not met         |
| <b>Red Meat</b><br>(g/day)                          | Average intake of red and processed meat to be pegged at around 70g per person per day | 65        | 55        | ↓                                                   | Goal met             |
| <b>Fat</b><br>(% food energy)                       | ≤35% food energy                                                                       | 38.8      | 39.7      | ↑                                                   | Goal not met         |
| <b>Saturated Fat</b><br>(% food energy)             | ≤11% of food energy                                                                    | 15.6      | 15.4      | No Change                                           | Goal not met         |
| <b>Free Sugars</b> <sup>3</sup><br>(% total energy) | ≤5% of total energy in adults and children over 2 years                                | 15.1      | 13.4      | ↓                                                   | Goal not met         |
| <b>Fibre</b><br>(g/day)                             | Increase in average consumption of AOAC <sup>4</sup> fibre to 30g/day                  | 16.4      | 15.6      | ↓                                                   | Goal not met         |
| <b>Carbohydrate</b><br>(% total energy)             | 50% of total energy with no more than 5% total energy from free sugars                 | 45.2      | 44.3      | No Change                                           | Goal not met         |

<sup>1</sup>Based on P-value for linear association ≤0.01; <sup>2</sup>LCFS is not used to monitor energy intakes because, as with all dietary intake monitoring, it could be subject to under-reporting, since energy SDG was introduced in 2013 there has only been a 39kcal/day reduction; <sup>3</sup>Free sugars are sugars added to food or drink and those which are found naturally in honey, syrups, and fruit juices, NMES figures provided as a proxy for free sugars; <sup>4</sup>Fibre as measured by American Association of Analytical Chemists (AOAC) methods, calculated from non-starch polysaccharide (NSP) as measured by Englyst method (AOAC fibre is estimated as NSP multiplied by 1.33).

### **Key Findings for 2001-2003 to 2016-2018: Additional Foods and Drinks Indicative of Diet Quality**

- **Total bread** consumption significantly decreased, however brown/wholemeal bread, high fibre and total breakfast cereal consumption remained fairly constant.
- Consumption of **discretionary foods**<sup>1</sup> such as cakes, sweet biscuits, and confectionery remained fairly constant.
- **Sugar and preserves** consumption significantly decreased from 19g/day to 13g/day.
- **Sugar containing soft drinks** consumption significantly decreased from 245g/day to 138g/day, and consumption of **sugar free soft drinks** significantly increased.
- **Bacon and ham** consumption significantly decreased (from 12g/day to 10g/day), as did **other processed red meat products** (from 29g/day to 26g/day) including **savoury pies** (from 10.0g/day to 8.8g/day).
- **Total spread** consumption significantly decreased (from 16g/day to 13g/day); however, this was due to a reduction in low fat spread consumption as margarine consumption increased and butter consumption remained fairly constant.
- **Cooking oil** consumption significantly decreased from 5.4g/day to 3.3g/day.
- **Total milk** consumption significantly decreased from 248g/day to 196g/day.
- **White fish** consumption significantly decreased from 92g/week to 68g/week.
- **Fresh potato** consumption significantly decreased from 60g/day to 38g/day.
- **Processed potato and savoury snack** consumption did not change.
- **Nut** consumption significantly increased from 2.0g/day to 3.9g/day.

<sup>1</sup>Discretionary foods are foods and drinks that are not required for a healthy diet, including confectionery, cakes, biscuits, pastries, savoury snacks, and sugar containing soft drinks. They should be only eaten occasionally and in small amounts.

### **Key Findings: Contribution of Foods to Intakes of Energy, Fat, Saturated Fat, and Free Sugars**

- **Discretionary foods** that are high in sugar and fat, namely **sweet biscuits; confectionery; crisps and savoury snacks; cakes, pastries and puddings; and sugar containing soft drinks** are significant contributors to energy in the diet. Sweet biscuits and confectionery, in particular, are two of the top five contributors to energy, fat, saturated fat, and free sugars.
- These five food groupings contribute almost 20% of energy, fat, and saturated fat intakes, and more than 50% of free sugars intake.
- In relation to food groupings that contribute more than 5% to energy, fat, saturated fat, and free sugars intake - significant reductions were found between 2001-2003 and 2016-2018 in the percentage contribution of:
  - a. **processed red meat, bread and rolls, and milk** to energy intake.
  - b. **processed red meat, spreading fats, and milk** to fat intake, with **processed red meat** and **milk** also producing significant reductions in the percentage contribution of saturated fat intake.
  - c. **sugar containing soft drinks, sugar, fruit and vegetables, and alcoholic drinks** to free sugars intake.
- Between 2001-2003 and 2016-2018, **sweet biscuits** and **confectionery** contributed less to saturated fat intake and more to free sugars intake, both in terms of absolute weight and percentage contribution.

**Mean contribution of selected discretionary foods and drinks to energy, fat, saturated fat, and free sugars intake in 2016-2018. Values are intake (percentage) per person per day.**

|                              | Weight<br>g | Energy<br>kcal (%) | Fat<br>g (%)       | Saturated Fat<br>g (%) | Free sugars<br>g (%) |
|------------------------------|-------------|--------------------|--------------------|------------------------|----------------------|
| Sweet Biscuits               | 20.4        | 98.1 (5.2)         | 4.8 (5.9)          | 2.4 (7.8)              | 5.6 (8.2)            |
| Total Confectionery          | 22.4        | 98.2 (5.2)         | 4.1 (5.1)          | 2.2 (7.2)              | 13.3 (19.7)          |
| Crisps and Savoury Snacks    | 12.8        | 64.0 (3.4)         | 3.6 (4.4)          | 0.5 (1.5)              | 0.02 (0.02)          |
| Cakes, Pastries and Puddings | 16.2        | 58.6 (3.1)         | 2.7 (3.4)          | 1.1 (3.7)              | 4.3 (6.4)            |
| Sugar Containing Soft Drinks | 138         | 51.3 (2.7)         | Nil                | Nil                    | 13.2 (19.5)          |
| <i>Total</i>                 |             | <i>370 (19.6)</i>  | <i>15.2 (18.8)</i> | <i>6.3 (20.2)</i>      | <i>36.4 (53.8)</i>   |

### **Conclusion**

A robust standardised methodology, used to calculate food consumption and nutrient intakes on a population basis over an 18-year period, has allowed comparisons to be made over time, enabling a clear assessment of any dietary change. As with previous monitoring of the Scottish diet, little change has been found for most of the foods/nutrients monitored since 2001 however, the goal for red and processed meat consumption has been met since 2001 and there has been a significant decreasing trend in free sugars intake which is making some progress towards the goal. This suggests that policies implemented to reduce free sugar intake are taking effect, but mean intake is still more than double the goal, and there is still a long way to go until the goal is reached based on current rates of decline. It is of concern that fibre intake has consistently decreased since 2010 showing movement away from the goal rather than progress towards it. In addition, fruit and vegetable intake has not increased despite numerous policies and campaigns. This is something that needs consideration in future strategies to improve dietary intake. This work continues to be an important part of Food Standards Scotland's dietary surveillance programme.

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## List of Abbreviations Used

|        |                                                       |
|--------|-------------------------------------------------------|
| AOAC   | Association of Analytical Chemists                    |
| Defra  | Department of the Environment, Food and Rural Affairs |
| EFS    | Expenditure and Food Survey                           |
| FSA    | Food Standards Agency                                 |
| FSS    | Food Standards Scotland                               |
| g      | gram                                                  |
| HH     | Household                                             |
| kcal   | kilocalorie                                           |
| LCFS   | Living Costs and Food Survey                          |
| MJ     | Megajoule = 1000 kilojoules                           |
| n      | number                                                |
| NDNS   | National Diet and Nutrition Survey                    |
| NFS    | National Food Survey                                  |
| NMES   | Non-Milk Extrinsic Sugar                              |
| NSP    | Non-Starch Polysaccharides                            |
| ONS    | Office for National Statistics                        |
| P      | People                                                |
| PP     | Per Person                                            |
| PW     | People Weighted                                       |
| SACN   | Scientific Advisory Committee on Nutrition            |
| SDG    | Scottish Dietary Goal                                 |
| SDT    | Scottish Dietary Target                               |
| SHeS   | Scottish Health Survey                                |
| SPSS   | Statistical Package for the Social Sciences           |
| UK     | United Kingdom                                        |
| WRAP   | Waste and Resource Action Programme                   |
| 95% CI | 95% Confidence Interval                               |
| >      | greater than                                          |
| <      | less than                                             |
| %      | percent / percentage                                  |

## Explanatory notes on some terms used in the report

|                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Confidence Interval (CI) and 95% Confidence Interval (95% CI) of the Mean | A range of values that, it is estimated includes a population statistic at a specific level of confidence. The 95% confidence interval (95% CI) of the mean refers to the range of values 2 standard errors above and 2 standard errors below the mean. There is only a 5% chance that this range excludes the true mean of the population. The 95% confidence interval (CI) calculates the region around the mean where the true figure is likely to be. The narrower the confidence interval about the observed mean the more reliable it is.                                                                                                                                                                                                                                                                                                                                             |
| Discretionary Foods                                                       | Foods and drinks that are not required for a healthy diet, including confectionery, cakes, biscuits, pastries, savoury snacks, and sugar containing soft drinks. They should be only eaten occasionally and in small amounts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Fibre                                                                     | Fibre is taken to mean AOAC fibre for the purposes of this report.<br>AOAC Fibre: Dietary fibre measured by methods of the Association of Analytical Chemists, which are widely used by the food industry. AOAC methods of measuring fibre include a larger range of non-digestible material than the Englyst method (non-starch polysaccharide); and it is suggested this larger range should be included in the definition of dietary fibre.<br>NSP Fibre: Dietary fibre measured by Englyst method. Non-starch polysaccharide (cellulose, soluble and insoluble non-cellulose polysaccharides (NCP)); unavailable carbohydrate also includes resistant starch, some other starch and lignin.                                                                                                                                                                                             |
| Food Energy                                                               | The energy obtained from food and drink (excluding alcohol).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Mean                                                                      | The mean intake is calculated by summing all intakes and dividing by the total number of people in the sample. Therefore, it is moderated by the high and/or low consumers. When there are non-consumers in the sample (i.e. those with an intake = 0) the population average must take these into account. The 95% CI calculates the region around the mean where the true figure is likely to be. The narrower the 95% CI of the observed mean the more reliable it is.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Median                                                                    | The median is the middle value of a set of figures, i.e. for an odd number of cases the median is the middle score. For an even number of cases the median is the average of the two middle scores. For normally distributed data the mean equals the median.<br>The interquartile range represents 25% of values either side of the median.<br>Data on food consumption and nutrient intake in a population is not usually normally distributed, some intakes will be very high or very low e.g. vitamin C or oil rich fish. For this reason, it is more meaningful to give median food consumption and nutrient intake and to show interquartile ranges. This allows the proportion of low (e.g. for fruit and vegetables) or high consumers (e.g. for free sugars) to be placed relative to the goal. Due to the nature of the LCFS data it is not possible to produce reliable medians. |
| P-value                                                                   | The probability that a particular statistical measure, such as the mean or standard deviation, of an assumed probability distribution will be greater than or equal to (or less than or equal to in some instances) observed results.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Percentage Food Energy (% Food Energy)                                    | The percentage of food energy (the energy obtained from food and drink (excluding alcohol)) intake derived from a macronutrient i.e. fat, carbohydrate or protein.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Percentage Total Energy (% Total Energy)                                  | The percentage of total energy (the energy obtained from food and drink (including alcohol)) intake derived from a macronutrient i.e. fat, carbohydrate or protein.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Quintile                                                                  | The portion of a frequency distribution containing one fifth of the total sample. For example, the first quintile is the point with 1/5 of the data below it and 4/5 above it.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Significant                                                               | The term significant refers to statistical significance (at the 95% level).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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|                 | It is not intended to imply substantive importance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Sodium          | Sodium chloride is the chemical name for salt. 100 millimoles of sodium is equivalent to the Scottish Dietary Goal of 6g of salt based on SACN advice.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Sugars          | <p>Free sugars: All added sugars in any form; all sugars naturally present in fruit and vegetable juices, purées and pastes and similar products in which the structure has been broken down; all sugars in drinks (except for dairy-based drinks); and lactose and galactose added as ingredients. The sugars naturally present in milk and dairy products, fresh and most types of processed fruit and vegetables and in cereal grains, nuts and seeds are excluded from the definition. The only difference between Non-Milk Extrinsic Sugars (NMES) and free sugars is that NMES includes 50% of the fruit sugars from stewed, dried or canned fruit, but free sugars include none.</p> <p>Non-Milk Extrinsic Sugars (NMES): Sugars, excluding those in milk and milk products that are not incorporated into the cellular structure of foods, such as fruit and vegetables e.g. sugar released from fruit when it is blended or juiced, table sugar, honey and added sugar in cakes, biscuits, sweets, breakfast cereals and soft drinks. NMES includes 50% of the fruit sugars from stewed, dried or canned fruit.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Total Energy    | The energy obtained from food and drink (including alcohol).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| UK Data Archive | The UK Data Archive is a centre of expertise in data acquisition, preservation, dissemination, and promotion and is curator of the largest collection of digital data in the social sciences and humanities in the UK.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Years           | <p>For the purposes of this report, for ease of understanding, dates have been presented in the text as single years:</p> <p>2001 = 2001/2002, which refers to April 2001 to March 2002<br/> 2002 = 2002/2003, which refers to April 2002 to March 2003<br/> 2003 = 2003/2004, which refers to April 2003 to March 2004<br/> 2004 = 2004/2005, which refers to April 2004 to March 2005<br/> 2005 = 2005/2006, which refers to April 2005 to March 2006</p> <p>In 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results. Removing the duplicated quarter from one of the years (2005/2006 or 2006) would have led to a smaller sample for the year in question which may have not been representative and may have been skewed due to seasonal purchases. In 2015, the LCFS moved back from a calendar year to a financial year, however data was still collected for the first quarter of 2015, so 2015 was analysed as a calendar year.</p> <p>2006 to 2015 = refers to Jan to Dec of the year in question</p> <p>In order to aid analysis, subsequent years have been analysed as a financial year with no data from the first quarter of 2016 included in the analysis. Similarly to before, for the purposes of this report, for ease of understanding, dates have been presented in the text as single years:</p> <p>2016 = 2016/2017, which refers to April 2016 to March 2017<br/> 2017 = 2017/2018, which refers to April 2017 to March 2018<br/> 2018 = 2018/2019, which refers to April 2018 to March 2019</p> |
| Periods         | <p>2001-2003 or 1<sup>st</sup> period = 2001/2002 - 2003/2004, which refers to April 2001 to March 2004<br/> 2004-2006 or 2<sup>nd</sup> period = 2004/2005 - 2006, which refers to refers to April 2004 to December 2006<br/> 2007-2009 or 3<sup>rd</sup> period refers to January 2007 to December 2009<br/> 2010-2012 or 4<sup>th</sup> period refers to January 2010 to December 2012<br/> 2013-2015 or 5<sup>th</sup> period refers to January 2013 to December 2015<br/> 2016-2018 or 6<sup>th</sup> period refers to April 2016 to March 2019</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

# 1. Background

## 1.1 The Scottish Dietary Goals

In 1996, Scottish Dietary Targets (SDTs) were set as part of the Scottish Diet Action Plan (Scottish Office, 1996) in response to a report published by the Scottish Office in 1993 which highlighted the need for “radical change in Scotland...to achieve the health targets for 2000” (Scottish Office, 1993). These targets were based on the UK Dietary Reference Values (Department of Health, 1991) for selected nutrients (total fat, saturated fat, salt, sugar as non-milk extrinsic sugars (NMES), and total complex carbohydrates), and also included key foods (fruit and vegetables, bread, breakfast cereals, white fish, and oil rich fish). The baseline figures used in the setting of these targets were derived mainly from the National Food Surveys of 1989-1991 and were an indication of food consumption and nutrient intake at that time. The SDTs were originally intended for achievement in 2005, but the timescale was extended to 2010 (Scottish Executive, 2003, Scottish Executive, 2004).

In 2013, *Revised Dietary Goals for Scotland* were published, updating the previous SDTs to “indicate the direction of travel, and assist policy development to reduce the burden of obesity and diet-related disease in Scotland” and to help to “facilitate improvements in the Scottish diet” (Scottish Government, 2013). These goals encompassed recommendations for intakes of both foods and nutrients, similar to those in the original SDTs regarding fruit and vegetables, oily fish, total fat, saturated fat, NMES, and salt. However, targets for consumption of bread, breakfast cereal and white fish were removed, and goals were added for red and processed meat, energy, energy density, trans fatty acids, and fibre as non-starch polysaccharides (NSP).

Following the publication of the Scientific Advisory Committee on Nutrition (SACN) *Carbohydrates and Health* report in 2015 (Scientific Advisory Committee on Nutrition (SACN), 2015), the Scottish Government further revised the Scottish Dietary Goals in 2016 (Scottish Government, 2016). In these revised goals (Table 1), the definition for sugar was changed from that of NMES to free sugars, and the goal was reduced; the goal for fibre intake was increased and the method for calculating fibre was amended to that developed by Association of Analytical Chemists (AOAC); and total carbohydrate was included as a new goal.

The Public Health England definition of free sugars (Swan *et al.*, 2018) includes: all added sugars in any form; all sugars naturally present in fruit and vegetable juices, purées and pastes and similar products in which the structure has been broken down; all sugars in drinks (except for sugars naturally present in dairy-based drinks); and lactose and galactose added as ingredients. The sugars naturally present in milk and dairy products, fresh and most types of processed fruit and vegetables and in cereal grains, nuts and seeds are excluded from the definition. The only difference between NMES and free sugars is that NMES includes 50% of the fruit sugars from stewed, dried or canned fruit, but free sugars include none (Scientific Advisory Committee on Nutrition (SACN), 2015).

Until the SACN *Carbohydrates and Health* report (Scientific Advisory Committee on Nutrition (SACN), 2015) dietary reference values for fibre intake were based on non-starch polysaccharides (NSP) (measured by Englyst method) (Department of Health, 1991). In 2015, SACN recommended that the method used to calculate fibre content in foods, should be that measured by American Association of Analytical Chemists methods (AOAC) (Scientific Advisory Committee on Nutrition (SACN), 2015), which are widely used by the

food industry. The AOAC methods of measuring fibre include a larger range of non-digestible material than the Englyst method, and it is suggested this larger range should be included in the definition of dietary fibre.

**Table 1: Revised Dietary Goals for Scotland (Scottish Government, 2016)**

|                               |                                                                                                                                                                                                                                                                                             |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Calories</b>               | A reduction in calorie intake by 120 kcal/person/day*<br>Average energy density of the diet to be lowered to 125 kcal/100g by reducing intake of high fat and/or sugary products and by replacing with starchy carbohydrates (e.g. bread, pasta, rice, and potatoes), fruits and vegetables |
| <b>Fruit &amp; Vegetables</b> | Average intake of a variety of fruit and vegetables to reach at least 5 portions per person per day (>400g per day)                                                                                                                                                                         |
| <b>Oily Fish</b>              | Oil rich fish consumption to increase to one portion per person (140g) per week                                                                                                                                                                                                             |
| <b>Red Meat</b>               | Average intake of red and processed meat to be pegged at around 70g per person per day<br>Average intake of the very highest consumers of red and processed meat (90g per person per day) not to increase*                                                                                  |
| <b>Fats</b>                   | Average intake of total fat to reduce to no more than 35% food energy<br>Average intake in saturated fat to reduce to no more than 11% food energy<br>Average intake of trans fatty acids to remain below 1% food energy*                                                                   |
| <b>Free Sugars</b>            | Average intake of free sugars <sup>1</sup> , not to exceed 5% of total energy in adults and children over 2 years                                                                                                                                                                           |
| <b>Salt</b>                   | Average intake of salt to reduce to 6g per day*                                                                                                                                                                                                                                             |
| <b>Fibre</b>                  | An increase in average consumption of AOAC fibre <sup>2</sup> for adults (16+) to 30g/day.<br>Dietary fibre intakes for children to increase in line with SACN recommendations <sup>3</sup>                                                                                                 |
| <b>Total Carbohydrate</b>     | Total carbohydrate to be maintained at an average population intake of approximately 50% of total dietary energy with no more than 5% total energy from free sugars                                                                                                                         |

\*Not monitored using data from the LCFS. <sup>1</sup>Free sugars are all monosaccharides and disaccharides added to foods by the manufacturer, cook or consumer, plus sugars naturally present in honey, syrups, and unsweetened fruit juices. Lactose when naturally present in milk and milk products is excluded. <sup>2</sup>Dietary fibre as measured using AOAC methodology (the association of analytical chemists). <sup>3</sup>It is recommended that the average population intake of dietary fibre for children aged 2 to 5 years should approximate 15g/day, for children aged 5 to 11 years 20g/day, for children aged 11 to 16 years 25 g/day and for adolescent aged 16 to 18 years about 30g/day.

## 1.2 Monitoring Progress towards the Scottish Dietary Goals

Progress towards the goals is monitored using a combination of surveys (Scottish Government, 2016), with the secondary analysis of the Living Costs and Food Survey (LCFS, known as the Expenditure and Food Survey (EFS) before 2008) as the primary means of monitoring from 2001 to 2018, following the endorsement of the Working Group Report on Monitoring Scottish Dietary Targets who concluded that it was the most appropriate method for Scotland (Food Standards Agency in Scotland, 2004) at that time. Other surveys that collect data on dietary intake include the Scottish Health Survey (SHeS) (McLean and Wilson, 2020) and the UK National Diet and Nutrition Survey (NDNS) (Bates *et al.*, 2014b, Bates *et al.*, 2016, Roberts *et al.*, 2018, Bates *et al.*, 2020), however neither survey currently provides annual data suitable for monitoring the goals. Food Standards Scotland (FSS) commissioned a pilot of Intake24 in the 2018 SHeS (Rowland *et al.*, 2020) with the view to using this as part of their dietary surveillance programme moving forward to monitor progress towards the SDGs and other dietary change in Scotland. Intake24 is being included as part of the 2021 SHeS, with all participants aged 16 and over eligible to take part by completing 2 dietary recalls. FSS also monitor retail purchase and price promotions (Food Standards Scotland, 2020a) and the out of home environment (Quirk *et al.*, 2020) as part of their dietary surveillance programme.

Secondary analysis of the LCFS has monitored trends in population food consumption and nutrient intakes from 2001. Previous reports describe the monitoring of progress towards the SDTs and additional foods and



drinks indicative of diet quality (further foods from the Scottish Diet report (Scottish Office, 1993)) from 2001-2006 (Barton *et al.*, 2010), 2001 to 2009 (Barton and Wrieden, 2012) and energy density (Wrieden and Barton, 2011), 2001-2012 (Wrieden and Barton, 2015) and 2013-2015 (Barton *et al.*, 2018). This current report updates previous reports, with the inclusion of data from 2016, 2017, and 2018, monitoring progress towards the 2016 Scottish Dietary Goals. The major exceptions to this are energy, trans fatty acids, and salt. LCFS is not used to monitor energy intakes because, as with all dietary intake monitoring, it could be subject to under-reporting. Trans fatty acid intake has been monitored using NDNS, and salt intake is monitored using urinary sodium surveys. This report also includes an update of consumption data, for 2001 to 2018, of foods that contribute to energy, fat, saturated fat, free sugars, and fibre in a further report by Barton and Wrieden (2015) and Barton *et al.* (2018).

### **1.3 Monitoring Improvements in the Diets of the Population**

The prevalence of overweight and obesity in adults aged 16 and over in Scotland rose from 62% in 1995 to 66% in 2019, although this high level has remained fairly constant since 2008 (McLean and Wilson, 2020). Scotland continues to have one of the highest prevalence rates of overweight and obesity in Europe (World Obesity Federation, 2018). Obesity increases the risk of non-communicable diseases such as type 2 diabetes, hypertension, cardiovascular disease, certain cancers, and osteoarthritis (World Health Organisation, 2003) which are the leading causes of death and disability in Scotland. In addition, individuals living with obesity are at increased risk of morbidity and mortality from COVID-19 (Popkin *et al.*, 2020).

In 2018, the Scottish Government published *A healthier future: Scotland's diet and healthy weight delivery plan* following a consultation with a wide range of stakeholders regarding proposed actions to improve diet and physical activity in Scotland (Scottish Government, 2018a). The delivery plan sets out how the Scottish Government will work with partners to assist the Scottish population to make healthier food choices and includes five key outcomes: 1. Children have the best start in life - they eat well and have a healthy weight; 2. The food environment supports healthier choices; 3. People have access to effective weight management services; 4. Leaders across all sectors promote healthy weight and diet; and 5. Diet-related health inequalities are reduced. It was partly informed by experience of implementing the Obesity Route Map (Scottish Government, 2010), with progress towards the route map actions monitored through a set of 16 indicators and associated desired outcomes. Secondary analysis of the LCFS was used to monitor the Obesity Route Map indicators of fat, saturated fat, and free sugars intake (Scottish Government, 2018b) and results from this report will allow the Diet and Healthy Weight Monitoring Report to be updated with data to 2018/19 (Scottish Government, 2020).

The importance of improving diet in order to achieve a healthy weight and to tackle obesity rates has been identified as a priority in the Scottish Government's *Healthy Weight Delivery Plan* (Scottish Government, 2018a). Likewise, FSS's *Situation Report: The Scottish Diet: It needs to change, 2020 update* (Food Standards Scotland, 2020b) highlighted the on-going challenge to improve the Scottish diet; including the need to reduce consumption of discretionary foods, tackle price promotions, and improve the out of home eating environment.

In addition, one of the outcomes of the FSS strategy for 2021-2026 *Healthy, Safe, Sustainable: Driving Scotland's Food Future* is that *Consumers Have Healthier Diets* (Food Standards Scotland, 2021). This

strategy outlines how FSS plans for the period of 2021-2026 to achieve these outcomes, through a series of six goals, in particular:

- Goal 3: A research and data science capability which enables us to detect risks, monitor public health trends and consumer behaviours, and translate evidence into action.
- Goal 5: A food environment which empowers consumers to make safe, healthy, and sustainable choice.
- Goal 6: Engage with all parts of society in Scotland; understanding the issues that matter to consumers and providing information that is tailored to their needs.

The results presented in this report will continue to support work by FSS and the Scottish Government to facilitate improvements to the diet in Scotland to promote health and wellbeing and reduce the levels of overweight and obesity and diet-related disease.

## **1.4 Purpose**

The purpose of this work was to obtain robust estimates of food consumption and nutrient intakes for 2016, 2017, and 2018 in Scotland in order to monitor progress towards the 2016 Scottish Dietary Goals and any change in the consumption of additional foods and drinks indicative of diet quality. Results are presented for 2001 to 2018 for the population. In addition, the main contributors to intakes of energy, fat, saturated fat, free sugars, and fibre were explored in order to inform FSS and Scottish Government policy to support people in Scotland to have healthier diets.

## 2. Methodology

### 2.1 Monitoring Scottish Dietary Goals and additional foods and drinks indicative of diet quality

#### 2.1.1 Overview

The methodology reported by Barton *et al.* (2010), Wrieden *et al.* (2014) and Barton *et al.* (2018) (summarised below) was used to calculate mean food consumption, nutrient intake, and energy density from LCFS data for 2016, 2017 and 2018 in order that comparisons could be made with results from previous years. LCFS data for each year, in its raw form, was obtained from UK Data Archive (University of Essex) and the Office for National Statistics (ONS). Population average intakes of foods, nutrients, and energy density relating to the 2016 Scottish Dietary Goals and additional foods and drinks indicative of diet quality, were estimated based on household purchases. Full details on the methodology can be found in Appendix 1, and the advantages and disadvantages of using data from the LCFS are provided in Appendix 2.

#### 2.1.2 Coding Frames and Conversion Factors

The detailed coding frames (Appendix 3 and Appendix 4) used in this analysis were developed previously by Barton *et al.* (2010) and Wrieden and Barton (2011), for both household (includes take-away/delivery) and eating out food purchases. They list foods/drinks (and codes) which form part of each food based dietary goal or food group of interest (Appendix 3) or are included within the food and milk method of calculating energy density (Appendix 4) and provide details of conversion factors applied to the food weights. Conversion factors were applied to food purchases to estimate the actual amount of each food that was consumed. They were applied (to each food code) to estimate the proportion of fruit, vegetable, meat etc. in a composite food; the proportion of food in a food grouping (where it bridges more than one food grouping); to convert a raw to cooked weight (where appropriate); and to account for the proportion of inedible waste. Estimates of edible waste for the UK population published by WRAP (Waste and Resource Action Programme Survey (WRAP), 2008) have been mapped by Defra to each of the household food codes used in the LCFS (Appendix 5) and these were subtracted from the purchased weight. Any foods where no information was available (e.g. liquids which are usually disposed of down the sink), were allocated a waste factor of 10% as is applied by Defra in their Family Food publications when comparing estimated nutrient intake to dietary recommendations. Eating out food weights are estimated as 'as eaten' by Defra using published portion sizes, therefore no waste factor was applied to eating out foods. Inedible waste (i.e. bone) was taken into account when calculating the conversion factor for each food code (Appendix 3 and Appendix 4).

#### 2.1.3 Data Handling

Appendix 6 provides a flowchart which illustrates the data handling process for data from each year (in MS Access, MS Excel, and SPSS), which were then merged in SPSS to obtain one working data file. Data on sampling strata and clusters were obtained from the UK ONS.

In brief, for estimating food consumption, in MS Access the raw LCFS data were linked to a table constructed from the coding frame which listed each food grouping, each food within these groupings and the appropriate conversion and waste factors to be applied to the calculations. Household and eating out purchases for two weeks, minus waste, for each food code were multiplied by the appropriate conversion factor and summed by food grouping. This was then divided by the number of individuals in the household and divided by 14 to

obtain the mean daily consumption per person, except for oil rich fish consumption, which is expressed as a weekly intake.

For estimating nutrient intake, in MS Access, household and eating out purchase data minus waste for each food code were multiplied by the appropriate nutrient content per gram (annual nutrient data provided by Defra) to provide the nutrient intake per food. The annual food composition data originates from the NDNS, with each of the Defra food codes having at least one NDNS composition code. Where more than one NDNS code was required to make up a food type from the EFS/LCFS, a weighted average nutrient composition was calculated based on market share estimates. The nutrient composition data were supplied to Defra by the Food Standards Agency (FSA) for 2001-2009 and by the Department of Health and Public Health England for 2010 onwards (Public Health England, 2018) which is updated annually to include new foods, and any changes in nutrient composition due to reformulation. Household, eating out, and combined nutrient intakes for foods were then summed for each household. These were then divided by the number of individuals in the household and divided by 14 to obtain the mean daily intake per person for each nutrient. Due to the food composition database not having information for free sugars and AOAC fibre, NMES have been provided as a proxy for free sugars and AOAC fibre has been estimated by multiplying NSP by 1.33 (Lunn and Buttriss, 2007). It is appreciated that NMES values are higher than those for free sugar, as NMES includes 50% of the fruit sugars from stewed, dried, or canned fruit, but free sugars include none. However, the contribution from this is small at approximately 1.8% NMES intake. Energy density for food and milk was calculated using the methodology developed by Wrieden *et al.* (2014) and quintiles of energy density were calculated in SPSS by year (to negate any difference in energy density quintile over time).

Food consumption and nutrient data were exported from MS Access to SPSS and merged with household variables as described in Appendix 1.

## **2.2 Contribution of foods to intakes of energy and selected nutrients**

As per section 2.1.3, household purchase data over two weeks minus estimated edible waste (Appendix 5) for each food code was multiplied by the appropriate nutrient content per gram (provided by Defra) in MS Access to obtain the nutrient intake per food for each household (any inedible waste was taken into account in the nutrient composition of the food). These intakes were then divided by the number of individuals in the household and divided by 14 to obtain the mean daily nutrient intake per person for each food. The food groupings described by (Barton and Wrieden, 2015) were used in the current analysis with the exception of confectionery and sweet biscuits which were considered separately to enable more detailed analysis. Therefore, the current analysis was for 65 food groupings and 7 combined groups (Appendix 7 and Appendix 8). As this work considered foods as *consumed*, these food groupings are broad and are different to those used for monitoring SDGs and additional foods and drinks indicative of diet quality (described in 2.1) in that they do not consider the different components of composite dishes / items. For example, the 'total processed red meat' group includes the carbohydrate component for some items (e.g. pastry) and the 'fruit and vegetable' group does not include the vegetable component of composite dishes (e.g. Bolognese, pizza etc.). Mean daily intakes per person of each of the food groupings were calculated and the resultant data was exported to SPSS. In order to calculate mean population intakes it was also necessary to add information on zero intake for non-consumers of foods per household (as described by Barton *et al.*, (2015)). The contribution that each food grouping made to energy, fat, saturated fat, free sugars, and fibre intake was then calculated.

## 2.3 Analysis of Data

Due to the multi-staged stratified sampling procedure of the LCFS, data were analysed using Descriptive Statistics and General Linear Models within the Complex Samples module of SPSS, version 27 (SPSS Inc., Chicago, IL, USA). Sampling of the EFS/LCFS is designed in such a way to ensure that the results are representative of the population of the UK (Office for National Statistics, 2020b) and each of the survey regions, of which Scotland is one. The data were weighted according to the sampling methodology of the original data collected by ONS (Office for National Statistics, 2020a) to reduce the effect of non-response bias and to ensure that data were representative of the Scottish population. The weights were produced in two stages: firstly the data were weighted to compensate for non-response (sample-based weighting) and secondly the sample distribution was weighted so that it matched the population distribution in terms of region, age group, and sex (population-based weighting) (Department for Environment Food & Rural Affairs (Defra), 2015). The weights were provided by Defra.

From 2016, the sample size for those households who completed food purchase diaries reduced. This was caused by changes in the data collection methodology of the LCFS by ONS and a reduction in the number of households who were requested to keep detailed diaries on food and drink purchases. Despite this, the Scottish sample was still representative and LCFS remains the study with the largest annual Scottish sample on total diet (based on food purchases) and provides a good indication of dietary habits of the Scottish population. It is acknowledged that 95% confidence intervals (95% CI) for the data presented from 2016 onwards will be greater than in previous years due to this reduction in sample size.

Linear associations between food consumption/ nutrient intake/ energy density and year or 3-year block were assessed by general linear modelling which was used to obtain estimates of the means with 95% CI and associated p-values. Overall associations between food consumption/ nutrient intake/ energy density, and year or 3-year block were assessed by adjusted Wald tests. The adjusted Wald test was used within regression analyses to test whether the value for all years or 3-year block were equal or whether there was at least one difference between year or 3-year block. P-values  $\leq 0.01$  are highlighted in bold to indicate significance at the 1% level, the stricter significance threshold was chosen to account for multiple testing.

## 3. Results

### 3.1 Monitoring Scottish Dietary Goals and additional foods and drinks indicative of diet quality

Results are presented as population per capita means (i.e. including consumers and non-consumers) for household and eating out foods combined, in g per day for foods and drinks with the exception of fish, which is expressed in g per week. Comparison is made against the 2016 Scottish Dietary Goals (where applicable). P-values  $\leq 0.01$  are highlighted in bold to indicate significance at the 1% level (the stricter significance threshold was chosen to account for multiple testing), although it should be noted that changes or differences that are statistically significant might not be large enough to be nutritionally meaningful.

From 2001-2006 data were collected by ONS on a financial year basis i.e. from April of one year to March of the next, however for ease of understanding dates are presented as single years e.g. 2001/2002 is presented as 2001 which refers to the period of April 2001 to March 2002. From 2006 to 2014 data were collected on a calendar year basis. As a consequence of this, data from January to March 2006 are duplicated in the 2005/2006 and 2006 results. In 2015, ONS moved back to collecting data on a financial year basis however data were still collected for the first quarter of 2015, so 2015 was analysed as a calendar year. In order to aid analysis, subsequent years have been analysed as a financial year with no data from the first quarter of 2016 included in the analysis. Similarly, for ease of understanding, dates have been presented in the text as single years - see *Explanatory notes on some terms used in the report* for further details on sampling years.

Mean food consumption and nutrient intakes relating to the Scottish Dietary Goals (**Table 1**) and additional foods, drinks, and nutrients indicative of diet quality are presented in 3-year blocks from 2001-2003 through to 2016-2018. Data on individual years from 2010 through to 2018 are presented in Appendix 9 with data for 2001 provided for comparison. For data from 2016, the 95% CI are wider than in previous years due to a reduction in sample size, however it is noted that this does not appear to have had a substantial effect on the results presented.

#### 3.1.1 Food Consumption Relating to the 2016 Scottish Dietary Goals

##### 3.1.1.1 Food Consumption Relating to the Scottish Dietary Goals

###### *Fruit and Vegetables*

Between 2001-2003 and 2016-2018 there was no significant difference in overall consumption of fruit and vegetables (including fruit and vegetable juices, beans, and pulses). Mean consumption of fruit and vegetables for 2016-2018 was 265g/day (Table 2). This equates to just over three portions per day and is considerably lower than the 2016 goal of at least 400g or five portions per day. Inclusion of fruit (and vegetable) juice increased fruit and vegetable consumption figures by the equivalent of around one fifth of a portion per day. There has been a significant reduction in the consumption of fruit juice since 2001-2003. Mean daily consumption of fruit juice has decreased from 43g in 2001-2003 to 34g in 2016-2018 (Table 2) (P-value for linear association = 0.002). As there has been little change in fruit consumption over the 18-year period, and there has been a significant decrease in fruit juice consumption, this suggests that whole fruit consumption has increased.

Mean fruit and vegetable consumption remains almost two portions below the '5 a day' population goal.

There was no significant increase in fruit and vegetable consumption over the 18-year period to 2018.

There was a significant decrease in fruit (and vegetable) juice consumption over the 18-year period to 2018.

### Oil Rich Fish

The Scottish Dietary Goal for oil rich fish was not met by 2016-2018 and there was no significant change in consumption since 2001-2003. Mean consumption for 2001-2003 was 29g/week and for 2016-2018 33g/week (Table 2), which is considerably less than the goal of 140g/week.

There was no significant change in oil rich fish consumption between 2001-2003 and 2016-2018.

### Red and Processed Meat

There has been a significant reduction in the consumption of red and processed meat since 2001-2003. Mean daily consumption of red and processed meat has decreased from 65g in 2001-2003 to 55g in 2016-2018 (Table 2) (P-value for linear association <0.001). This was partly accounted for by a fall in bacon and ham, and other processed red meat products (which includes the meat portion of sausages, meat pies, corned beef, burgers, and pate) from a combined total of 41g/day in 2001-2003 to 36g/day in 2016-2018 (Table 5). Due to the nature of the LCFS data it is not possible to assess the SDG for the highest consumers ( $\geq 90$ g per day) because the data is at a household and not an individual level.

There was a significant reduction in red and processed meat consumption between 2001-2003 and 2016-2018.

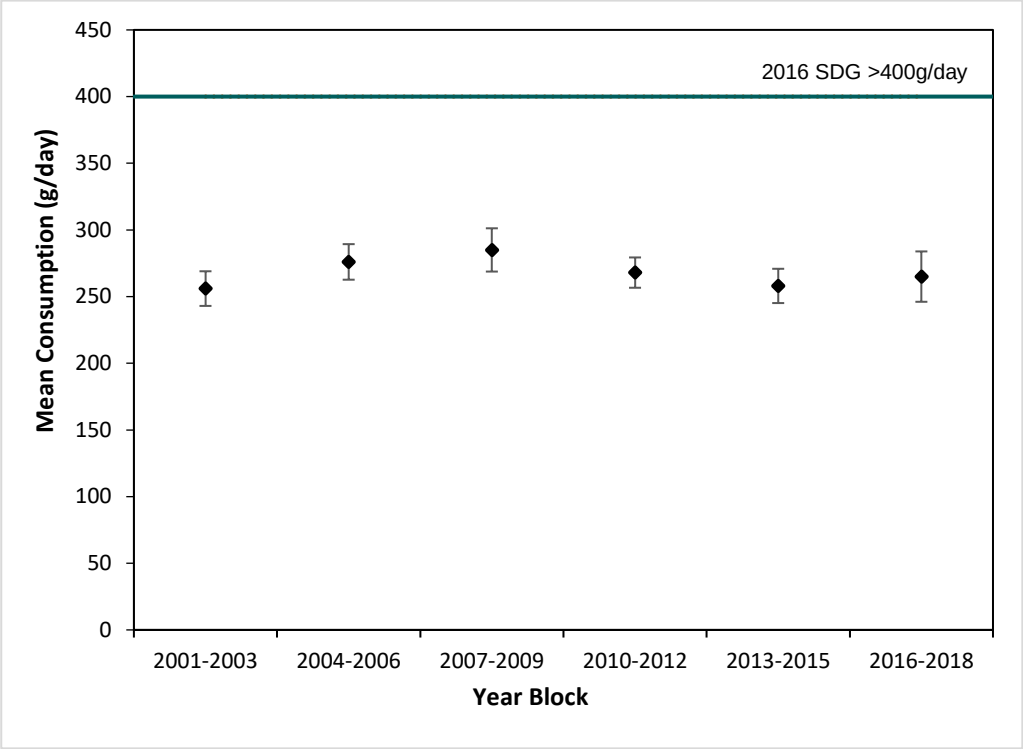
The population is meeting the Scottish Dietary Goal for red and processed meat consumption.

**Table 2: Mean Consumption<sup>1</sup> of 2016 Scottish Dietary Goal Foods by 3-Year Block 2001-2003 to 2016-2018 - EFS / LCFS data (g/person/day with the exception of fish: g/person/week)**

| Food <sup>2</sup>                         | 2016 Scottish Dietary Goal | 2001-2003 Mean<br>95% CI | 2004-2006 <sup>3</sup> Mean<br>95% CI | 2007-2009 Mean<br>95% CI | 2010-2012 Mean<br>95% CI | 2013-2015 Mean<br>95% CI | 2016-2018 Mean<br>95% CI | P-value for Linear Association | P-value for Overall Association |
|-------------------------------------------|----------------------------|--------------------------|---------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------------|---------------------------------|
| <b>Fruit and Vegetables<sup>4,5</sup></b> | >400g per day              | 256<br>243, 269          | 276<br>262, 289                       | 285<br>268, 301          | 268<br>256, 279          | 258<br>245, 271          | 265<br>246, 284          | 0.678                          | 0.031                           |
| <b>Fruit<sup>4</sup></b>                  |                            | 133<br>123, 142          | 147<br>138, 156                       | 154<br>143, 166          | 140<br>133, 148          | 129<br>121, 138          | 134<br>123, 145          | 0.154                          | <b>0.002</b>                    |
| <b>Fruit (and vegetable) juice</b>        |                            | 43<br>38, 47             | 45<br>40, 50                          | 47<br>42, 52             | 44<br>38, 50             | 37<br>32, 42             | 34<br>29, 39             | <b>0.002</b>                   | 0.011                           |
| <b>Vegetables<sup>5</sup></b>             |                            | 123<br>118, 128          | 129<br>123, 135                       | 130<br>123, 137          | 128<br>121, 134          | 129<br>122, 135          | 131<br>120, 142          | 0.294                          | 0.550                           |
| <b>Oil Rich Fish</b>                      | 140g per week              | 29<br>25, 32             | 35<br>29, 41                          | 29<br>26, 33             | 29<br>26, 33             | 29<br>25, 34             | 33<br>27, 39             | 0.826                          | 0.272                           |
| <b>Red and Processed Meat<sup>6</sup></b> | $\leq 70$ g per day        | 65<br>63, 67             | 61<br>58, 64                          | 61<br>58, 64             | 61<br>58, 64             | 56<br>53, 59             | 55<br>52, 59             | <b>&lt;0.001</b>               | <b>&lt;0.001</b>                |
| <i>n Households</i>                       |                            | 1750                     | 1733                                  | 1537                     | 1436                     | 1266                     | 536                      |                                |                                 |
| <i>n People</i>                           |                            | 4022                     | 3979                                  | 3373                     | 3181                     | 2825                     | 1131                     |                                |                                 |
| <i>n People Weighted<sup>7</sup></i>      |                            | 14934                    | 14792                                 | 15364                    | 15337                    | 15679                    | 15555                    |                                |                                 |

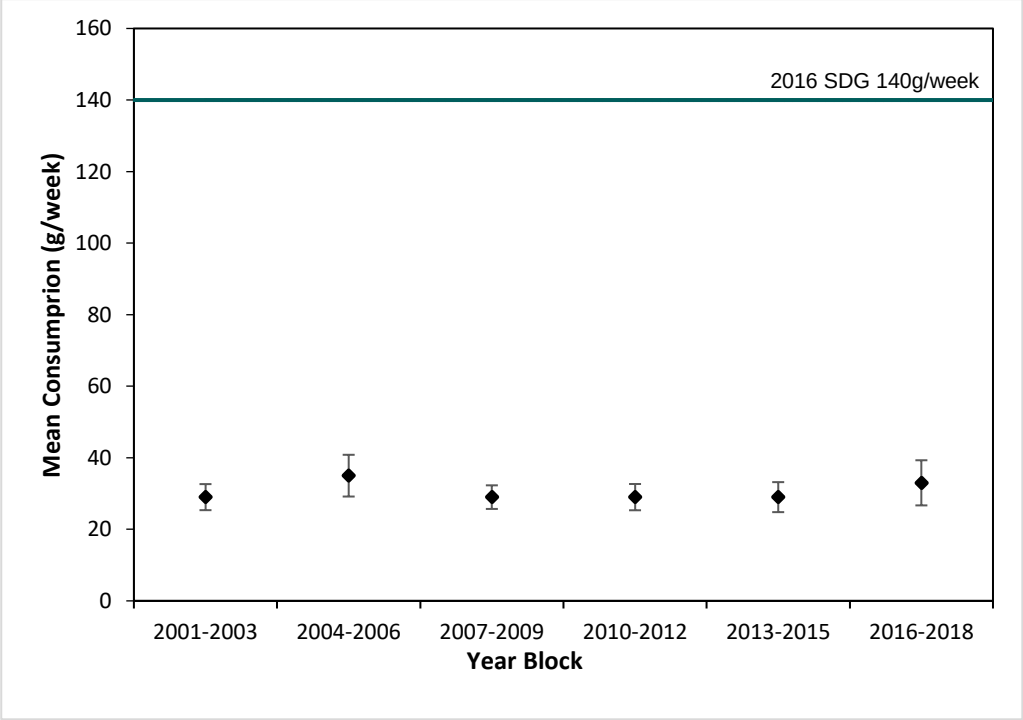
<sup>1</sup>Household and eating out consumption combined; <sup>2</sup>See appendices 1 & 3 for methodology; <sup>3</sup>From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2004-2006 results; <sup>4</sup>Fruit includes fruit and vegetable juice; <sup>5</sup>Vegetables include beans and pulses; <sup>6</sup>Meat portion only (includes processed red meat products e.g. sausages, meat pies, burgers, and pate); <sup>7</sup>The results are weighted to the Scottish population - the number provided is approximately 1000<sup>th</sup> of the Scottish population.

**Figure 1: Mean [95% CI] Fruit and Vegetables Consumption by 3-Year Block 2001-2003 to 2016-2018, compared to the 2016 Scottish Dietary Goal (>400g per day)**



*P* (linear association) = 0.678; *P* (overall association) = 0.031

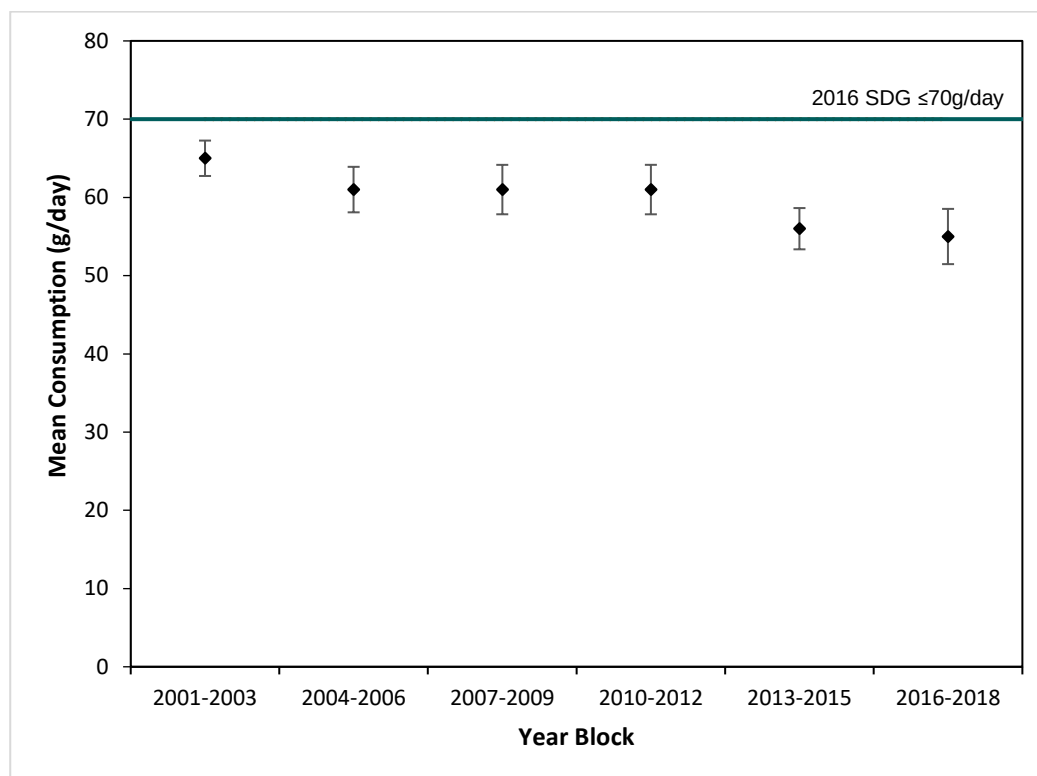
**Figure 2: Mean [95% CI] Oil Rich Fish Consumption by 3-Year Block 2001-2003 to 2016-2018, compared to the 2016 Scottish Dietary Goal (140g per week)**



*P* (linear association) = 0.826; *P* (overall association) = 0.272



**Figure 3: Mean [95% CI] Red and Processed Meat\* Consumption by 3-Year Block 2001-2003 to 2016-2018, compared to the 2016 Scottish Dietary Goal ( $\leq 70$ g per day)**



*P* (linear association)  $<0.001$ ; *P* (overall association)  $<0.001$ ; \*Meat portion only

### 3.1.2 Nutrient Intake Relating to the 2016 Scottish Dietary Goals

There was little change in intakes of most of the Scottish Dietary Goal nutrients between 2001 and 2018, except that there has been a statistically significant but small decrease in free sugars intake over the 18-year period. In contrast, there has been a significant increase in total fat intake and a significant decrease in fibre intake; both of which show movement away from goals rather than progress towards goals. None of the goals for nutrient intakes were met by 2018.

#### 3.1.2.1 Nutrient Intake Relating to the Scottish Dietary Goals

##### *Energy Density*

Energy density, calculated from food and milk, was similar between 2001-2003 and 2016-2018 (Table 3). The mean energy density for 2016-2018 was 172 kcal/100g, which is considerably higher than the 2016 Scottish Dietary Goal of 125 kcal/100g.

Energy density has remained similar between 2001-2003 and 2016-2018.

##### *Total Fat and Saturated Fat*

There has been no evidence of progress towards the 2016 Scottish Dietary Goals for total fat or saturated fat (average intakes to reduce to no more than 35% and 11% of food energy respectively) with intakes considerably higher than the goals (Table 3). Mean intake of total fat increased significantly, from 38.8% of food energy for 2001-2003 to 39.7% for 2016-2018 (*P*-value for linear association = 0.003) and mean intake of saturated fat remained similar from 2001-2003 to 2016-2018 at 15.4% food energy for 2016-2018. (Table 3).

Total fat intake increased significantly between 2001-2003 and 2016-2018, but saturated fat intake (as a percentage of food energy) did not change.

### *Free Sugars*

Due to the change in the terminology of sugar in the 2016 Scottish Dietary Goals, the term NMES, provided in previous reports, has been replaced by free sugars which has a slightly different definition. However, due to the food composition database not having information for free sugars, NMES have been provided as a proxy for free sugars as there is little difference between the two (NMES including 50% of the fruit sugars from stewed, dried, or canned fruit, but free sugars including none). In addition, in previous reports NMES was calculated as % food energy, but for this report all years have been recalculated as % total energy.

A significant reduction over time was found for the percentage of total energy from free sugars (Table 3). The mean percentage of total energy contributed by free sugars fell from 15.1% in 2001-2003 to 13.4% in 2016-2018. The overall decrease in the percentage of total energy from free sugars was highly statistically significant (P-value for linear association <0.001), however intake remains very high compared to the 2016 Scottish Dietary Goal of no more than 5% total energy.

Free sugars intake (as a percentage of total energy) has fallen significantly between 2001-2003 and 2016-2018, however mean intake exceeds the population goal by two and a half times (168%).

### *Fibre*

Due to the change in the method for calculating fibre intake in the 2016 Scottish Dietary Goals, NSP provided in previous reports, has been replaced by AOAC fibre which for most foods has a higher value. However, due to the food composition database not having information for AOAC fibre, it has been estimated by multiplying NSP by 1.33 (Lunn and Buttriss, 2007).

There has been a significant decrease in the mean intake of fibre between 2001-2003 and 2016-2018 (P-value for linear association = 0.006) (Table 3). The mean amount of fibre consumed fell from 16.4g/day in 2001-2003 to 15.6g/day in 2016-2018 and remains considerably below the 2016 Scottish Dietary Goal of 30g/day.

There has been a significant decrease in fibre intake between 2001-2003 and 2016-2018.

### *Carbohydrate*

Carbohydrate intake, as a percentage of total energy, was similar between 2001-2003 and 2016-2018 (Table 3). The mean percentage carbohydrate intake for 2016-2018 was 44.3%, which is below the 2016 Scottish Dietary Goal of 50% total energy.

Carbohydrate intake has remained similar between 2001-2003 and 2016-2018.

### *Energy*

Energy intake is not monitored using data from the LCFS and is provided for comparison purposes only as it is used for calculating energy density and percent energy from fat, saturated fat, carbohydrate, and free sugars. A significant reduction over time was found for total and food energy intake (Table 3), with a mean intake in 2001-2003 of 2126 kcal/day total energy compared to 1893 kcal/day in 2016-2018 (P-value for linear association <0.001) and a mean intake in 2001-2003 of 2052 kcal/day food energy compared to 1829 kcal/day in 2016-2018 (P-value for linear association <0.001).

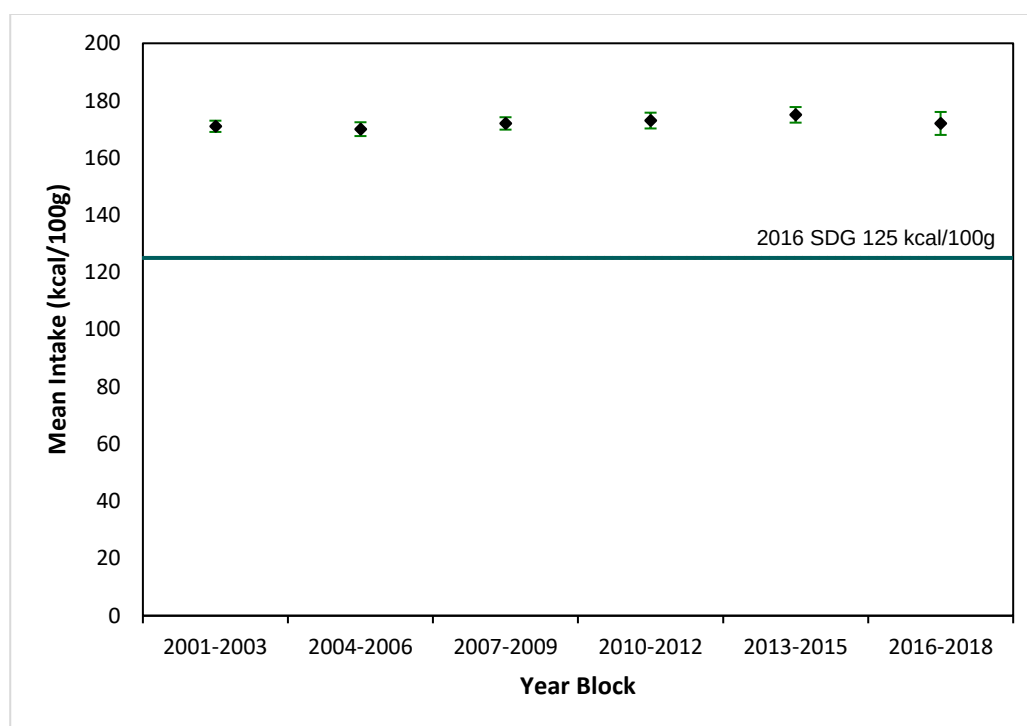
**Table 3: Mean Intake<sup>1</sup> of 2016 Scottish Dietary Goal Nutrients by 3-Year Block 2001-2003 to 2016-2018 – EFS / LCFS data (units/person/day)**

| Nutrient <sup>2</sup>                   | 2016 Scottish Dietary Goal | 2001-2003 Mean<br>95% CI | 2004-2006 <sup>3</sup> Mean<br>95% CI | 2007-2009 Mean<br>95% CI | 2010-2012 Mean<br>95% CI | 2013-2015 Mean<br>95% CI | 2016-2018 Mean<br>95% CI | P-value for Linear Association | P-value for Overall Association |
|-----------------------------------------|----------------------------|--------------------------|---------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------------|---------------------------------|
| Total Energy kcal                       | 120 kcal reduction         | 2126<br>2082, 2170       | 2065<br>2019, 2111                    | 2107<br>2052, 2161       | 2011<br>1955, 2067       | 1952<br>1894, 2009       | 1893<br>1823, 1962       | <0.001                         | <0.001                          |
| Total Energy MJ                         |                            | 8.9<br>8.7, 9.1          | 8.6<br>8.4, 8.8                       | 8.8<br>8.6, 9.0          | 8.4<br>8.2, 8.6          | 8.2<br>7.9, 8.4          | 7.9<br>7.6, 8.2          | <0.001                         | <0.001                          |
| Energy Density kcal/100g <sup>4</sup>   | 125kcal/100g               | 171<br>169, 173          | 170<br>168, 173                       | 172<br>170, 174          | 173<br>170, 176          | 175<br>173, 178          | 172<br>168, 176          | 0.088                          | 0.078                           |
| % Food Energy Fat                       | ≤35%                       | 38.8<br>38.4, 39.2       | 38.7<br>38.3, 39.2                    | 38.9<br>38.5, 39.3       | 39.1<br>38.6, 39.6       | 39.3<br>38.8, 39.8       | 39.7<br>39.1, 40.2       | 0.003                          | 0.999                           |
| % Food Energy Saturated Fat             | ≤11%                       | 15.6<br>15.4, 15.7       | 15.5<br>15.3, 15.7                    | 15.3<br>15.1, 15.4       | 15.2<br>14.9, 15.5       | 15.3<br>15.0, 15.5       | 15.4<br>15.1, 15.6       | 0.080                          | 0.034                           |
| % Total Energy Free Sugars <sup>5</sup> | ≤5%                        | 15.1<br>14.7, 15.5       | 14.7<br>14.2, 15.1                    | 14.4<br>14, 14.7         | 14.0<br>13.6, 14.4       | 13.8<br>13.2, 14.4       | 13.4<br>12.8, 13.9       | <0.001                         | <0.001                          |
| Fibre <sup>6</sup>                      | 30g/day                    | 16.4<br>16.0, 16.8       | 16.4<br>16.0, 16.9                    | 17.0<br>16.4, 17.6       | 16.2<br>15.7, 16.8       | 15.8<br>15.3, 16.3       | 15.6<br>14.8, 16.3       | 0.006                          | 0.024                           |
| % Total Energy Carbohydrate             | 50%                        | 45.2<br>44.7, 45.6       | 45.2<br>44.8, 45.7                    | 45.1<br>44.6, 45.6       | 44.9<br>44.4, 45.3       | 44.8<br>44.2, 45.4       | 44.3<br>43.7, 45.0       | 0.016                          | 0.246                           |
| Food Energy kcal                        |                            | 2052<br>2011, 2094       | 1991<br>1947, 2035                    | 2038<br>1985, 2092       | 1942<br>1885, 1998       | 1889<br>1833, 1945       | 1829<br>1762, 1896       | <0.001                         | <0.001                          |
| Food Energy MJ                          |                            | 8.6<br>8.5, 8.8          | 8.4<br>8.2, 8.6                       | 8.6<br>8.3, 8.8          | 8.1<br>7.9, 8.3          | 7.9<br>7.7, 8.2          | 7.7<br>7.4, 8.0          | <0.001                         | <0.001                          |
| n Households                            |                            | 1750                     | 1733                                  | 1537                     | 1436                     | 1266                     | 536                      |                                |                                 |
| n People                                |                            | 4022                     | 3979                                  | 3373                     | 3181                     | 2825                     | 1131                     |                                |                                 |
| n People Weighted <sup>7</sup>          |                            | 14934                    | 14792                                 | 15364                    | 15337                    | 15679                    | 15555                    |                                |                                 |

<sup>1</sup>Household and eating out intakes combined; <sup>2</sup>See appendices 1, 3 and 4 for methodology; <sup>3</sup>From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2004-2006 results;

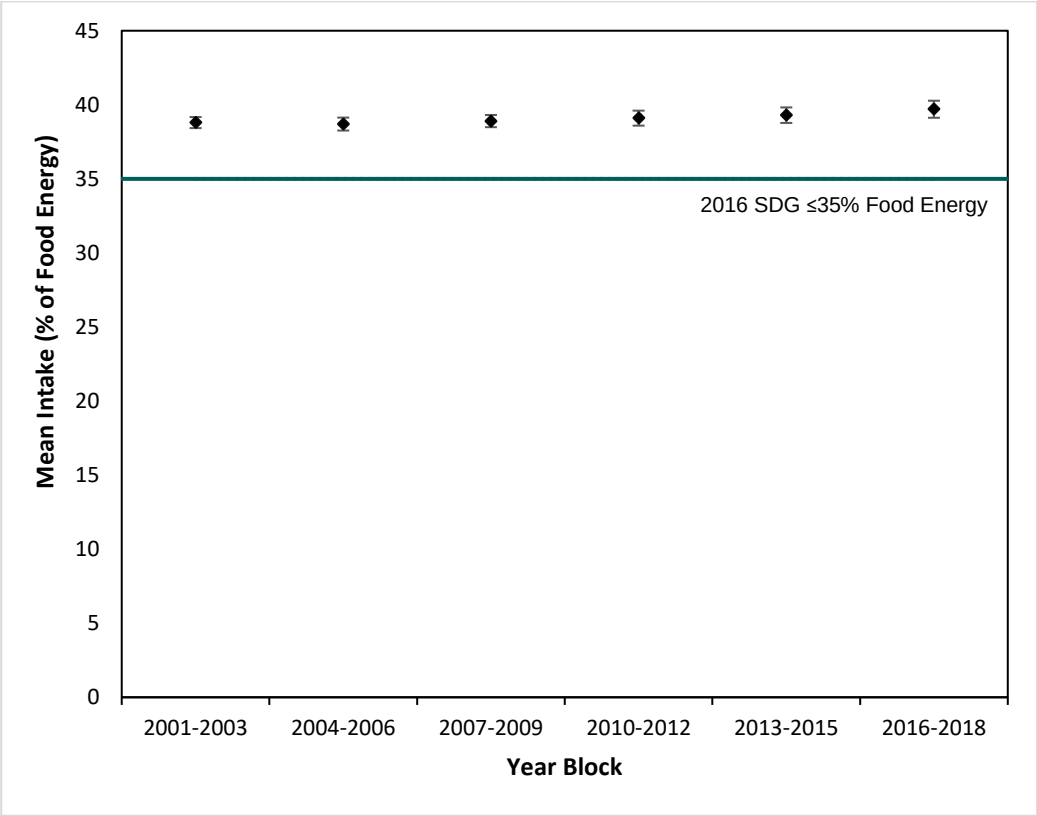
<sup>4</sup>Calculated from food and milk; <sup>5</sup>Free sugars are sugars added to food or drink and those which are found naturally in honey, syrups, and fruit juices, NMES figures provided as a proxy for free sugars; <sup>6</sup>Fibre as measured by American Association of Analytical Chemists (AOAC) methods, calculated from non-starch polysaccharide (NSP) as measured by Englyst method (AOAC fibre is estimated as NSP multiplied by 1.33); <sup>7</sup>The results are weighted to the Scottish population - the number provided is approximately 1000<sup>th</sup> of the Scottish population.

**Figure 4: Mean [95% CI] Energy Density (food and milk) by 3-Year Block 2001-2003 to 2016-2018, compared to the 2016 Scottish Dietary Goal (125 kcal/100g)**



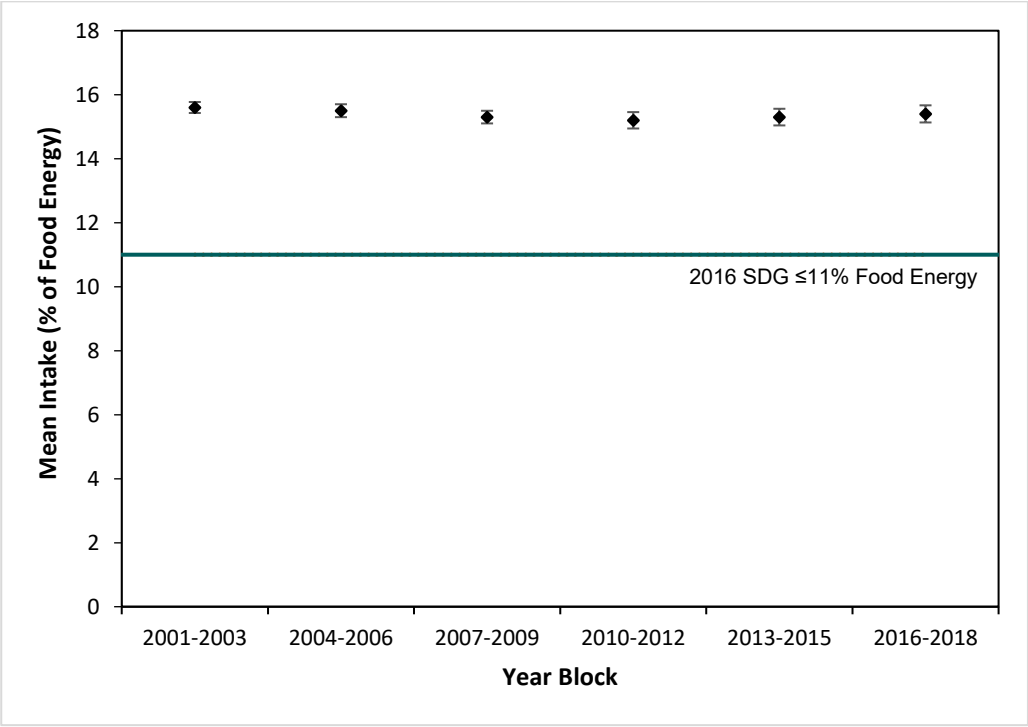
P (linear association) = 0.088; P (overall association) = 0.078

**Figure 5: Mean [95% CI] Fat Intake by 3-Year Block 2001-2003 to 2016-2018, compared to the 2016 Scottish Dietary Goal (<35% food energy)**



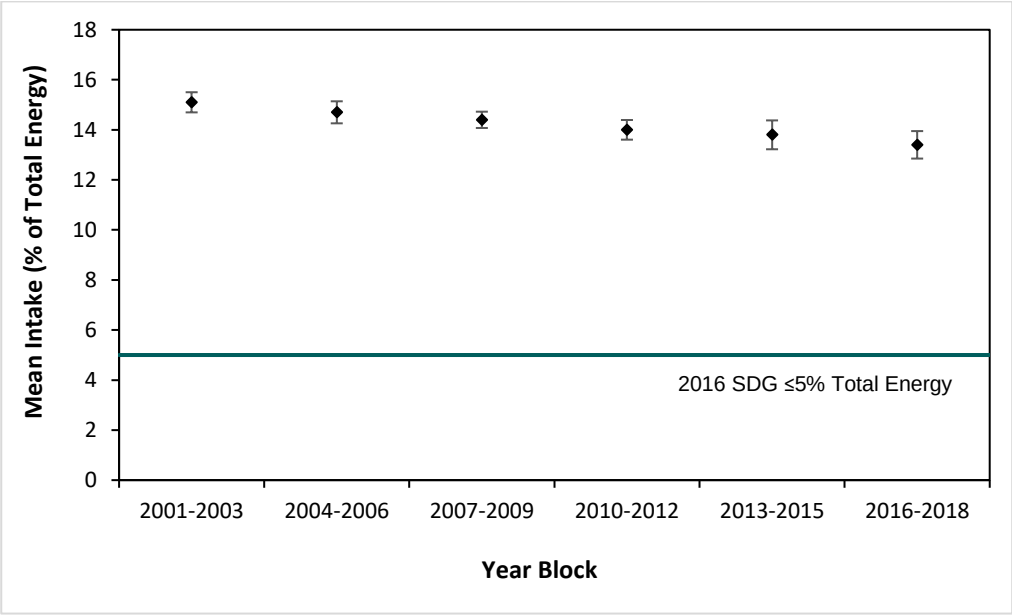
*P* (linear association) = 0.003; *P* (overall association) = 0.999

**Figure 6: Mean [95% CI] Saturated Fat Intake by 3-Year Block 2001-2003 to 2016-2018, compared to the 2016 Scottish Dietary Goal (≤11% food energy)**



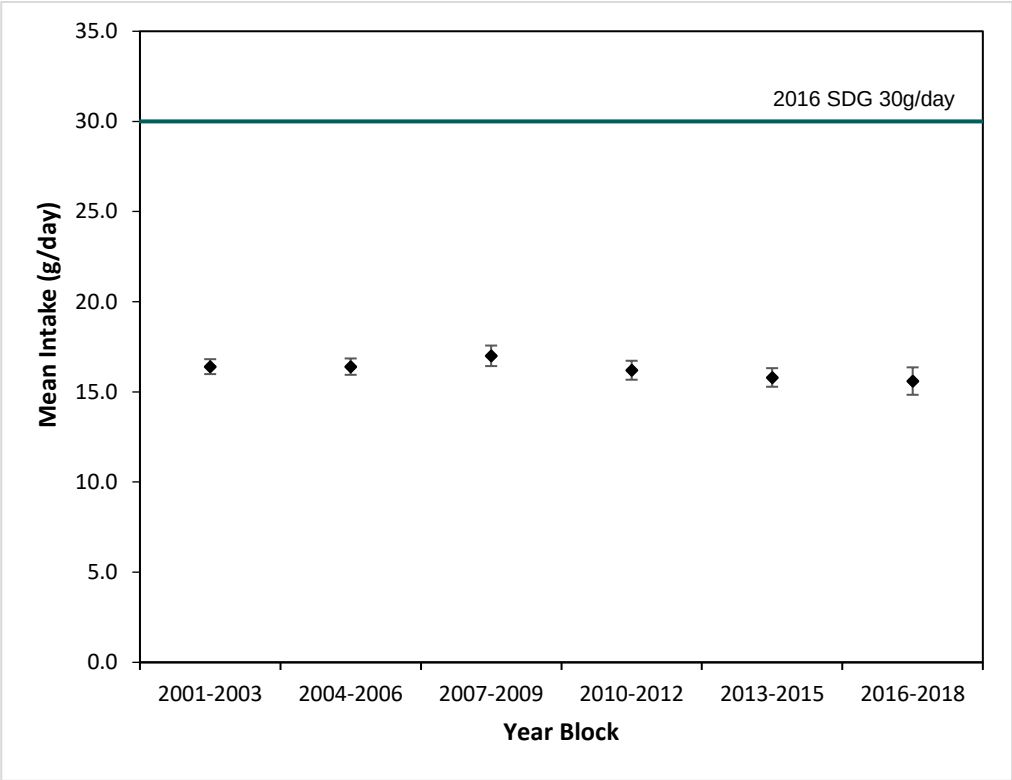
*P* (linear association) = 0.080; *P* (overall association) = 0.034

**Figure 7: Mean [95% CI] Free Sugars\* Intake by 3-Year Block 2001-2003 to 2016-2018, compared to the 2016 Scottish Dietary Goal ( $\leq 5\%$  total energy)**



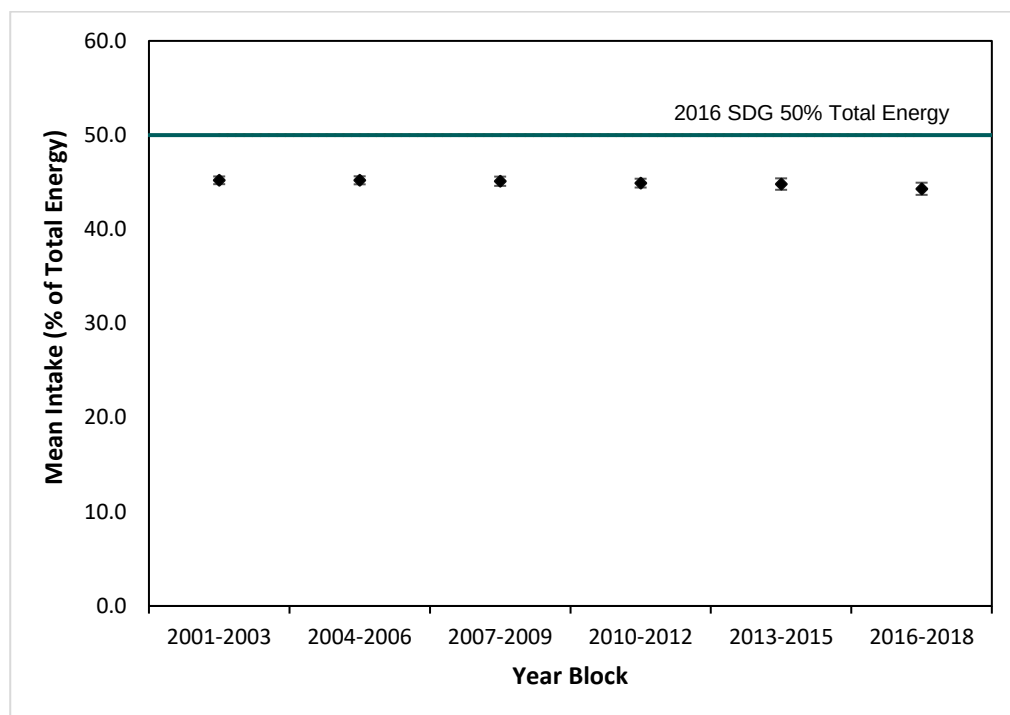
*P* (linear association) <0.001; *P* (overall association) <0.001; \*NMES figures provided as a proxy for free sugars

**Figure 8: Mean [95% CI] Fibre\* Intake by 3-Year Block 2001-2003 to 2016-2018, compared to the 2016 Scottish Dietary Goal (30g/day)**



*P* (linear association) = 0.006; *P* (overall association) = 0.024; \*AOAC fibre is estimated as NSP multiplied by 1.33

**Figure 9: Mean [95% CI] Carbohydrate Intake by 3-Year Block 2001-2003 to 2016-2018, compared to the 2016 Scottish Dietary Goal (50% total energy)**



$P$  (linear association) = 0.016;  $P$  (overall association) = 0.246

### 3.1.3 Consumption of Additional Foods and Drinks Indicative of Diet Quality

#### *Bread*

Mean total daily bread consumption decreased significantly over the period 2001-2003 to 2016-2018 (from 107g to 81g, or the equivalent of about two-thirds of a slice of bread (Food Standards Agency, 2002),  $P$ -value for linear association  $<0.001$ ) (Table 4). This was accounted for by a steady decrease in white bread. However, consumption of brown/wholemeal bread has remained fairly constant with a mean consumption for 2016-2018 of 18g/day. By 2016-2018, 22.2% of bread consumed was brown/wholemeal compared to 16.8% for 2001-2003.

#### *Breakfast Cereal*

Mean high fibre and total breakfast cereal consumption remained fairly constant from 2001-2003 to 2016-2018. The mean consumption for 2016-2018 was 13g/day and 20g/day respectively (Table 4).

#### *Cakes, Sweet Biscuits and Pastries; Sugar and Preserves; Confectionery and Ice Cream and Dairy Desserts*

Mean consumption of cakes, sweet biscuits and pastries, confectionery, and ice cream and dairy desserts have remained similar between 2001-2003 and 2016-2018 with mean consumption for 2016-2018 of 36, 22 and 35g/day respectively (Table 4). Mean consumption of sugar and preserves mirrored that of free sugars intake and has decreased significantly over the period 2001-2003 and 2016-2018 (from 19g to 13g,  $P$ -value for linear association  $<0.001$ ) (Table 3, Table 4, and Figure 7).

#### *Soft Drinks*

The trends in consumption of sugar-containing soft drinks mirrored that of free sugars intake (Table 3, Table 4, Figure 7, and Figure 10). Overall, sugar-containing soft drink consumption decreased significantly from 245g/day for 2001-2003 to 138g/day for 2016-2018, the equivalent of one third of a 330ml can of sugar-

containing soft drink (P-value for linear association <0.001). Appendix 9, Figure 20 presents data on sugar containing soft drinks annually from 2001-2018, and highlights drops between 2010 and 2011, and year on year drops from 2016. In contrast, the mean consumption of sugar free soft drinks increased significantly from 104g/day for 2001-2003 to 158g/day for 2016-2018 (P-value for linear association <0.001).

#### *Processed Red Meat Products*

Mean consumption of bacon and ham, and other processed red meat products decreased significantly over the period 2001-2003 to 2016-2018 with bacon and ham consumption decreasing from 12g to 10g/day (P-value for linear association = 0.006), and other processed red meat products decreasing from 29 to 26g/day (P-value for linear association = 0.003) (this includes the meat content of savoury pies). Savoury meat pie consumption (based on total pie weight) decreased significantly from 10g/day for 2001-2003 to 8.8g/day for 2016-2018 (P-value for linear association = 0.001) (Table 5).

#### *Dairy Products and Fat*

There was no overall significant difference in mean butter consumption from 2001-2003 to 2016-2018, despite a significant increase in the period 2001-2003 to 2013-2015. The mean consumption for 2016-2018 was 4.7g/day. Mean soft margarine consumption increased significantly from 1.3g/day for 2001-2003 to 4.9 g/day for 2016-2018 (P-value for linear association <0.001). Over the same period, there was a significant reduction in mean low fat spread consumption from 8.9 to 4.0g/day (P-value for linear association <0.001) (Table 5), such that there was a significant reduction in total spread consumption (P-value for linear association 0.001). There was a significant reduction in the mean consumption of cooking oil from 5.4g/day for 2001-2003 to 3.3g/day for 2016-2018 (P-value for linear association = 0.006). There was no significant change to mean cheese or cream consumption over time. Mean total daily milk consumption decreased from 248g for 2001-2003 to 196g for 2016-2018 (P-value for linear association <0.001). This was caused mainly by a decrease in mean whole milk consumption from 89 to 47g/day (P-value for linear association <0.001) (Table 5).

#### *White Fish*

Mean white fish consumption has decreased significantly from 92g/week for 2001-2003 to 68g/week for 2016-2018 (P-value for linear association <0.001) (Table 5).

#### *Potatoes, Nuts and Savoury Snacks*

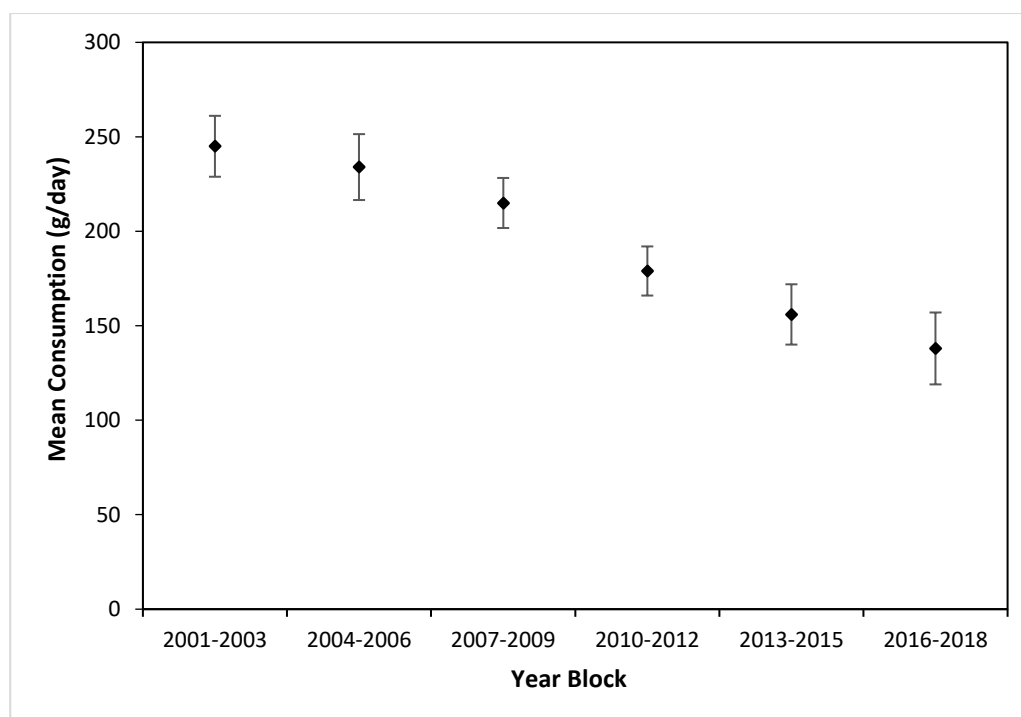
There was a significant decrease in fresh potato consumption between 2001-2003 and 2016-2018 (P-value for linear association <0.001), with a mean consumption for 2016-2018 of 38g/day compared with a mean consumption for 2001-2003 of 60g/day. Processed potato (e.g. chips) and savoury snack consumption (e.g. potato-based snacks) fluctuated slightly between 2001-2003 and 2016-2018, with no statistically significant linear association. Mean nut consumption significantly increased from 2.0g/day for 2001-2003 to 3.9g/day for 2016-2018 (P-value for linear association <0.001) (Table 5).

**Table 4: Mean Consumption<sup>1</sup> of Additional Foods and Drinks Indicative of Diet Quality by 3-Year Block 2001-2003 to 2016-2018 - EFS / LCF data (g/person/day)**

| Food <sup>2</sup>                  | 2001-2003<br>Mean<br>95% CI | 2004-2006 <sup>3</sup><br>Mean<br>95% CI | 2007-2009<br>Mean<br>95% CI | 2010-2012<br>Mean<br>95% CI | 2013-2015<br>Mean<br>95% CI | 2016-2018<br>Mean<br>95% CI | P-value for<br>Linear<br>Association | P-value for<br>Overall<br>Association |
|------------------------------------|-----------------------------|------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|--------------------------------------|---------------------------------------|
| Brown/Wholemeal Bread              | 18<br>17, 19                | 23<br>21, 24                             | 23<br>21, 24                | 22<br>20, 23                | 18<br>17, 20                | 18<br>16, 20                | 0.045                                | <0.001                                |
| Total Bread                        | 107<br>104, 111             | 101<br>97, 105                           | 95<br>92, 98                | 91<br>88, 94                | 83<br>80, 86                | 81<br>75, 88                | <0.001                               | <0.001                                |
| High fibre Breakfast Cereal        | 10<br>9.2, 11               | 11<br>10, 12                             | 13<br>12, 15                | 12<br>11, 13                | 12<br>10, 13                | 13<br>10, 15                | 0.117                                | 0.027                                 |
| Total Breakfast Cereal             | 19<br>18, 21                | 20<br>18, 21                             | 22<br>21, 24                | 21<br>20, 23                | 20<br>19, 22                | 20<br>17, 23                | 0.848                                | 0.160                                 |
| Cakes and Pastries                 | 17<br>16, 19                | 17<br>16, 19                             | 17<br>17, 18                | 16<br>15, 17                | 16<br>15, 18                | 16<br>14, 18                | 0.138                                | 0.391                                 |
| Sweet Biscuits                     | 22<br>21, 23                | 21<br>20, 22                             | 24<br>22, 25                | 17<br>19, 22                | 22<br>20, 23                | 20<br>18, 23                | 0.145                                | 0.095                                 |
| Cakes, Sweet Biscuits and Pastries | 40<br>38, 42                | 39<br>37, 40                             | 41<br>39, 43                | 37<br>35, 39                | 38<br>36, 40                | 36<br>33, 40                | 0.062                                | 0.116                                 |
| Ice Cream and Dairy Desserts       | 33<br>30, 35                | 33<br>30, 36                             | 33<br>29, 36                | 31<br>28, 33                | 33<br>30, 36                | 35<br>29, 40                | 0.525                                | 0.779                                 |
| Sugar and Preserves                | 19<br>17, 21                | 17<br>15, 19                             | 18<br>16, 20                | 17<br>15, 19                | 16<br>14, 17                | 13<br>11, 15                | <0.001                               | 0.001                                 |
| Chocolate Confectionery            | 15<br>14, 16                | 14<br>13, 15                             | 15<br>14, 17                | 14<br>13, 15                | 14<br>12, 15                | 15<br>14, 17                | 0.822                                | 0.315                                 |
| Sugar Confectionery                | 7.8<br>7.1, 8.4             | 6.8<br>6.1, 7.5                          | 6.8<br>6.2, 7.4             | 7.0<br>6.3, 7.6             | 7.7<br>6.8, 8.6             | 7.3<br>6.2, 8.5             | 0.888                                | 0.065                                 |
| Total Confectionery                | 23<br>21, 24                | 21<br>19, 22                             | 22<br>20, 24                | 21<br>19, 23                | 21<br>20, 23                | 22<br>20, 25                | 0.930                                | 0.509                                 |
| Sugar-Containing Soft Drinks       | 245<br>229, 261             | 234<br>216, 251                          | 215<br>202, 228             | 179<br>166, 192             | 156<br>140, 172             | 138<br>119, 157             | <0.001                               | <0.001                                |
| Sugar Free Soft Drinks             | 104<br>95, 113              | 94<br>83, 104                            | 88<br>78, 98                | 118<br>105, 132             | 133<br>116, 149             | 158<br>129, 187             | <0.001                               | <0.001                                |
| Total Soft Drinks                  | 349<br>331, 367             | 328<br>305, 350                          | 303<br>285, 322             | 298<br>279, 316             | 288<br>268, 309             | 296<br>265, 327             | <0.001                               | <0.001                                |
| n Households                       | 1750                        | 1733                                     | 1537                        | 1436                        | 1266                        | 536                         |                                      |                                       |
| n People                           | 4022                        | 3979                                     | 3373                        | 3181                        | 2825                        | 1131                        |                                      |                                       |
| n People Weighted <sup>4</sup>     | 14934                       | 14792                                    | 15364                       | 15337                       | 15679                       | 15555                       |                                      |                                       |

<sup>1</sup>Household and eating out consumption combined; <sup>2</sup>See appendices 1 & 3 for methodology; <sup>3</sup>From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2004-2006 results; <sup>4</sup>The results are weighted to the Scottish population - the number provided is approximately 1000<sup>th</sup> of the Scottish population

**Figure 10: Mean [95% CI] Sugar Containing Soft Drinks Consumption by 3-Year Block 2001-2003 to 2016-2018**



P (linear association) <0.001; P (overall association) < 0.001



**Table 5: Mean Consumption<sup>1</sup> of Additional Foods and Drinks Indicative of Diet Quality by 3-Year Block 2001-2003 to 2016-2018 - EFS/ LCF data (g/person/day)**

| Food <sup>2</sup>                                          | 2001-2003<br>Mean<br>95% CI | 2004-2006 <sup>3</sup><br>Mean<br>95% CI | 2007-2009<br>Mean<br>95% CI | 2010-2012<br>Mean<br>95% CI | 2013-2015<br>Mean<br>95% CI | 2016-2018<br>Mean<br>95% CI | P-value for<br>Linear<br>Association | P-value for<br>Overall<br>Association |
|------------------------------------------------------------|-----------------------------|------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|--------------------------------------|---------------------------------------|
| <b>Bacon and Ham</b>                                       | 12<br>11, 13                | 12<br>11, 12                             | 12<br>12, 13                | 13<br>12, 14                | 11<br>10, 12                | 10<br>9.2, 11               | <b>0.006</b>                         | 0.012                                 |
| <b>Other Processed Red Meat<br/>Products<sup>4,5</sup></b> | 29<br>28, 31                | 27<br>25, 29                             | 27<br>26, 28                | 27<br>25, 28                | 26<br>24, 27                | 26<br>24, 28                | <b>0.003</b>                         | <b>0.004</b>                          |
| <b>Savoury Meat Pies</b>                                   | 10.0<br>9.6, 11.0           | 10.0<br>9.4, 11.0                        | 10.0<br>8.9, 10.0           | 10.0<br>9.0, 10.0           | 8.7<br>7.9, 10.0            | 8.8<br>7.7, 9.8             | <b>0.001</b>                         | 0.028                                 |
| <b>Butter</b>                                              | 5.8<br>5.2, 6.4             | 6.7<br>5.9, 7.5                          | 6.5<br>5.8, 7.1             | 7.2<br>6.4, 8.1             | 7.7<br>6.8, 8.5             | 4.7<br>3.8, 5.5             | 0.500                                | <b>&lt;0.001</b>                      |
| <b>Soft Margarine</b>                                      | 1.3<br>1.0, 1.5             | 1.6<br>1.3, 1.9                          | 2.1<br>1.7, 2.4             | 2.1<br>1.7, 2.4             | 1.7<br>1.4, 2.1             | 4.9<br>3.9, 5.9             | <b>&lt;0.001</b>                     | <b>&lt;0.001</b>                      |
| <b>Low Fat Spread</b>                                      | 8.9<br>8.2, 9.6             | 7.4<br>6.7, 8.0                          | 7.0<br>6.3, 7.7             | 6.2<br>5.4, 7.0             | 5.0<br>4.5, 5.6             | 4.0<br>3.1, 4.9             | <b>&lt;0.001</b>                     | <b>&lt;0.001</b>                      |
| <b>Total Spreading Fats</b>                                | 16<br>15, 17                | 16<br>15, 17                             | 16<br>15, 16                | 16<br>14, 17                | 14<br>13, 15                | 13<br>12, 15                | <b>0.001</b>                         | 0.016                                 |
| <b>Cooking Oil</b>                                         | 5.4<br>4.7, 6.0             | 6.1<br>4.9, 7.4                          | 6.6<br>5.6, 7.6             | 6.3<br>5.3, 7.3             | 6.3<br>5.3, 7.2             | 3.3<br>2.4, 4.2             | <b>0.006</b>                         | <b>&lt;0.001</b>                      |
| <b>Cream</b>                                               | 2.4<br>2.1, 2.8             | 3.0<br>2.6, 3.4                          | 3.1<br>2.7, 3.5             | 3.3<br>2.9, 3.8             | 3.6<br>3.0, 4.1             | 3.0<br>2.4, 3.6             | 0.026                                | <b>0.001</b>                          |
| <b>Cheese</b>                                              | 14<br>13, 15                | 14<br>13, 15                             | 15<br>14, 16                | 15<br>14, 15                | 15<br>13, 16                | 17<br>15, 18                | 0.020                                | 0.051                                 |
| <b>Whole Milk</b>                                          | 89<br>80, 98                | 66<br>57, 75                             | 57<br>50, 65                | 45<br>39, 51                | 38<br>33, 43                | 47<br>37, 58                | <b>&lt;0.001</b>                     | <b>&lt;0.001</b>                      |
| <b>Semi-skimmed Milk</b>                                   | 125<br>117, 133             | 129<br>120, 138                          | 138<br>127, 149             | 135<br>125, 144             | 132<br>123, 140             | 114<br>99, 129              | 0.268                                | 0.131                                 |
| <b>Skimmed Milk</b>                                        | 12<br>9.5, 15               | 14<br>11, 17                             | 17<br>14, 20                | 15<br>12, 18                | 12<br>8.7, 15               | 17<br>11, 23                | 0.404                                | 0.112                                 |
| <b>Total Milk</b>                                          | 248<br>238, 258             | 228<br>218, 238                          | 231<br>220, 241             | 213<br>204, 223             | 197<br>188, 207             | 196<br>182, 209             | <b>&lt;0.001</b>                     | <b>&lt;0.001</b>                      |
| <b>White Fish</b>                                          | 92<br>86, 97                | 88<br>81, 95                             | 93<br>87, 99                | 81<br>73, 89                | 75<br>69, 81                | 68<br>60, 76                | <b>&lt;0.001</b>                     | <b>&lt;0.001</b>                      |
| <b>Fresh Potatoes</b>                                      | 60<br>56, 64                | 57<br>53, 61                             | 53<br>48, 57                | 46<br>43, 50                | 40<br>37, 43                | 38<br>34, 42                | <b>&lt;0.001</b>                     | <b>&lt;0.001</b>                      |
| <b>Processed Potatoes</b>                                  | 33<br>31, 34                | 28<br>26, 30                             | 28<br>26, 30                | 29<br>27, 31                | 29<br>27, 31                | 29<br>25, 32                | 0.213                                | <b>0.008</b>                          |
| <b>Nuts</b>                                                | 2.0<br>1.6, 2.3             | 3.0<br>2.5, 3.5                          | 3.6<br>3.1, 4.2             | 2.9<br>2.4, 3.5             | 4.0<br>3.5, 4.5             | 3.9<br>3.0, 4.7             | <b>&lt;0.001</b>                     | <b>&lt;0.001</b>                      |
| <b>Savoury Snacks</b>                                      | 15<br>14, 15                | 12<br>11, 13                             | 13<br>12, 14                | 12<br>12, 13                | 13<br>13, 14                | 13<br>12, 14                | 0.104                                | <b>&lt;0.001</b>                      |
| <i>n Households</i>                                        | 1750                        | 1733                                     | 1537                        | 1436                        | 1266                        | 536                         |                                      |                                       |
| <i>n People</i>                                            | 4022                        | 3979                                     | 3373                        | 3181                        | 2825                        | 1131                        |                                      |                                       |
| <i>n People Weighted<sup>6</sup></i>                       | 14934                       | 14792                                    | 15364                       | 15337                       | 15679                       | 15555                       |                                      |                                       |

<sup>1</sup>Household and eating out consumption combined; <sup>2</sup>See appendices 1 & 3 for methodology; <sup>3</sup>From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2004- 2006 results; <sup>4</sup>Meat portion only – see appendices 1 & 3 of Wrieden and Barton, (2015) for methodology; <sup>5</sup>Other processed red meat products includes the meat portion of sausages, meat pies, corned beef, burgers and pate and is a component of red and processed meat; <sup>6</sup>The results are weighted to the Scottish population - the number provided is approximately 1000<sup>th</sup> of the Scottish population

## 3.2 Contribution of Foods to Intakes of Energy, Fat, Saturated Fat, Free Sugars, and Fibre

### 3.2.1 Differences in Contributing Foods over Time

Results are presented for food groupings (foods / drinks within these food groupings are presented in Appendix 8), which contribute more than 1% of energy, fat, saturated fat, free sugars, and fibre. Results are provided for population data (i.e. includes consumers and non-consumers) for the contribution of each food grouping to the total nutrient intake for energy in kcal, and for fat, saturated fat, free sugars, and fibre in grams. The tables presenting results for 2001-2003 to 2016-2018 have been ordered in descending order for the highest overall contributor of energy, fat, saturated fat, free sugars, and fibre, for 2016-2018. The tables also provide results on percentage contribution to household and eating out consumption for the period 2016-2018. P-values were calculated for linear and overall association over time of the contributing amount in kcal or g rather than the % contribution, and p-values  $\leq 0.01$  are highlighted in bold to indicate significance at the 1% level (the stricter significance threshold was chosen to account for multiple testing). Household and Eating Out categories reported in previous reports are not directly comparable to those reported in the current report as previously takeaway foods were included as household purchases but were changed for 2016-2018 to eating out purchases. In previous reports takeaway foods were included as household purchases as this is the way they are reported by Defra in the Family Food reports reporting on LCFS food purchases however, as FSS define takeaway foods as eating out, they were re-classified for this report to enable comparison with other work. The 2001-2003 household and eating out figures presented for comparison purposes have been re-calculated for this report following the re-categorisation of takeaway foods from household purchases to eating out purchases.

#### *Contribution to Energy Intake*

As presented in Table 3, mean total energy intakes reduced significantly between 2001-2003 and 2016-2018 from 2126 kcal/day to 1893 kcal/day respectively ( $P < 0.001$ ). For 2016-2018, 86.5% of energy intake was from household food purchases and 13.5% was from eating out purchases. The proportion of energy obtained from household purchases has increased slightly from 82.5% for 2001-2003 while the proportion of energy obtained from eating out purchases has reduced slightly from 17.5% for 2001-2003.

Table 6 shows that the highest contributors to energy were total processed red meat (7.8%), bread and rolls (6.4%), total milk (5.6%), unclassified foods<sup>1</sup> (5.3%), total confectionary (5.2%) and sweet biscuits (5.2%). With the exception of unclassified foods<sup>1</sup> and sandwiches, household consumption provided the greatest proportion of total energy for each of the food groupings. The highest contributors to total energy from eating out foods and drinks were unclassified foods<sup>1</sup> (3.1%), processed potatoes (1.2%), total processed red meat (1.1%), sandwiches (1.0%), alcoholic drinks (1.0%), pizza (0.6%), sugar containing soft drinks (0.6%), and cakes, pastries and puddings (0.5%). On the whole, foods for which there was a significant decrease in the absolute amount over time from 2001-2003 to 2016-2018 also had a decreasing percentage contribution to energy over time. These foods were bread and rolls, total milk, spreading fats, crisps and savoury snacks, sugar containing soft drinks, unprocessed red meat, cooking oil, sugar, and sandwiches. Conversely the contribution from savoury sauces and dressings, ready meals, other baked goods, and pizza to energy increased over the 18-year period (Table 6).

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<sup>1</sup>Includes unspecified foods, mainly eaten out such as 'meal', 'school meal' or 'meal at work', and unspecified meals on wheels - see Appendix 3 for details of all foods included in this food grouping

### *Contribution to Fat Intake*

As presented in Table 3, mean total fat intakes increased significantly between 2001-2003 and 2016-2018 from 38.8% food energy to 39.7% food energy respectively ( $P=0.003$ ). For 2016-2018, 86.2% of fat intake was from household food purchases and 13.8% was from eating out purchases. The proportion of fat obtained from household purchases has increased slightly from 81.9% for 2001-2003 while the proportion of fat obtained from eating out purchases has reduced slightly from 18.1% for 2001-2003.

Table 7 shows that the highest contributors to fat were total processed red meat (12.4%), total spreading fats (11.8%), unclassified foods<sup>1</sup> (6.0%), total cheese (6.0%), sweet biscuits (5.9%), total milk (5.7%), and total confectionary (5.1%). With the exception of unclassified foods<sup>1</sup>, processed potatoes and sandwiches, household consumption provided the greatest proportion of fat for each of the food groupings. The highest contributors to fat from eating out foods and drinks were unclassified foods<sup>1</sup> (3.9%), total processed red meat (1.5%), processed potatoes (1.3%), sandwiches (1.2%), cakes, pastries and puddings (0.6%), and pizza (0.6%). On the whole, foods for which there was a significant decrease in the absolute amount over time from 2001-2003 to 2016-2018 also had a decreasing percentage contribution to energy over time. These foods were total processed red meat, spreading fats, total milk, crisps and savoury snacks, cooking oil, unprocessed red meat, eggs, sandwiches, and bread and rolls. In contrast, contribution from savoury sauces and dressings, ready meals, nuts, pizza, total breakfast cereal, and other baked goods increased over the 18-year period (Table 7).

### *Contribution to Saturated Fat Intake*

As presented in Table 3, mean saturated fats intake remained similar between 2001-2003 and 2016-2018 at 15.6% food energy and 15.4% food energy respectively. For 2016-2018, 88.8% of saturated fat intake was from household food purchases and 11.2% was from eating out purchases. The proportion of saturated fat obtained from household purchases has increased slightly from 85.5% for 2001-2003 while the proportion of saturated fat obtained from eating out purchases has reduced slightly from 14.4% for 2001-2003.

Table 8 shows that the highest contributors to saturated fat were total spreading fats (13.1%), total processed red meat (12.3%), total cheese (9.8%), total milk (9.0%), sweet biscuits (7.8%), total confectionery (7.2%), and unclassified foods<sup>1</sup> (5.0%). With the exception of unclassified foods<sup>1</sup>, sandwiches, and processed potatoes, household consumption provided the greatest proportion of saturated fat for each of the food groupings. The highest contributors to saturated fat from eating out foods and drinks were unclassified foods<sup>1</sup> (2.7%), total processed red meat (1.6%), sandwiches (0.9%), cakes, pastries and puddings (0.6%), pizza (0.6%), processed potatoes (0.6%), and total confectionary (0.5%). On the whole, foods for which there was a significant decrease in the absolute amount over time also had a decreasing percentage contribution to energy over time. These foods were total processed red meat, total milk, unprocessed red meat, crisps and savoury snacks, sandwiches, and processed potatoes. In contrast, contribution from pizza increased (Table 8).

### *Contribution to Free Sugars Intake*

As presented in Table 3, mean free sugars intakes decreased significantly between 2001-2003 and 2016-2018 from 15.1% total energy to 13.5% total energy respectively ( $P<0.001$ ). For 2016-2018, 90.2% of free sugars intake was from household food purchases and 9.8% was from eating out purchases. The proportion

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<sup>1</sup> Includes unspecified foods, mainly eaten out such as 'meal', 'school meal' or 'meal at work', and unspecified meals on wheels - see Appendix 3 for details of all foods included in this food grouping

of free sugars obtained from household purchases has increased slightly from 86.2% for 2001-2003 while the proportion of free sugars obtained from eating out purchases has reduced slightly from 13.8% for 2001-2003. Table 9 shows that the highest contributors to free sugars were total confectionery (19.7%), sugar containing soft drinks (19.5%), sugar (10.4%), sweet biscuits (8.2%), cakes, pastries and puddings (6.4%), total fruit and vegetables (6.4%), ice cream and dairy desserts (5.6%), and jam, marmalade, honey and sweet spreads (5.2%). For all food groupings, except alcoholic drinks, household consumption provided the greatest proportion of free sugars. The highest contributors to free sugars from eating out foods and drinks were sugar-containing soft drinks (4.1%), alcoholic drinks (1.7%), total confectionery (1.1%), and cakes, pastries, and puddings (0.7%). Sugar containing soft drinks contributed an average of 22.5g (25.8% of total free sugars) in 2001-2003 but this decreased to 13.2g (19.5%) by 2016-2018. The percentage contribution from sugar, total fruit and vegetables, and alcoholic drinks, decreased between 2001-2003 and 2016-2018 and percentage contribution from ice cream and dairy desserts increased (Table 9).

#### *Contribution to Fibre Intake*

As presented in Table 3, mean fibre intakes decreased significantly between 2001-2003 and 2016-2018 from 16.4g/day to 15.6g/day respectively ( $P=0.006$ ). For 2016-2018, 85.4% of fibre intake was from household food purchases and 14.6% was from eating out purchases. The proportion of fibre obtained from household purchases has increased slightly from 80.6% for 2001-2003 while the proportion of fibre obtained from eating out purchases has reduced slightly from 19.4% for 2001-2003.

Table 10 shows that the highest contributors to fibre were total fruit and vegetables (24.9%), bread and rolls (12.8%), total breakfast cereals (9.9%), unclassified foods<sup>1</sup> (8.4%), and processed potatoes (5.2%). With the exception of unclassified foods<sup>1</sup> and sandwiches, household consumption provided the greatest proportion of fibre for each of the food groupings. The highest contributors to fibre from eating out foods and drinks were unclassified foods<sup>1</sup> (5.0%), processed potatoes (2.4%), sandwiches (0.9%), fruit and vegetables (0.8%), pizza (0.8%), total processed red meat (0.6%), and soup (0.5%). A significant decrease in the contribution of bread and rolls, crisps and savoury snacks, and potatoes, to fibre was seen in absolute terms, which was reflected in a decreasing percentage contributed. However, a small significant increase in the contribution from pasta, rice and noodles, total processed meat, other baked goods (i.e. items such as non-standard breads such as garlic bread, teacakes etc.), total confectionery, ready meals, cakes pastries and puddings, savoury biscuits, and nuts was observed (Table 10).

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<sup>1</sup> Includes unspecified foods, mainly eaten out such as 'meal', 'school meal' or 'meal at work', and unspecified meals on wheels - see Appendix 3 for details of all foods included in this food grouping

**Table 6: Mean contribution of foods providing more than 1% of energy (2001-2018 data)**

| Food Grouping <sup>1</sup>                  | % Contribution to Total kcal |           |            | kcal (% Contribution to Total kcal) |            |            |            |            |            | P-value for Linear Association <sup>2</sup> | P-value for Overall Association <sup>3</sup> |
|---------------------------------------------|------------------------------|-----------|------------|-------------------------------------|------------|------------|------------|------------|------------|---------------------------------------------|----------------------------------------------|
|                                             | 2016-2018                    |           |            | 2001-2003                           | 2004-2006  | 2007-2009  | 2010-2012  | 2013-2015  | 2016-2018  |                                             |                                              |
|                                             | All                          | Household | Eating out | All                                 | All        | All        | All        | All        | All        |                                             |                                              |
| <b>Total Processed Red Meat<sup>4</sup></b> | 7.8                          | 6.7       | 1.1        | 163 (7.7)                           | 152 (7.4)  | 152 (7.2)  | 151 (7.5)  | 146 (7.5)  | 147 (7.8)  | <b>0.009</b>                                | 0.014                                        |
| <b>Bread and Rolls</b>                      | 6.4                          | 6.3       | 0.1        | 189 (8.9)                           | 172 (8.3)  | 157 (7.5)  | 147 (7.3)  | 130 (6.7)  | 122 (6.4)  | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| <b>Total Milk</b>                           | 5.6                          | 5.5       | 0.1        | 139 (6.5)                           | 125 (6.0)  | 124 (5.9)  | 113 (5.6)  | 104 (5.3)  | 106 (5.6)  | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| <b>Unclassified Foods<sup>5</sup></b>       | 5.3                          | 2.3       | 3.1        | 130 (6.1)                           | 108 (5.2)  | 116 (5.5)  | 112 (5.6)  | 115 (5.9)  | 101 (5.3)  | 0.053                                       | 0.131                                        |
| <b>Total Confectionery</b>                  | 5.2                          | 4.9       | 0.3        | 97.5 (4.6)                          | 90.9 (4.4) | 96.7 (4.6) | 92.0 (4.6) | 92.2 (4.7) | 98.2 (5.2) | 0.931                                       | 0.559                                        |
| <b>Sweet Biscuits</b>                       | 5.2                          | 5.1       | 0.1        | 110 (5.2)                           | 104 (5.0)  | 114 (5.4)  | 98.8 (4.9) | 103 (5.3)  | 98.1 (5.2) | 0.040                                       | 0.039                                        |
| <b>Total Fruit and Vegetables</b>           | 4.8                          | 4.6       | 0.2        | 93.7 (4.4)                          | 102 (5.0)  | 106 (5.0)  | 98.1 (4.9) | 91.9 (4.7) | 90.5 (4.8) | 0.018                                       | <b>&lt;0.001</b>                             |
| <b>Spreading Fats</b>                       | 4.6                          | 4.5       | 0.0        | 102 (4.8)                           | 97.0 (4.7) | 95.5 (4.5) | 96.8 (4.8) | 93.9 (4.8) | 86.1 (4.6) | <b>0.006</b>                                | 0.126                                        |
| <b>Alcoholic Drinks</b>                     | 3.8                          | 2.8       | 1.0        | 82.3 (3.9)                          | 83.3 (4.0) | 76.5 (3.6) | 79.6 (4.0) | 71.1 (3.6) | 72.5 (3.8) | 0.013                                       | 0.092                                        |
| <b>Total Breakfast Cereal</b>               | 3.8                          | 3.8       | 0.0        | 69.8 (3.3)                          | 70.5 (3.4) | 82.4 (3.9) | 77.9 (3.9) | 73.8 (3.8) | 71.9 (3.8) | 0.660                                       | 0.034                                        |
| <b>Crisps and Savoury Snacks</b>            | 3.4                          | 3.2       | 0.2        | 75.1 (3.5)                          | 63.4 (3.1) | 67.5 (3.2) | 61.9 (3.1) | 67.1 (3.4) | 64.0 (3.4) | <b>0.008</b>                                | <b>&lt;0.001</b>                             |
| <b>Total Cheese</b>                         | 3.1                          | 3.1       | 0.0        | 51.6 (2.4)                          | 51.6 (2.5) | 56.1 (2.7) | 52.8 (2.6) | 51.4 (2.6) | 58.8 (3.1) | 0.107                                       | 0.068                                        |
| <b>Cakes, Pastries and Puddings</b>         | 3.1                          | 2.6       | 0.5        | 64.1 (3.0)                          | 64.1 (3.1) | 63.7 (3.0) | 59.6 (3.0) | 59.7 (3.1) | 58.6 (3.1) | 0.083                                       | 0.242                                        |
| <b>Pasta, Rice and Noodles</b>              | 2.9                          | 2.6       | 0.4        | 56.7 (2.7)                          | 53.8 (2.6) | 58.1 (2.8) | 62.4 (3.1) | 61.8 (3.2) | 55.5 (2.9) | 0.481                                       | 0.765                                        |
| <b>Sugar Containing Soft Drinks</b>         | 2.7                          | 2.1       | 0.6        | 87.3 (4.1)                          | 81.5 (3.9) | 75.5 (3.6) | 65.4 (3.3) | 57.0 (2.9) | 51.3 (2.7) | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| <b>Processed Potatoes</b>                   | 2.7                          | 1.4       | 1.2        | 55.5 (2.6)                          | 47.7 (2.3) | 47.9 (2.3) | 49.9 (2.5) | 50.6 (2.6) | 50.5 (2.7) | 0.437                                       | <b>0.004</b>                                 |
| <b>Unprocessed Red Meat</b>                 | 2.3                          | 2.2       | 0.1        | 55.6 (2.6)                          | 51.4 (2.5) | 52.2 (2.5) | 50.2 (2.5) | 43.7 (2.2) | 43.0 (2.3) | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| <b>Poultry</b>                              | 2.1                          | 1.8       | 0.3        | 37.0 (1.7)                          | 38.3 (1.9) | 37.4 (1.8) | 39.1 (1.9) | 36.6 (1.9) | 39.9 (2.1) | 0.471                                       | 0.755                                        |
| <b>Ice Cream and Dairy Desserts</b>         | 2.0                          | 1.9       | 0.1        | 34.8 (1.6)                          | 34.5 (1.7) | 34.5 (1.6) | 34.3 (1.7) | 36.8 (1.9) | 37.9 (2.0) | 0.170                                       | 0.733                                        |
| <b>Savoury Sauces and Dressings</b>         | 2.0                          | 1.9       | 0.1        | 29.8 (1.4)                          | 33.2 (1.6) | 39.4 (1.9) | 37.6 (1.9) | 35.9 (1.8) | 37.7 (2.0) | <b>0.001</b>                                | <b>&lt;0.001</b>                             |
| <b>Ready Meals</b>                          | 2.0                          | 2.0       | 0.0        | 28.0 (1.3)                          | 31.2 (1.5) | 32.1 (1.5) | 33.1 (1.6) | 32.9 (1.7) | 37.4 (2.0) | <b>&lt;0.001</b>                            | <b>0.001</b>                                 |
| <b>Other Baked Goods</b>                    | 1.9                          | 1.7       | 0.2        | 24.6 (1.2)                          | 28.4 (1.4) | 32.7 (1.6) | 31.2 (1.6) | 33.0 (1.7) | 36.1 (1.9) | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| <b>Pizza</b>                                | 1.6                          | 1.0       | 0.6        | 21.7 (1.0)                          | 23.1 (1.1) | 23.1 (1.1) | 28.8 (1.4) | 27.8 (1.4) | 30.7 (1.6) | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| <b>Potatoes</b>                             | 1.5                          | 1.3       | 0.2        | 26.0 (1.2)                          | 36.2 (1.8) | 33.6 (1.6) | 30.7 (1.5) | 28.7 (1.5) | 27.9 (1.5) | 0.078                                       | <b>&lt;0.001</b>                             |
| <b>Cooking Oil</b>                          | 1.4                          | 1.4       | 0.0        | 44.2 (2.1)                          | 50.5 (2.4) | 54.2 (2.6) | 52.0 (2.6) | 51.6 (2.6) | 27.4 (1.4) | <b>0.006</b>                                | <b>&lt;0.001</b>                             |
| <b>Sugar</b>                                | 1.4                          | 1.4       | 0.0        | 51.3 (2.4)                          | 41.9 (2.0) | 42.4 (2.0) | 43.3 (2.2) | 35.7 (1.8) | 26.3 (1.4) | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| <b>Sandwiches</b>                           | 1.3                          | 0.2       | 1.0        | 31.3 (1.5)                          | 30.1 (1.5) | 29.4 (1.4) | 27.4 (1.4) | 24.5 (1.3) | 24.1 (1.3) | <b>&lt;0.001</b>                            | <b>0.001</b>                                 |
| <b>Yoghurt and Fromage Frais</b>            | 1.2                          | 1.2       | 0.0        | 18.3 (0.9)                          | 23.1 (1.1) | 23.5 (1.1) | 23.3 (1.2) | 21.3 (1.1) | 23.6 (1.2) | 0.027                                       | <b>&lt;0.001</b>                             |
| <b>Eggs</b>                                 | 1.0                          | 0.9       | 0.1        | 20.1 (0.9)                          | 17.4 (0.8) | 18.6 (0.9) | 16.7 (0.8) | 15.9 (0.8) | 18.9 (1.0) | 0.091                                       | <b>&lt;0.001</b>                             |
| <b>Other Food Groupings<sup>6</sup></b>     | 7.9                          | 6.0       | 1.9        | 136 (6.4)                           | 158 (7.6)  | 164 (7.8)  | 145 (7.2)  | 158 (8.1)  | 149 (7.9)  | -                                           | -                                            |
| <b>Total % Contributions</b>                | 100.0                        | 86.5      | 13.5       | -                                   | -          | -          | -          | -          | -          | -                                           | -                                            |

<sup>1</sup>See Appendix 8 for details of foods in each food grouping; <sup>2</sup>P-values are for the linear association over time of the contributing amount in kcal; <sup>3</sup>P-values are for the overall association over time of the contributing amount in kcal; <sup>4</sup>May include starch component e.g. pastry / potato / bread; <sup>5</sup>Includes unspecified foods, mainly eating out such as 'meal', 'school meal' or 'meal at work', and unspecified meals on wheels - see Appendix 3 for details of all foods included in this food grouping; <sup>6</sup>Includes all food groupings not already listed - a full list of food groupings is provided in Appendix 7

**Table 7: Mean contribution of foods providing more than 1% of fat (2001-2018 data)**

| Food Grouping <sup>1</sup>            | % Contribution to Total Fat |           |            | Fat g (% Contribution to Total Fat) |             |             |             |             |             | P-value for Linear Association <sup>2</sup> | P-value for Overall Association <sup>3</sup> |
|---------------------------------------|-----------------------------|-----------|------------|-------------------------------------|-------------|-------------|-------------|-------------|-------------|---------------------------------------------|----------------------------------------------|
|                                       | 2016-2018                   |           |            | 2001-2003                           | 2004-2006   | 2007-2009   | 2010-2012   | 2013-2015   | 2016-2018   |                                             |                                              |
|                                       | All                         | Household | Eating out | All                                 | All         | All         | All         | All         | All         |                                             |                                              |
| Total Processed Red Meat <sup>4</sup> | 12.4                        | 10.9      | 1.5        | 11.3 (12.7)                         | 10.5 (12.1) | 10.5 (11.7) | 10.4 (12.3) | 10.1 (12.0) | 10.1 (12.4) | <b>0.004</b>                                | <b>0.006</b>                                 |
| Spreading Fats                        | 11.8                        | 11.7      | 0.1        | 11.1 (12.5)                         | 10.6 (12.3) | 10.5 (11.8) | 10.7 (12.6) | 10.4 (12.4) | 9.5 (11.8)  | <b>0.010</b>                                | 0.174                                        |
| Unclassified Foods <sup>5</sup>       | 6.0                         | 2.1       | 3.9        | 6.7 (7.5)                           | 5.5 (6.3)   | 5.9 (6.6)   | 5.6 (6.6)   | 5.8 (6.9)   | 4.8 (6.0)   | 0.017                                       | 0.056                                        |
| Total Cheese                          | 6.0                         | 6.0       | 0.0        | 4.3 (4.8)                           | 4.3 (4.9)   | 4.6 (5.2)   | 4.3 (5.1)   | 4.2 (5.1)   | 4.8 (6.0)   | 0.136                                       | 0.060                                        |
| Sweet Biscuits                        | 5.9                         | 5.8       | 0.1        | 5.3 (6.0)                           | 5.0 (5.7)   | 5.4 (6.0)   | 4.7 (5.6)   | 4.9 (5.9)   | 4.8 (5.9)   | 0.055                                       | 0.046                                        |
| Total Milk                            | 5.7                         | 5.6       | 0.1        | 6.5 (7.3)                           | 5.6 (6.5)   | 5.4 (6.0)   | 4.8 (5.7)   | 4.4 (5.2)   | 4.6 (5.7)   | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Total Confectionery                   | 5.1                         | 4.8       | 0.3        | 3.8 (4.3)                           | 3.7 (4.2)   | 4.0 (4.5)   | 3.8 (4.5)   | 3.7 (4.5)   | 4.1 (5.1)   | 0.284                                       | 0.405                                        |
| Crisps and Savoury Snacks             | 4.4                         | 4.1       | 0.3        | 4.6 (5.1)                           | 3.9 (4.5)   | 4.0 (4.5)   | 3.5 (4.1)   | 3.8 (4.5)   | 3.6 (4.4)   | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Cooking Oil                           | 3.8                         | 3.8       | 0.0        | 4.9 (5.5)                           | 5.6 (6.5)   | 6.0 (6.8)   | 5.8 (6.8)   | 5.7 (6.8)   | 3.0 (3.8)   | <b>0.006</b>                                | <b>&lt;0.001</b>                             |
| Unprocessed Red Meat                  | 3.4                         | 3.3       | 0.1        | 3.7 (4.1)                           | 3.3 (3.9)   | 3.5 (3.9)   | 3.3 (3.8)   | 2.8 (3.4)   | 2.8 (3.4)   | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Cakes, Pastries and Puddings          | 3.4                         | 2.7       | 0.6        | 2.9 (3.2)                           | 2.9 (3.3)   | 3.0 (3.3)   | 2.8 (3.3)   | 2.8 (3.3)   | 2.7 (3.4)   | 0.287                                       | 0.593                                        |
| Savoury Sauces and Dressings          | 3.4                         | 3.2       | 0.2        | 1.9 (2.2)                           | 2.3 (2.6)   | 2.8 (3.1)   | 2.6 (3.1)   | 2.5 (3.0)   | 2.7 (3.4)   | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Poultry                               | 2.7                         | 2.4       | 0.3        | 2.0 (2.2)                           | 2.1 (2.4)   | 2.0 (2.2)   | 2.1 (2.5)   | 2.0 (2.4)   | 2.2 (2.7)   | 0.259                                       | 0.611                                        |
| Processed Potatoes                    | 2.4                         | 1.1       | 1.3        | 2.2 (2.5)                           | 1.9 (2.2)   | 1.8 (2.1)   | 1.8 (2.2)   | 1.9 (2.3)   | 2.0 (2.4)   | 0.107                                       | <b>&lt;0.001</b>                             |
| Ready Meals                           | 2.3                         | 2.3       | 0.0        | 1.3 (1.5)                           | 1.5 (1.8)   | 1.6 (1.8)   | 1.6 (1.9)   | 1.6 (2.0)   | 1.9 (2.3)   | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Ice Cream and Dairy Desserts          | 2.3                         | 2.1       | 0.2        | 1.9 (2.1)                           | 1.9 (2.2)   | 1.8 (2.0)   | 1.7 (2.0)   | 1.8 (2.1)   | 1.8 (2.3)   | 0.338                                       | 0.218                                        |
| Nuts                                  | 1.7                         | 1.7       | 0.0        | 0.7 (0.8)                           | 1.2 (1.4)   | 1.4 (1.6)   | 1.2 (1.4)   | 1.6 (1.9)   | 1.4 (1.7)   | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Eggs                                  | 1.6                         | 1.4       | 0.2        | 1.5 (1.7)                           | 1.3 (1.5)   | 1.4 (1.6)   | 1.2 (1.4)   | 1.1 (1.3)   | 1.3 (1.6)   | <b>0.002</b>                                | <b>&lt;0.001</b>                             |
| Sandwiches                            | 1.5                         | 0.3       | 1.2        | 1.6 (1.8)                           | 1.5 (1.8)   | 1.5 (1.7)   | 1.4 (1.6)   | 1.2 (1.5)   | 1.2 (1.5)   | <b>&lt;0.001</b>                            | <b>0.002</b>                                 |
| Pizza                                 | 1.5                         | 0.9       | 0.6        | 0.8 (0.9)                           | 0.9 (1.0)   | 0.8 (1.0)   | 1.1 (1.3)   | 1.1 (1.3)   | 1.2 (1.5)   | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Bread and Rolls                       | 1.4                         | 1.3       | 0.1        | 1.7 (1.9)                           | 1.6 (1.9)   | 1.5 (1.7)   | 1.4 (1.6)   | 1.2 (1.4)   | 1.1 (1.4)   | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Cream                                 | 1.4                         | 1.3       | 0.0        | 0.9 (1.0)                           | 1.1 (1.3)   | 1.1 (1.3)   | 1.2 (1.4)   | 1.3 (1.6)   | 1.1 (1.4)   | 0.026                                       | <b>0.001</b>                                 |
| Total Breakfast Cereal                | 1.1                         | 1.1       | 0.0        | 0.6 (0.7)                           | 0.7 (0.8)   | 0.9 (1.0)   | 0.8 (1.0)   | 0.8 (1.0)   | 0.9 (1.1)   | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Other Baked Goods                     | 1.0                         | 0.9       | 0.1        | 0.6 (0.7)                           | 0.7 (0.8)   | 0.8 (0.9)   | 0.7 (0.9)   | 0.8 (0.9)   | 0.8 (1.0)   | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Total Fruit and Vegetables            | 1.0                         | 0.9       | 0.1        | 0.8 (0.9)                           | 0.9 (1.0)   | 0.9 (1.0)   | 0.8 (0.9)   | 0.8 (0.9)   | 0.8 (1.0)   | 0.196                                       | <b>0.002</b>                                 |
| Other Food Groupings <sup>6</sup>     | 7.0                         | 4.5       | 2.5        | 5.5 (6.2)                           | 6.2 (7.2)   | 5.9 (6.7)   | 5.4 (6.4)   | 5.6 (6.7)   | 5.7 (7.0)   | -                                           | -                                            |
| Total % Contributions                 | 100.0                       | 86.2      | 13.8       | -                                   | -           | -           | -           | -           | -           | -                                           | -                                            |

<sup>1</sup>See Appendix 8 for details of foods in each food grouping; <sup>2</sup>P-values are for the linear association over time of the contributing amount in g; <sup>3</sup>P-values are for the overall association over time of the contributing amount in g; <sup>4</sup>May include starch component e.g. pastry / potato / bread; <sup>5</sup>Includes unspecified foods, mainly eating out such as 'meal', 'school meal' or 'meal at work', and unspecified meals on wheels - see Appendix 8 for details of all foods included in this food grouping; <sup>6</sup>Includes all food groupings not already listed - a full list of food groupings is provided in Appendix 7

**Table 8: Mean contribution of foods providing more than 1% of saturated fat (2001-2018 data)**

| Food Grouping <sup>1</sup>            | % Contribution to Total Saturated Fat |           |            | Saturated Fat g (% Contribution to Total Saturated Fat) |            |            |            |            |            | P-value for Linear Association <sup>2</sup> | P-value for Overall Association <sup>3</sup> |
|---------------------------------------|---------------------------------------|-----------|------------|---------------------------------------------------------|------------|------------|------------|------------|------------|---------------------------------------------|----------------------------------------------|
|                                       | 2016-2018                             |           |            | 2001-2003                                               | 2004-2006  | 2007-2009  | 2010-2012  | 2013-2015  | 2016-2018  |                                             |                                              |
|                                       | All                                   | Household | Eating out | All                                                     | All        | All        | All        | All        | All        |                                             |                                              |
| Spreading Fats                        | 13.1                                  | 13.0      | 0.1        | 4.6 (13.0)                                              | 4.9 (14.2) | 4.7 (13.8) | 5.0 (15.5) | 5.1 (16.0) | 4.1 (13.1) | 0.292                                       | 0.027                                        |
| Total Processed Red Meat <sup>4</sup> | 12.3                                  | 10.8      | 1.6        | 4.4 (12.3)                                              | 4.0 (11.8) | 4.0 (11.6) | 4.0 (12.3) | 3.8 (12.0) | 3.8 (12.3) | <b>0.001</b>                                | <b>0.003</b>                                 |
| Total Cheese                          | 9.8                                   | 9.8       | 0.0        | 2.7 (7.6)                                               | 2.7 (7.9)  | 3.0 (8.6)  | 2.7 (8.5)  | 2.7 (8.4)  | 3.1 (9.8)  | 0.180                                       | 0.059                                        |
| Total Milk                            | 9.0                                   | 8.9       | 0.2        | 4.1 (11.5)                                              | 3.5 (10.2) | 3.4 (9.7)  | 3.0 (9.2)  | 2.7 (8.5)  | 2.8 (9.0)  | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Sweet Biscuits                        | 7.8                                   | 7.7       | 0.1        | 2.8 (7.9)                                               | 2.6 (7.5)  | 2.7 (7.8)  | 2.4 (7.4)  | 2.5 (7.7)  | 2.4 (7.8)  | 0.017                                       | <b>0.005</b>                                 |
| Total Confectionery                   | 7.2                                   | 6.7       | 0.5        | 2.1 (6.1)                                               | 2.0 (6.0)  | 2.2 (6.5)  | 2.1 (6.4)  | 2.0 (6.3)  | 2.2 (7.2)  | 0.828                                       | 0.363                                        |
| Unclassified Foods <sup>5</sup>       | 5.0                                   | 2.3       | 2.7        | 2.0 (5.7)                                               | 1.7 (5.0)  | 1.9 (5.5)  | 1.8 (5.5)  | 1.8 (5.8)  | 1.6 (5.0)  | 0.043                                       | 0.097                                        |
| Ice Cream and Dairy Desserts          | 3.9                                   | 3.6       | 0.3        | 1.2 (3.5)                                               | 1.2 (3.6)  | 1.2 (3.5)  | 1.1 (3.4)  | 1.2 (3.7)  | 1.2 (3.9)  | 0.579                                       | 0.430                                        |
| Unprocessed Red Meat                  | 3.7                                   | 3.6       | 0.2        | 1.5 (4.4)                                               | 1.4 (4.2)  | 1.5 (4.2)  | 1.4 (4.3)  | 1.2 (3.7)  | 1.2 (3.7)  | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Cakes, Pastries and Puddings          | 3.7                                   | 3.1       | 0.6        | 1.2 (3.5)                                               | 1.2 (3.6)  | 1.3 (3.6)  | 1.2 (3.6)  | 1.2 (3.7)  | 1.1 (3.7)  | 0.085                                       | 0.283                                        |
| Cream                                 | 2.2                                   | 2.2       | 0.0        | 0.6 (1.6)                                               | 0.7 (2.0)  | 0.7 (2.1)  | 0.8 (2.4)  | 0.8 (2.6)  | 0.7 (2.2)  | 0.026                                       | <b>0.001</b>                                 |
| Poultry                               | 2.0                                   | 1.7       | 0.2        | 0.6 (1.6)                                               | 0.6 (1.7)  | 0.6 (1.6)  | 0.6 (1.8)  | 0.6 (1.8)  | 0.6 (2.0)  | 0.266                                       | 0.619                                        |
| Pizza                                 | 1.5                                   | 0.9       | 0.6        | 0.3 (0.9)                                               | 0.4 (1.0)  | 0.3 (1.0)  | 0.4 (1.4)  | 0.4 (1.4)  | 0.5 (1.5)  | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Crisps and Savoury Snacks             | 1.5                                   | 1.2       | 0.3        | 1.8 (5.1)                                               | 1.5 (4.4)  | 1.2 (3.3)  | 0.5 (1.5)  | 0.5 (1.6)  | 0.5 (1.5)  | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Ready Meals                           | 1.4                                   | 1.4       | 0.0        | 0.4 (1.1)                                               | 0.4 (1.3)  | 0.4 (1.2)  | 0.4 (1.2)  | 0.4 (1.2)  | 0.4 (1.4)  | 0.603                                       | 0.256                                        |
| Sandwiches                            | 1.2                                   | 0.3       | 0.9        | 0.5 (1.3)                                               | 0.4 (1.3)  | 0.5 (1.3)  | 0.4 (1.3)  | 0.4 (1.2)  | 0.4 (1.2)  | <b>&lt;0.001</b>                            | <b>0.002</b>                                 |
| Cooking Oil                           | 1.2                                   | 1.2       | 0.0        | 0.6 (1.6)                                               | 0.6 (1.9)  | 0.7 (2.0)  | 0.7 (2.1)  | 0.7 (2.1)  | 0.4 (1.2)  | 0.017                                       | <b>&lt;0.001</b>                             |
| Eggs                                  | 1.2                                   | 1.0       | 0.1        | 0.4 (1.2)                                               | 0.4 (1.1)  | 0.4 (1.1)  | 0.3 (1.0)  | 0.3 (1.0)  | 0.4 (1.2)  | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Savoury Sauces and Dressings          | 1.1                                   | 1.0       | 0.2        | 0.3 (0.9)                                               | 0.4 (1.1)  | 0.4 (1.2)  | 0.3 (1.1)  | 0.3 (1.0)  | 0.3 (1.1)  | 0.918                                       | <b>&lt;0.001</b>                             |
| Processed Potatoes                    | 1.1                                   | 0.5       | 0.6        | 0.4 (1.2)                                               | 0.4 (1.1)  | 0.3 (0.9)  | 0.3 (1.0)  | 0.3 (1.1)  | 0.3 (1.1)  | <b>&lt;0.001</b>                            | <b>&lt;0.001</b>                             |
| Yoghurt and Fromage Frais             | 1.0                                   | 1.0       | 0.0        | 0.3 (0.8)                                               | 0.3 (1.0)  | 0.3 (1.0)  | 0.3 (1.0)  | 0.3 (0.9)  | 0.3 (1.0)  | 0.410                                       | <b>&lt;0.001</b>                             |
| Other Food Groupings <sup>6</sup>     | 8.9                                   | 6.9       | 2.0        | 2.5 (7.2)                                               | 2.8 (8.2)  | 2.9 (8.5)  | 2.6 (8.1)  | 2.7 (8.4)  | 2.8 (8.9)  | -                                           | -                                            |
| Total % Contributions                 | 100.0                                 | 88.8      | 11.2       | -                                                       | -          | -          | -          | -          | -          | -                                           | -                                            |

<sup>1</sup>See Appendix 8 for details of foods in each food grouping; <sup>2</sup>P-values are for the linear association over time of the contributing amount in g; <sup>3</sup>P-values are for the overall association over time of the contributing amount in g; <sup>4</sup>May include starch component e.g. pastry / potato / bread; <sup>5</sup>Includes unspecified foods, mainly eating out such as 'meal', 'school meal' or 'meal at work', and unspecified meals on wheels - see Appendix 8 for details of all foods included in this food grouping; <sup>6</sup>Includes all food groupings not already listed - a full list of food groupings is provided in Appendix 7

**Table 9: Mean contribution of foods providing more than 1% of free sugars\* (2001-2018 data)**

| Food Grouping <sup>1</sup>                     | % Contribution to Total Free Sugars |           |            | Free Sugars g (% Contribution to Total Free Sugars) |             |             |             |             |             | P-value for Linear Association <sup>2</sup> | P-value for Overall Association <sup>3</sup> |
|------------------------------------------------|-------------------------------------|-----------|------------|-----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|---------------------------------------------|----------------------------------------------|
|                                                | 2016-2018                           |           |            | 2001-2003                                           | 2004-2006   | 2007-2009   | 2010-2012   | 2013-2015   | 2016-2018   |                                             |                                              |
|                                                | All                                 | Household | Eating out | All                                                 | All         | All         | All         | All         | All         |                                             |                                              |
| <b>Total Confectionery</b>                     | 19.7                                | 18.6      | 1.1        | 13.9 (16.0)                                         | 12.8 (15.5) | 13.3 (16.1) | 12.6 (16.5) | 12.8 (17.9) | 13.3 (19.7) | 0.453                                       | 0.350                                        |
| <b>Sugar Containing Soft Drinks</b>            | 19.5                                | 15.4      | 4.1        | 22.5 (25.8)                                         | 21.1 (25.6) | 19.5 (23.7) | 17.0 (22.2) | 14.9 (20.8) | 13.2 (19.5) | <0.001                                      | <0.001                                       |
| <b>Sugar</b>                                   | 10.4                                | 10.3      | 0.0        | 13.7 (15.7)                                         | 11.2 (13.6) | 11.3 (13.7) | 11.5 (15.1) | 9.5 (13.3)  | 7.0 (10.4)  | <0.001                                      | <0.001                                       |
| <b>Sweet Biscuits</b>                          | 8.2                                 | 8.1       | 0.1        | 6.3 (7.3)                                           | 5.8 (7.1)   | 6.4 (7.8)   | 5.5 (7.2)   | 5.7 (8.0)   | 5.6 (8.2)   | 0.022                                       | 0.009                                        |
| <b>Cakes, Pastries and Puddings</b>            | 6.4                                 | 5.7       | 0.7        | 4.9 (5.6)                                           | 4.9 (6.0)   | 4.8 (5.8)   | 4.4 (5.8)   | 4.4 (6.2)   | 4.3 (6.4)   | 0.022                                       | 0.048                                        |
| <b>Total Fruit and Vegetables</b>              | 6.4                                 | 6.0       | 0.4        | 5.7 (6.6)                                           | 6.1 (7.4)   | 6.4 (7.8)   | 5.9 (7.7)   | 4.9 (6.8)   | 4.3 (6.4)   | <0.001                                      | <0.001                                       |
| <b>Ice Cream and Dairy Desserts</b>            | 5.6                                 | 5.3       | 0.3        | 2.9 (3.3)                                           | 2.8 (3.4)   | 3.0 (3.6)   | 3.3 (4.4)   | 3.7 (5.1)   | 3.8 (5.6)   | <0.001                                      | <0.001                                       |
| <b>Jam, marmalade, honey and sweet spreads</b> | 5.2                                 | 5.2       | 0.1        | 3.2 (3.7)                                           | 3.5 (4.3)   | 3.9 (4.7)   | 3.5 (4.6)   | 3.5 (4.9)   | 3.5 (5.2)   | 0.595                                       | 0.392                                        |
| <b>Total Breakfast Cereal</b>                  | 3.5                                 | 3.5       | 0.0        | 2.9 (3.3)                                           | 2.6 (3.1)   | 2.9 (3.6)   | 2.5 (3.2)   | 2.5 (3.5)   | 2.3 (3.5)   | 0.021                                       | 0.020                                        |
| <b>Alcoholic Drinks</b>                        | 2.9                                 | 1.2       | 1.7        | 2.7 (3.1)                                           | 2.7 (3.3)   | 2.3 (2.7)   | 2.2 (2.9)   | 1.8 (2.5)   | 2.0 (2.9)   | <0.001                                      | <0.001                                       |
| <b>Savoury Sauces and Dressings</b>            | 2.8                                 | 2.8       | 0.0        | 2.0 (2.3)                                           | 1.9 (2.4)   | 2.0 (2.4)   | 2.0 (2.6)   | 1.9 (2.6)   | 1.9 (2.8)   | 0.246                                       | 0.548                                        |
| <b>Yoghurt and Fromage Frais</b>               | 2.8                                 | 2.8       | 0.0        | 1.5 (1.7)                                           | 1.8 (2.2)   | 1.9 (2.3)   | 1.9 (2.4)   | 1.7 (2.4)   | 1.9 (2.8)   | 0.023                                       | <0.001                                       |
| <b>Unclassified Foods<sup>4</sup></b>          | 1.1                                 | 0.7       | 0.4        | 0.9 (1.0)                                           | 0.9 (1.0)   | 0.9 (1.1)   | 0.8 (1.0)   | 0.7 (1.0)   | 0.7 (1.1)   | 0.033                                       | 0.270                                        |
| <b>Other Food Groupings<sup>5</sup></b>        | 0.8                                 | 4.2       | 4.8        | 4.2 (4.8)                                           | 4.2 (5.1)   | 3.9 (4.7)   | 3.4 (4.5)   | 3.6 (5.0)   | 3.7 (5.5)   | -                                           | -                                            |
| <b>Total % Contributions</b>                   | 100.0                               | 90.2      | 9.8        | -                                                   | -           | -           | -           | -           | -           | -                                           | -                                            |

\*NMES figures provided as a proxy for free sugars; <sup>1</sup>See Appendix 8 for details of foods in each food grouping; <sup>2</sup>P-values are for the linear association over time of the contributing amount in g; <sup>3</sup>P-values are for the overall association over time of the contributing amount in g; <sup>4</sup>Includes unspecified foods, mainly eating out such as 'meal', 'school meal' or 'meal at work', and unspecified meals on wheels - see Appendix 8 for details of all foods included in this food grouping; <sup>5</sup>Includes all food groupings not already listed - a full list of food groupings is provided in Appendix 7



**Table 10: Mean contribution of foods providing more than 1% of fibre\* (2001-2018 data)**

| Food Grouping <sup>1</sup>            | % Contribution to Total Fibre |           |            | Fibre g (% Contribution to Total Fibre) |            |            |            |            |            | P-value for Linear Association <sup>2</sup> | P-value for Overall Association <sup>3</sup> |
|---------------------------------------|-------------------------------|-----------|------------|-----------------------------------------|------------|------------|------------|------------|------------|---------------------------------------------|----------------------------------------------|
|                                       | 2016-2018                     |           |            | 2001-2003                               | 2004-2006  | 2007-2009  | 2010-2012  | 2013-2015  | 2016-2018  |                                             |                                              |
|                                       | All                           | Household | Eating out | All                                     | All        | All        | All        | All        | All        |                                             |                                              |
| Total Fruit and Vegetables            | 24.9                          | 24.0      | 0.8        | 3.8 (23.5)                              | 4.1 (25.1) | 4.3 (25.1) | 3.9 (24.1) | 3.8 (24.1) | 3.9 (24.9) | 0.226                                       | 0.011                                        |
| Bread and Rolls                       | 12.8                          | 12.7      | 0.2        | 2.7 (16.3)                              | 2.7 (16.2) | 2.5 (14.7) | 2.3 (14.4) | 2.1 (13.5) | 2.0 (12.8) | <0.001                                      | <0.001                                       |
| Total Breakfast Cereal                | 9.9                           | 9.9       | 0.0        | 1.7 (10.5)                              | 1.6 (9.5)  | 1.8 (10.3) | 1.6 (10.0) | 1.5 (9.7)  | 1.5 (9.9)  | 0.196                                       | 0.117                                        |
| Unclassified Foods <sup>4</sup>       | 8.4                           | 3.4       | 5.0        | 1.7 (10.4)                              | 1.4 (8.4)  | 1.5 (8.7)  | 1.4 (8.7)  | 1.4 (9.2)  | 1.3 (8.4)  | 0.046                                       | 0.105                                        |
| Processed Potatoes                    | 5.2                           | 2.8       | 2.4        | 0.8 (5.1)                               | 0.7 (4.3)  | 0.7 (4.4)  | 0.8 (5.1)  | 0.8 (5.2)  | 0.8 (5.2)  | 0.323                                       | 0.001                                        |
| Pasta, Rice and Noodles               | 4.1                           | 3.7       | 0.4        | 0.5 (3.0)                               | 0.5 (3.3)  | 0.6 (3.7)  | 0.6 (3.8)  | 0.6 (3.8)  | 0.6 (4.1)  | 0.002                                       | <0.001                                       |
| Sweet Biscuits                        | 3.6                           | 3.5       | 0.1        | 0.6 (3.5)                               | 0.5 (3.3)  | 0.6 (3.6)  | 0.6 (3.5)  | 0.6 (3.7)  | 0.6 (3.6)  | 0.957                                       | 0.085                                        |
| Crisps and Savoury Snacks             | 3.5                           | 3.2       | 0.3        | 0.9 (5.4)                               | 0.7 (4.5)  | 0.6 (3.7)  | 0.6 (3.5)  | 0.6 (3.6)  | 0.5 (3.5)  | <0.001                                      | <0.001                                       |
| Total Processed Red Meat <sup>5</sup> | 2.9                           | 2.3       | 0.6        | 0.4 (2.5)                               | 0.4 (2.4)  | 0.4 (2.3)  | 0.4 (2.8)  | 0.4 (2.8)  | 0.5 (2.9)  | <0.001                                      | 0.001                                        |
| Other Baked Goods                     | 2.7                           | 2.6       | 0.2        | 0.3 (1.6)                               | 0.3 (2.0)  | 0.4 (2.2)  | 0.4 (2.3)  | 0.4 (2.5)  | 0.4 (2.7)  | <0.001                                      | <0.001                                       |
| Potatoes                              | 2.6                           | 2.2       | 0.4        | 0.5 (3.2)                               | 0.8 (4.8)  | 0.7 (4.3)  | 0.6 (3.6)  | 0.4 (2.6)  | 0.4 (2.6)  | <0.001                                      | <0.001                                       |
| Total Confectionery                   | 2.5                           | 2.5       | 0.0        | 0.2 (1.1)                               | 0.2 (1.1)  | 0.2 (1.2)  | 0.4 (2.2)  | 0.4 (2.2)  | 0.4 (2.5)  | <0.001                                      | <0.001                                       |
| Ready Meals                           | 2.2                           | 2.2       | 0.0        | 0.2 (1.4)                               | 0.2 (1.5)  | 0.3 (1.5)  | 0.3 (1.8)  | 0.3 (1.9)  | 0.3 (2.2)  | <0.001                                      | <0.001                                       |
| Cakes, Pastries and Puddings          | 1.9                           | 1.5       | 0.3        | 0.2 (1.5)                               | 0.2 (1.5)  | 0.3 (1.6)  | 0.3 (1.8)  | 0.3 (1.9)  | 0.3 (1.9)  | 0.002                                       | <0.001                                       |
| Pizza                                 | 1.7                           | 1.0       | 0.8        | 0.2 (1.4)                               | 0.2 (1.5)  | 0.2 (1.3)  | 0.3 (1.6)  | 0.2 (1.6)  | 0.3 (1.7)  | 0.030                                       | 0.092                                        |
| Savoury Sauces and Dressings          | 1.6                           | 1.5       | 0.1        | 0.2 (1.3)                               | 0.2 (1.5)  | 0.3 (1.6)  | 0.3 (1.6)  | 0.2 (1.6)  | 0.2 (1.6)  | 0.046                                       | <0.001                                       |
| Savoury Biscuits                      | 1.4                           | 1.4       | 0.0        | 0.1 (0.8)                               | 0.1 (0.9)  | 0.2 (1.0)  | 0.2 (1.1)  | 0.2 (1.2)  | 0.2 (1.4)  | <0.001                                      | <0.001                                       |
| Nuts                                  | 1.4                           | 1.4       | 0.0        | 0.1 (0.7)                               | 0.2 (1.2)  | 0.2 (1.4)  | 0.2 (1.2)  | 0.3 (1.6)  | 0.2 (1.4)  | <0.001                                      | <0.001                                       |
| Flour                                 | 1.3                           | 1.3       | 0.0        | 0.2 (1.0)                               | 0.2 (1.2)  | 0.3 (1.6)  | 0.2 (1.3)  | 0.3 (1.6)  | 0.2 (1.3)  | 0.321                                       | 0.030                                        |
| Sandwiches                            | 1.2                           | 0.2       | 0.9        | 0.2 (1.4)                               | 0.2 (1.4)  | 0.2 (1.3)  | 0.2 (1.3)  | 0.2 (1.2)  | 0.2 (1.2)  | <0.001                                      | 0.002                                        |
| Soup                                  | 1.0                           | 0.6       | 0.5        | 0.2 (1.1)                               | 0.2 (1.1)  | 0.2 (1.0)  | 0.2 (1.2)  | 0.2 (1.0)  | 0.2 (1.0)  | 0.099                                       | 0.168                                        |
| Other Food Groupings <sup>6</sup>     | 0.3                           | 0.1       | 0.2        | 0.5 (3.2)                               | 0.6 (3.5)  | 0.6 (3.3)  | 0.5 (3.2)  | 0.6 (3.6)  | 0.5 (3.3)  | -                                           | -                                            |
| Total % Contributions                 | 100.0                         | 85.4      | 14.6       | -                                       | -          | -          | -          | -          | -          | -                                           | -                                            |

\*AOAC fibre is estimated as NSP multiplied by 1.33; <sup>1</sup>Please see Appendix 8 for details of foods in each food grouping; <sup>2</sup>P-values are for the linear association over time of the contributing amount in g; <sup>3</sup>P-values are for the overall association over time of the contributing amount in g; <sup>4</sup>Includes unspecified foods, mainly eating out such as 'meal', 'school meal' or 'meal at work', and unspecified meals on wheels - see Appendix 8 for details of all foods included in this food grouping; <sup>5</sup>May include starch component e.g. pastry / potato / bread; <sup>6</sup>Full list of food groupings are provided in Appendix 2; <sup>6</sup>Includes all food groupings not already listed - a full list of food groupings is provided in Appendix 7

## 4. Discussion

### *Monitoring of Scottish Dietary Goals and Additional Foods and Drinks Indicative of Diet Quality*

Estimates of mean food consumption and nutrient intake for Scotland, calculated using the household and eating out data from LCFS purchase data, and described previously (Barton *et al.*, 2010, Wrieden and Barton, 2011, Barton and Wrieden, 2012, Wrieden and Barton, 2015) were updated by the addition of the years 2016, 2017, and 2018 to give trend data from 2001 through to 2018; which has been used to assess progress towards the Scottish Dietary Goals. Until 2018, this was the only method of monitoring the complete diet over time in Scotland. Following the pilot of Intake24 in the 2018 SHeS (Rowland *et al.*, 2020), Intake24 is being included in the 2021 SHeS, as part of FSS's dietary surveillance programme monitoring progress towards SDGs and other dietary change in Scotland. FSS also monitor retail purchase and price promotions (Food Standards Scotland, 2020a) and the out of home environment (Quirk *et al.*, 2020) as part of their dietary surveillance programme. Advantages and disadvantages of using the LCFS to estimate food consumption and nutrient intake are presented in Appendix 2. Advantages include the annual robust sample size for Scotland, collection of data over 14 days, and the possibility of the data being less susceptible to misreporting and non-response bias. Disadvantages include that the data is collected at a household level, therefore results are for a typical average person in the household with no differentiation for age/sex or consumer/non-consumer, and that it is purchase rather than consumption data.

A summary of the results for the goals measured here are presented in Table 11. Although there have been fluctuations over the 18 years, little change was found in intakes of most foods and nutrients between 2001 and 2018. Red and processed meat consumption has significantly decreased, and the goal has been met since 2001. There has been a significant decrease in free sugars intake making some progress towards the goal, however progress is slow, and mean intake exceeds the population goal by two and a half times (168%). In contrast, there has been a significant increase in total fat intake and a significant decrease in fibre intake; both of which show movement away from the goals rather than progress towards them.

**Table 11: Mean food consumption and nutrient intakes in relation to the Scottish Dietary Goals from 2001-2003 to 2016-2018**

|                                                     | 2016 Scottish Dietary Goal                                                             | 2001-2003 | 2016-2018 | Change between 2001-2003 and 2016-2018 <sup>1</sup> | Progress Towards SDG |
|-----------------------------------------------------|----------------------------------------------------------------------------------------|-----------|-----------|-----------------------------------------------------|----------------------|
| <b>Total Energy</b><br>(kcal/day)                   | A reduction in calorie intake by 120 kcal per person per day                           | 2126      | 1893      | ↓                                                   | N/A <sup>2</sup>     |
| <b>Energy density</b><br>(kcal/100g)                | Average energy density of the diet to be lowered to 125 kcal/100g                      | 171       | 172       | No Change                                           | Goal not met         |
| <b>Fruit and Vegetables</b><br>(g/day)              | At least 5 portions per person per day (>400 g/day)                                    | 256       | 265       | No Change                                           | Goal not met         |
| <b>Oil rich fish</b><br>(g/week)                    | Increase to one portion per person (140g) per week                                     | 29        | 33        | No Change                                           | Goal not met         |
| <b>Red Meat</b><br>(g/day)                          | Average intake of red and processed meat to be pegged at around 70g per person per day | 65        | 55        | ↓                                                   | Goal met             |
| <b>Fat</b><br>(% food energy)                       | ≤35% food energy                                                                       | 38.8      | 39.7      | ↑                                                   | Goal not met         |
| <b>Saturated Fat</b><br>(% food energy)             | ≤11% of food energy                                                                    | 15.6      | 15.4      | No Change                                           | Goal not met         |
| <b>Free Sugars</b> <sup>3</sup><br>(% total energy) | ≤5% of total energy in adults and children over 2 years                                | 15.1      | 13.4      | ↓                                                   | Goal not met         |
| <b>Fibre</b><br>(g/day)                             | Increase in average consumption of AOAC <sup>4</sup> fibre to 30g/day                  | 16.4      | 15.6      | ↓                                                   | Goal not met         |
| <b>Carbohydrate</b><br>(% total energy)             | 50% of total energy with no more than 5% total energy from free sugars                 | 45.2      | 44.3      | No Change                                           | Goal not met         |

<sup>1</sup>Based on P-value for linear association ≤0.01; <sup>2</sup>LCFS is not used to monitor energy intakes because, as with all dietary intake monitoring, it could be subject to under-reporting, since energy SDG was introduced in 2013 there has only been a 39kcal/day reduction; <sup>3</sup>Free sugars are sugars added to food or drink and those which are found naturally in honey, syrups, and fruit juices, NMES figures provided as a proxy for free sugars; <sup>4</sup>Fibre as measured by American Association of Analytical Chemists (AOAC) methods, calculated from non-starch polysaccharide (NSP) as measured by Englyst method (AOAC fibre is estimated as NSP multiplied by 1.33).

Results from the LCFS suggest little progress towards the Scottish Dietary Goals except for free sugar intake. There has been a statistically significant reduction in free sugar intake over the period 2001-2018; in particular, there has been a statistically significant fall in 2018 (April 2018 to March 2019) alone (see Appendix 9, Table 15, and Figure 17) which may have some relation to the introduction of the Soft Drinks Industry Levy on 6<sup>th</sup> April 2018 (HM Revenue & Customs, 2016). For other foods and nutrients, little or no change was found in the trends of consumption of the food-based goals over the period 2001-2018. For data from 2016, the 95% CI are greater than in previous years due to a reduction in sample size, however it is noted that this does not appear to have had a substantial effect on the results presented.

The small, but statistically significant, increase in mean consumption of fruit and vegetables, found in the 10-year period from 2001 to 2010 stalled for 2012-2015 however, mean consumption for 2016-2018 has almost recovered to 2010-2012 levels, with no significant change overall between 2001-2003 and 2016-2018. Mean fruit and vegetable consumption remains almost 2 portions below the population target of 5 portions per day. No change has been found in oil rich fish consumption. Red and processed meat consumption reduced significantly between 2001-2003 and 2016-2018 with mean consumption meeting the goals. Total fat intake has been steadily increasing since 2004-2006 and now shows a significant increase between 2001-2003 and 2016-2018; this trend moves total fat intake

in the opposite direction from the Scottish Dietary Goal. Similar results have also been found in other recent reports (Bates *et al.*, 2020, Food Standards Scotland, 2020a). However, it is acknowledged that, due to the proportionate nature of macronutrient intake to total energy intake, this increase in fat intake (as a percentage of food energy) has occurred due to the decrease in carbohydrate intake (as a percentage of total energy) brought about by the reduction in free sugars, and not by an increase in fat intake in grams (which has actually decreased). Total energy intake has also decreased.

The changes reported in fat and oil consumption over the 18-year period, particularly in the last three years, were further investigated to check that there had been no re-categorisation of any fat spreads over this period. Defra confirmed that no changes have been made. In addition, reported changes are mirrored in data for the UK (Department for Environment Food & Rural Affairs (Defra), 2020) so are unlikely to be caused by an anomaly in the Scottish data. Fibre intake increased between the 2001-2003 and 2007-2009 periods, however, has been steadily decreasing since then, with a statistically significant fall between 2001-2003 and 2016-2018. Concerningly, this trend moves fibre intake in the opposite direction from the Scottish Dietary Goal.

Whilst energy intake is not monitored using data from the LCFS, a significant reduction over time was found, with mean intakes of total energy in 2016-2018 159kcal/day lower than that reported for 2001-2003. However, over the same period, no reduction was found in overweight and obesity levels for Scotland. There are several reasons why this may be the case, and due to not having information on energy intake and energy expenditure of individuals it is difficult to draw conclusions. The mean energy density of the diet is now similar to that of 2001-2003, reversing the statistically significant increase found between 2001-2003 and 2013-2015.

The significant decrease in the percentage of energy from free sugars observed in previous LCFS reports continued to 2016-2018; this was in line with the significant reduction in sugar-containing soft drink consumption. A reduction in sugar-containing soft drinks has also been found in other recent reports (Bates *et al.*, 2020, Food Standards Scotland, 2020a). The observation that sugar-containing soft drink consumption mirrored the trend in free sugars is important, as a key part of strategies, such as the introduction of the Soft Drinks Industry Levy (HM Revenue & Customs, 2016), to improve diet related health by reducing consumption of sugar-containing soft drinks (Scottish Government, 2018a). The reduction in free sugars intake as a percentage of total energy, regardless of the increase in carbohydrate intake from other sources (1.7% decrease in free sugar intake, with only a 0.8% decrease in carbohydrate intake), has caused the percentage increase in total fat intake, due to the proportionate nature of macronutrient intake to energy intake.

#### *Contribution of Foods to Intakes of Energy, Fat, Saturated Fat, Free sugars, and Fibre*

Discretionary foods that are high in sugar and fat, namely sweet biscuits; confectionery; crisps and savoury snacks; cakes, pastries, and puddings; and sugar containing soft drinks are significant contributors to energy in the diet. In the current analysis, these five food groupings contributed around 20% of energy, fat, and saturated fat intakes and more than 50% of free sugars intake as is shown in Table 12. Whilst only including retail food and drinking purchase into the home, data collected by Kantar in 2018 also highlight considerable proportions of energy, fat, saturated fat, and sugar being purchased through discretionary foods (Food Standards Scotland, 2020a). In the Eatwell Guide

(Public Health England, 2016) discretionary foods/drinks were excluded from the main part of the guide in order to highlight that these foods/drinks are not needed in the diet. Reducing consumption of discretionary foods, in particular those presented in Table 12, has the potential to redress the balance of the Scottish Diet, by reducing energy, fat, saturated fat and free sugar intakes and in turn reducing overweight and obesity, and diet related disease statistics.

**Table 12: Mean contribution of selected discretionary foods and drinks to energy, fat, saturated fat and free sugars intake in 2016-2018 (intake (percentage) per person per day)**

|                              | Weight<br>g | Energy<br>kcal (%) | Fat<br>g (%)       | Saturated Fat<br>g (%) | Free sugars<br>g (%) |
|------------------------------|-------------|--------------------|--------------------|------------------------|----------------------|
| Sweet Biscuits               | 20.4        | 98.1 (5.2)         | 4.8 (5.9)          | 2.4 (7.8)              | 5.6 (8.2)            |
| Total Confectionery          | 22.4        | 98.2 (5.2)         | 4.1 (5.1)          | 2.2 (7.2)              | 13.3 (19.7)          |
| Crisps and Savoury Snacks    | 12.8        | 64.0 (3.4)         | 3.6 (4.4)          | 0.5 (1.5)              | 0.02 (0.02)          |
| Cakes, Pastries and Puddings | 16.2        | 58.6 (3.1)         | 2.7 (3.4)          | 1.1 (3.7)              | 4.3 (6.4)            |
| Sugar Containing Soft Drinks | 138         | 51.3 (2.7)         | Nil                | Nil                    | 13.2 (19.5)          |
| <b>Total</b>                 |             | <b>370 (19.6)</b>  | <b>15.2 (18.8)</b> | <b>6.3 (20.2)</b>      | <b>36.4 (53.8)</b>   |

#### *Comparison with the National Diet and Nutrition Survey*

Unlike NDNS data for 2008/09-2011/12 (Bates *et al.*, 2014a, Bates *et al.*, 2014b) results from the NDNS for 2012/13-2013/14 (Bates *et al.*, 2016), 2014/15-15/16 (Roberts *et al.*, 2018), and 2016/17-18/19 (Bates *et al.*, 2020) are not available separately for Scotland as there was no boosted sample for Scotland for these years. Therefore, any comparison against recent NDNS results must be made against UK data.

Table 13 provides a comparison of Scottish LCFS data from 2016-2018 against UK NDNS data for 19-64 years from 2016/17-2018/19 for SDG foods and nutrients monitored by the LCFS. It can be seen that, with the exception of red and processed meat and carbohydrate, there are few similarities in the results from the two surveys. However, despite some similarities being found in food consumption and nutrient intake between the LCFS and NDNS data, it must be appreciated that the LCFS results are based on purchase data and are expressed per capita, i.e. are an average of all ages, so comparison of the results with other studies should be carried out with caution. Further possible reasons for the differences in percentage of energy from the macronutrients presented have been discussed previously (Barton *et al.*, 2010, Wrieden and Barton, 2011, Barton and Wrieden, 2012, Wrieden and Barton, 2015). These include that fats and oils used for cooking (particularly frying) are not likely to be fully consumed and waste is difficult to quantify due to them being disposed of down domestic drains, and that individuals often under-report foods high in fat and/or sugar in dietary surveys such as the NDNS. In addition, the figures for waste used to adjust the purchase data are from a UK WRAP survey of 2008 (Waste and Resource Action Programme Survey (WRAP), 2008) and do not account for reductions in waste over recent years (WRAP, 2018). WRAP waste figures for Scotland were published in 2009 (WRAP Scotland, 2009), but these could not be used in the current analysis as data were not available as a percentage of individual foods/food groups, and therefore no mapping to Defra food codes could be carried out using these data. Nevertheless, the fact that the LCFS provides a continuous survey of a representative sample of households in Scotland allows comparisons to be made over time, the ability to apply consistent definitions over time and consider any inconsistencies in the data, enabling a clearer assessment to be made of any dietary change.

**Table 13: Comparison of mean food consumption and nutrient intakes in relation to the 2016**

## Scottish Dietary Goals between LCFS 2016-2018 and 19-64y NDNS 2016/17-2018/19

| Food / Nutrient                                    | Scottish Dietary Goal (SDG)                                                            | LCFS 2016-2018 |              | NDNS 2016/17-2018/19 |              |
|----------------------------------------------------|----------------------------------------------------------------------------------------|----------------|--------------|----------------------|--------------|
|                                                    |                                                                                        | Population     | SDG          | 19-64 years          | SDG          |
| <b>Fruit and Vegetables</b><br>(g/day)             | At least 5 portions per person per day (>400g/day)                                     | 265            | Goal not met | 311                  | Goal not met |
| <b>Oil rich fish</b><br>(g/week)                   | Increase to one portion per person (140g) per week                                     | 33             | Goal not met | 8                    | Goal not met |
| <b>Red Meat</b><br>(g/day)                         | Average intake of red and processed meat to be pegged at around 70g per person per day | 55             | Goal met     | 56                   | Goal met     |
| <b>Fat</b><br>(% food energy)                      | ≤35% food energy                                                                       | 39.7           | Goal not met | 35.5                 | Goal not met |
| <b>Saturated Fat</b><br>(% food energy)            | ≤11% of food energy                                                                    | 15.4           | Goal not met | 12.8                 | Goal not met |
| <b>Free Sugars<sup>1</sup></b><br>(% total energy) | ≤5% of total energy in adults and children over 2 years                                | 13.4           | Goal not met | 9.9                  | Goal not met |
| <b>Fibre<sup>2</sup></b><br>(g/day)                | Increase in average consumption of AOAC fibre to 30g/day                               | 15.6           | Goal not met | 19.7                 | Goal not met |
| <b>Carbohydrate</b><br>(% total energy)            | 50% of total energy with no more than 5% total energy from free sugars                 | 44.3           | Goal not met | 45.0                 | Goal not met |

<sup>1</sup>Free sugars are sugars added to food or drink and those which are found naturally in honey, syrups, and fruit juices, NMES figures provided as a proxy for free sugars; <sup>2</sup>Fibre as measured by American Association of Analytical Chemists (AOAC) methods, calculated from non-starch polysaccharide (NSP) as measured by Englyst method (AOAC fibre is estimated as NSP multiplied by 1.33).

### Future monitoring of the Scottish Dietary Goals

The Scottish Dietary Goals were revised in 2016 (Scottish Government, 2016), in order to reflect recommendations on total carbohydrate, sugar and fibre intakes from the Scientific Advisory Committee on Nutrition (SACN) published in 2015 (Scientific Advisory Committee on Nutrition (SACN), 2015). The recommended intake of sugar was halved, the recommended intake of fibre was increased, and the terminology for sugar and fibre were both revised. An additional 2016 goal specified that total carbohydrate should “be maintained at an average population intake of approximately 50% of total dietary energy”, with the term “total dietary energy” referring to the energy provided by protein, carbohydrate, fat, and alcohol. This suggested an increase in total carbohydrate from the previous dietary reference value of a population average intake of 47% total energy (50% food energy) (Department of Health, 1991).

The 2013 Scottish Dietary Goals for *average intake of NMES to reduce to less than 11% of food energy in children and adults* was replaced with the 2016 goal for *average intake of free sugars not to exceed 5% of total energy in adults and children over 2 years*. Replacing the term NMES with *free sugars* results in a slightly lower mean intake since NMES includes 50% of the fruit sugars from stewed dried or canned fruit, and free sugars includes none (Scientific Advisory Committee on Nutrition (SACN), 2015). In this report, NMES intake were used as a proxy for free sugars intake, which means that the reported figures were slightly higher than that for free sugars. Nevertheless, current free sugars intakes are likely to still be more than twice the recommended intake, based on findings from the current report. In order to monitor the 2016 goal for free sugars accurately, food composition databases need to be updated.

The 2016 Scottish Dietary Goals specified that fibre should be measured using the AOAC method rather than the Englyst method which measures NSP only, and that average intake of AOAC fibre should be 30g/day in adults. This goal represents an increase in the recommended fibre intake, since the 2013 goal of 18g/day for NSP equates to around 23-24g/day of AOAC fibre. In this report, NSP intakes were multiplied by 1.33 to provide an estimate for AOAC intake to compare to the 2016 SDG. In order to monitor the 2016 goal for AOAC fibre accurately, new analyses of foods and drinks need to be carried out to ensure that AOAC fibre data are available for key contributing foods, as AOAC fibre data is incomplete in the current food composition tables.

## **Conclusion**

A robust standardised methodology, used to calculate food consumption and nutrient intakes on a population basis over an 18-year period, has allowed comparisons to be made over time, enabling a clear assessment of any dietary change. As with previous monitoring of the Scottish diet, little change has been found for most of the foods/nutrients monitored since 2001 however, the goal for red and processed meat consumption has been met since 2001 and there has been a significant decreasing trend in free sugars intake which is making some progress towards the goal. This suggests that policies implemented to reduce free sugar intake are taking effect, but mean intake is still more than double the goal, and there is still a long way to go until the goal is reached based on current rates of decline. It is of concern that fibre intake has consistently decreased since 2010 showing movement away from the goal rather than progress towards it. In addition, fruit and vegetable intake has not increased despite numerous policies and campaigns. This is something that needs consideration in future strategies to improve dietary intake. This work continues to be an important part of Food Standards Scotland's dietary surveillance programme.



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## 6. Appendices

Appendix 1: Further Detail on Methodology of Monitoring Work

Appendix 2: Advantages and Disadvantages of the LCFS

Appendix 3: Monitoring Scottish Dietary Goals and Additional Foods and Drinks Indicative of Diet Quality Coding Frame

Appendix 4: Energy Density Coding Frame

Appendix 5: Defra Food Codes with Recommended Estimates of Edible Food Waste

Appendix 6: Flowchart of Data Handling Process for Monitoring Work\*

Appendix 7: Food Groupings Used for Contributing Foods Analysis<sup>1</sup>

Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

Appendix 9: Mean Food Consumption and Nutrient Intake Results by Year

## **Appendix 1: Further Detail on Methodology of Monitoring Work**

### **The Living Costs and Food Survey / Expenditure and Food Survey**

The Living Costs and Food Survey (LCFS) (before 2008 known as the Expenditure and Food Survey (EFS)) is a continuous survey of households in the UK commissioned jointly by the Office for National Statistics (ONS) and the Department for Environment and Rural Affairs (Defra). The LCFS is an annual household budget survey designed to collect information about household food and expenditure. It provides a valuable source of information about food purchases of the population, which can be translated into estimates of food consumption and nutrient intake (Wrieden *et al.*, 2006). The survey however is not designed to measure food consumption and nutrient intakes of specific individuals. The LCFS collects household food purchase and eating out data from every person over 7 years of age in each household over a 14-day period (each household member aged 16 and over is asked to keep diary records (and collect till receipts) of daily expenditure with simplified diaries being kept by children aged between 7 and 15). Whilst only those over 7 years of age are asked to complete a diary, all household purchases are recorded by the household reference person, so the data includes all household members from birth to old age. However, LCFS data requires considerable secondary analysis to group the foods relevant to the Scottish Dietary Goals and calculate statistically meaningful figures. Due to the nature of household food purchase data, the LCFS cannot be used to give information on median food consumption and nutrient intakes or classify by age or gender (further advantages and disadvantages of the LCFS are discussed in Appendix 2). Therefore, the prevalence of individuals who are particularly high or low consumers of specific foods cannot be determined. The calculation of mean per capita consumption and nutrient intakes, with 95% confidence intervals, is not straightforward and requires a series of factors to be applied to the data. This process is essential if any meaningful comparisons are to be made between years.

### **Changes to Methodology over Time**

Methods for the secondary analysis of the food purchase data of the LCFS and its predecessor (the EFS) have been further developed and improved since the original report (Wrieden *et al.*, 2006). For example, in the original analysis all food purchase data were adjusted by subtracting 10% to take account of wastage following a similar procedure used by Defra in their analysis of the National Food Survey (NFS) and EFS and LCFS data. Following the publication of the Waste and Resource Action Programme (WRAP) survey (Waste and Resource Action Programme Survey (WRAP), 2008), Defra provided new figures which were based on more recent estimations of waste which varied according to food group. The data from 2001 onwards were subsequently revised to incorporate improvements to the methodology as follows:

1. Account for free food (e.g. from school meals, meals on wheels etc.). Defra adjusted the EFS data since the results of the secondary analysis published in 2006 (Wrieden *et al.*, 2006) and have backdated these changes to 2001.
2. Adjust for waste using new factors following the publication of the 2008 WRAP report (Waste and Resource Action Programme Survey (WRAP), 2008).
3. Include factors to account for the LCFS sampling methodology.

4. Make use of a refined coding frame to allocate specific proportions of foods to appropriate food groupings.

### Coding Frames

The detailed coding frame reported by Barton *et al.* (2010) compiled for both household and eating out food purchases was re-ordered in line with the Scottish Dietary Goals and used for the analysis (Appendix 3). This was based on that reported by Wrieden *et al.* (2006) which provides further detail on its derivation and on the disaggregation of foods where appropriate. The coding frame is based on 522 food codes allocated by Defra to household or eating out food purchases. It lists groupings of foods (and codes) which form part of each dietary goal (or food group of interest) and gives details of conversion factors applied to the food weights. Conversion factors are necessary to apply the proportion of the food code applicable to the target food – for example, the vegetable contribution of vegetarian dishes is x0.4, a factor calculated from the NDNS adults 19-64 (Henderson *et al.*, 2002). Where no factor was necessary, a factor of 1.0 was applied. Due to the type of data, it is not possible to put a ceiling on the contribution that fruit juice and baked beans make to total fruit and vegetable consumption and “5-a-day” as often happens in dietary survey reporting. It was decided following the Wrieden *et al.* (2006) report to only report total fruit and vegetable consumption rather than with and without fruit juice and baked beans. This decision was based on the fact that average fruit juice consumption from 2001-2003 was 42g/day and average baked bean consumption was 12g/day, therefore well below the ceilings usually applied to fruit juice and baked beans of one 80g portion per day.

The coding frame for energy density (Appendix 4) was compiled in a similar way (Wrieden and Barton, 2011); it indicates which foods/drinks were included within the food and milk method of calculating energy density and lists conversion factors. Foods which may not be consumed in their purchased state e.g. flour, stock cubes, jelly cubes were given a conversion factor of 1 as it was not possible to tell how these foods may be prepared and subsequently consumed.

#### *Categorisation of Foods*

The Defra EFS coding frames for household and eating out food purchases were examined and foods forming part of each dietary goal (or additional foods and drinks indicative of diet quality) were selected and categorised accordingly.

#### *Conversion Factors*

The conversion factors are applied to food purchases to estimate the actual amount of each food that is consumed. A conversion factor was calculated (for each food code, for household and eating out purchases); for the proportion of fruit, vegetable, meat etc. in a composite food; for the proportion of food in a food grouping (where it bridges more than one food grouping); raw to cooked weight (where appropriate); proportion of inedible waste. Data for these conversion factors were taken from the 1st, 2nd, 5th and 6th supplements of the 5<sup>th</sup> edition of McCance and Widdowson's composition of foods (Holland *et al.*, 1992a, Holland *et al.*, 1992b, Chan *et al.*, 1995, Chan *et al.*, 1996). Where these data were not available from the above sources, information was sought from manufacturers' label data or

market share data supplied by the Food Standards Agency. For details see Appendix 3 and Appendix 4.

### *Edible Waste*

Estimates of waste for the UK population were first published by WRAP in 2008. The annex of the report on the 2007 EFS (Department for Environment Food & Rural Affairs (Defra), 2008) expands on the information available in the WRAP report and provides waste information at a more detailed level. Defra have mapped waste figures, based on those in the WRAP report, to each of the household food codes used in the LCFS. This information was obtained from Defra and used to assign a waste factor to each food code. The waste figures were provided for single and multiple adult households and were linked to the appropriate type of household prior to analysis. The figures published by WRAP account for edible waste; inedible waste (i.e. bone) was taken into account when calculating the conversion factor for each food code, as described above. WRAP waste figures for Scotland were published in 2009 (WRAP Scotland, 2009), however these could not be used in the current analysis as data were not available as a percentage of individual foods/food groups and therefore no mapping to Defra food codes could be carried out on this regional data. Likewise, the UK 2009 update (WRAP, 2009) did not provide waste as a percentage of individual foods/food groups. Any foods where no information was available (e.g. liquids which are usually disposed of down the sink), were allocated a waste factor of 10% as is applied by Defra in their Family Food publications when comparing estimated nutrient intake to dietary recommendations. Eating out food weights are estimated as 'as eaten' by Defra using published portion sizes, therefore no waste factor was applied to eating out foods. For details see Appendix 5.

## **Data Handling**

LCFS data for each year, in raw form, were obtained from the UK Data Archive, University of Essex (or from Defra and ONS ahead of it being made available from the UK Data Archive). The data comprised 3 files for each year – an Access (Microsoft Corporation) database containing raw data (at the household level) for food and drink purchases; and 2 SPSS (IBM Corporation) files – one containing information on each household (HH file) and the other containing information on each person within each household (PP file). Appendix 6 provides a flowchart which illustrates the data handling process for data from each year. Data from each year were concatenated in SPSS to obtain one long working data file. The Scottish sample of the LCFS for each year was extracted from the Access database and the HH and PP SPSS files. Each household was allocated a new ID due to overlap in Case IDs between years.

In addition, further data on sampling strata and clusters, and household income, not available in the UK Data Archive files are obtained from the UK ONS.

### *Food Purchase Data*

The Access database containing the Scottish food purchase data was linked to a table constructed from the coding frame, which listed each food grouping, each food within these groupings and the appropriate conversion factor (see above) to be applied to the calculations (where no factor was

necessary 1.0 was applied). This table also contained data on edible waste for single and multiple adult households. Single and multiple adult households were selected in turn, the appropriate adjustment was then made for waste and the databases re-joined.

For foods: household and eating out consumption data minus edible waste (based on purchases) for each food code was multiplied by the appropriate conversion factor and summed by food grouping. This was then divided by the number of individuals in the household and divided by 14 to obtain the mean daily consumption per person. Inedible waste was accounted for in the conversion factors.

For nutrients: household consumption data minus edible waste (based on purchases) for each food code was multiplied by the appropriate nutrient content per gram (provided by Defra) to provide the nutrient intake per food (any inedible waste was taken into account in the nutrient composition of the food). Household, eating out, and combined nutrient intakes for foods were then summed for each household. These were then divided by the number of individuals in the household and divided by 14 to obtain the mean daily intake per person for each nutrient.

Energy density for food and milk was calculated using the methodology developed by Wrieden *et al.* (2014) in three stages in MS Access and quintiles of energy density were calculated in SPSS by year (to negate any difference in energy density quintile over time).

1. Calculating weight of food/milk - the total weight of food/milk for each household was calculated by summing the weights of each food after making adjustments for edible waste and multiplying by the conversion factors described previously. Inedible waste was accounted for in the conversion factors.
2. Calculating energy content of food/milk - the total energy from food/milk for each household was calculated by summing the energy content of each food after making adjustments for edible waste only, as the nutrient values in the database are based on the foods in their purchased form and not in the form they are consumed, hence any inedible waste was taken into account in the nutrient composition of the food.
3. Calculating energy density - the energy density values per 100g for each household were calculated by dividing the total household energy content for food/milk (2) by the total household weight for food/milk (1) and multiplying by 100.

### *Derivation of Household Variables Required for Analysis Purposes*

Descriptive variables for each household were extracted from the two SPSS files described previously and merged with data on sampling strata and clusters, and household income, to form a SPSS file containing all household variables.

## **Analysis of Data**

The food consumption and nutrient intake data were exported to SPSS and merged with the household variables file. Due to the multi-staged stratified sampling procedure of the LCFS, data were analysed using Descriptive Statistics and General Linear Models within the Complex Samples module of SPSS and weighted according to the Scottish population. The data were weighted so that estimates

obtained for mean food consumption and nutrient intake more accurately reflected that of the Scottish population. The weights were provided by Defra, and are those used by the LCFS.

Linear associations between food consumption/ nutrient intake/ energy density and year or three-year block were assessed by general linear modelling which was used to obtain estimates of the means with 95% confidence intervals (95% CI) and associated p-values. Overall associations between food consumption/ nutrient intake/ energy density, and year or three-year block were assessed by adjusted Wald tests. The adjusted Wald test was used within regression analyses to test whether the value for all years, or 3-year block was equal or whether there was at least one difference between year or three-year block. P-values  $\leq 0.01$  are highlighted in bold to indicate significance at the 1% level.

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## Appendix 2: Advantages and Disadvantages of the LCFS

The EFS/LCFS and their predecessor, the NFS, are annual household budget surveys designed to collect information about household food and expenditure. Further details about the design of the EFS/NFS are discussed in an earlier report (Wrieden *et al.*, 2003). The EFS/LCFS provide a valuable source of information about the food purchases of the population, which can be translated into estimates of food consumption and nutrient intake (Wrieden *et al.*, 2006). The survey however is not designed to measure food consumption and nutrient intakes of specific individuals. The LCFS collects household food purchase data from every person in each household for a 14-day period. The length of time the food diaries are kept (14 days) is a major strength of this study, as for most foods and nutrients the balance of consumption/intake is over more than 7-10 days. Due to the nature of the data collected in household budget surveys it is not possible to produce median food consumption and nutrient intake figures. Therefore, the prevalence of individuals who are particularly high or low consumers of a food, food group or nutrient cannot be determined.

### Advantages

- From 2001 to 2015 the LCFS included between 410 and 619 households (and between 921 and 1414 people) per year in mainland Scotland. Despite the sample size reducing dramatically from 2016 onwards (186, 162, and 188 for 2016, 2017, and 2018 respectively), it still remains the study with the largest Scottish sample on total diet (based on food purchases).
- The LCFS collects information over a period of 14 days on food and drink purchases and includes foods eaten within the household and those eaten out of the home.
- The LCFS records food acquisitions rather than consumption and is therefore possibly less susceptible to under-reporting and non-response bias than weighed intake dietary surveys (Chesher, 1997).
- The LCFS is one of the few publicly available sources of information on food purchased out of the home. This can be compared with consumption in the home.
- The LCFS can be used to assess all the Scottish Dietary Goals (except energy, trans fatty acids and salt), using assumptions on varieties and composition of food groups which were developed for the Barton *et al.* (2010) report.
- Data is collected continuously and published annually; it is possible to merge datasets over a number of years.

### Disadvantages

- The information collected is based on food purchased rather than actually eaten, so specific wastage factors are incorporated for different food groups, based on recent research by WRAP (2008). Although this is an improvement on the previously used 10% estimation of waste for all foods, the figures are based on research carried out in England and do not include flat dwelling households (due to the use of communal bins) which may have differing household composition to non-flat dwelling households.

- Results obtained are an estimate of the consumption of a typical average household member so no information can be derived regarding the consumption by specific sub-groups e.g. children or consumers compared to non-consumers.
- Median and other distributional characteristics relating to consumption cannot be estimated.

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### Appendix 3: Monitoring Scottish Dietary Goals and Additional Foods and Drinks Indicative of Diet Quality Coding Frame

This updated and simplified coding frame is based on that reported by Wrieden *et al.*, (2006), which provides information on the disaggregation of foods where appropriate. Appendix 1 provides further detail on the coding frame. Factor relates to the conversion factor detailed in Appendix 1.

#### 1. Dietary Goal: Average intake of a variety of fruit and vegetables to reach at least 5 portions per day (>400g per day)

Presented in results tables as:

1. Fruit and Vegetables including fruit (and vegetable) juice and beans and pulses (addition of 2 and 4 below)
2. Fruit including fruit (and vegetable) juice
3. Fruit (and vegetable) juice
4. Vegetables including beans and pulses

#### Household Fruit - including fruit (and vegetable) juice

| Defra Code | Food Description                                                                 | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 19603      | Vegetable juices e.g. tomato juice, carrot juice                                 | 1      | 0.1                   | 0.1                     |
| 21001      | Fresh oranges                                                                    | 1      | 0.3382                | 0.2325                  |
| 21401      | Other fresh citrus fruits                                                        | 1      | 0.0536                | 0.041                   |
| 21701      | Fresh apples                                                                     | 1      | 0.6627                | 0.2772                  |
| 21801      | Fresh pears                                                                      | 1      | 0.1442                | 0.1929                  |
| 22101      | Fresh stone fruit                                                                | 1      | 0.2036                | 0.1797                  |
| 22201      | Fresh grapes                                                                     | 1      | 0.0833                | 0.0778                  |
| 22701      | Other fresh soft fruit                                                           | 1      | 0.433                 | 0.2521                  |
| 22801      | Fresh bananas                                                                    | 1      | 0.1545                | 0.082                   |
| 22901      | Fresh melon                                                                      | 1      | 0.2848                | 0.1797                  |
| 23101      | Other fresh fruit                                                                | 1      | 0.1404                | 0.0938                  |
| 23301      | Tinned peaches, pears & pineapples                                               | 0.6    | 0.0806                | 0.0899                  |
| 23601      | All other tinned or bottled fruit                                                | 0.52   | 0.0806                | 0.0899                  |
| 24001      | Dried fruit                                                                      | 3.71   | 0.0806                | 0.0899                  |
| 24101      | Frozen strawberries, apple slices, peach halves, oranges and other frozen fruits | 1      | 0.0806                | 0.0899                  |
| 24801      | Pure fruit juices                                                                | 1      | 0.1                   | 0.1                     |

#### Household Fruit (and vegetable) juice

| Defra Code | Food Description                                 | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------------------------------------|--------|-----------------------|-------------------------|
| 19603      | Vegetable juices e.g. tomato juice, carrot juice | 1      | 0.1                   | 0.1                     |
| 24801      | Pure fruit juices                                | 1      | 0.1                   | 0.1                     |

**Eating Out Fruit - including fruit (and vegetable) juice**

| Defra Code | Food Description                                                               | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 200101     | All citrus fruit, fresh e.g. orange, grapefruit                                | 1      | 0                     | 0                       |
| 200102     | Banana, fresh                                                                  | 1      | 0                     | 0                       |
| 200103     | Apples, fresh                                                                  | 1      | 0                     | 0                       |
| 200104     | Pears, fresh                                                                   | 1      | 0                     | 0                       |
| 200105     | Stone fruit, fresh e.g. apricot, plum, peach, cherry, avocado                  | 1      | 0                     | 0                       |
| 200106     | Grapes, fresh                                                                  | 1      | 0                     | 0                       |
| 200107     | Soft fruit/berries, fresh e.g. strawberries, blackberries - no cream/ice cream | 1      | 0                     | 0                       |
| 200108     | Melon, fresh                                                                   | 1      | 0                     | 0                       |
| 200109     | Pineapple, fresh                                                               | 1      | 0                     | 0                       |
| 200110     | Fresh fruit salad, without cream/ice cream                                     | 1      | 0                     | 0                       |
| 200111     | Other fresh fruit (kiwi, passion) & 'fruit', type not specified                | 1      | 0                     | 0                       |
| 200112     | Free school fruit                                                              | 1      | 0                     | 0                       |
| 200201     | Dried fruit e.g. sultanas, raisins                                             | 3.71   | 0                     | 0                       |
| 200301     | Tinned, stewed/baked or processed fruit - without cream/ice cream              | 1      | 0                     | 0                       |
| 240301     | Fruit filling e.g. peaches for pancakes                                        | 1      | 0                     | 0                       |
| 260204     | PURE fruit juices                                                              | 1      | 0                     | 0                       |
| 260205     | Vegetable juices e.g. tomato juice, carrot juice                               | 1      | 0                     | 0                       |
| 290205     | Fruit and other pies/pastries                                                  | 0.5    | 0                     | 0                       |

**Eating Out Fruit (and vegetable) juice**

| Defra Code | Food Description                                 | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------------------------------------|--------|-----------------------|-------------------------|
| 260204     | PURE fruit juices                                | 1      | 0                     | 0                       |
| 260205     | Vegetable juices e.g. tomato juice, carrot juice | 1      | 0                     | 0                       |

Appendix 3: Monitoring Scottish Dietary Goals and Additional Foods and Drinks Indicative of Diet Quality Coding Frame

**Household Vegetables - including beans and pulses**

| Defra Code | Food Description                                                  | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|-------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 16201      | Cabbages, fresh                                                   | 1      | 0.7014                | 0.4155                  |
| 16301      | Brussels sprouts, fresh                                           | 1      | 0.1701                | 0.0794                  |
| 16401      | Cauliflower, fresh                                                | 1      | 0.1449                | 0.1019                  |
| 16701      | Lettuce & leafy salads                                            | 1      | 0.5069                | 0.3519                  |
| 16702      | Prepared lettuce salads                                           | 1      | 0.6023                | 0.4633                  |
| 16801      | Peas, fresh                                                       | 1      | 0.0917                | 0.0417                  |
| 16901      | Beans, fresh                                                      | 1      | 0.5589                | 0.3071                  |
| 17101      | Other fresh green vegetables                                      | 1      | 0.2589                | 0.1589                  |
| 17201      | Carrots, fresh                                                    | 1      | 0.3835                | 0.1681                  |
| 17301      | Turnips & swede, fresh                                            | 1      | 0.1231                | 0.0669                  |
| 17401      | Other root vegetable, fresh                                       | 1      | 0.225                 | 0.1511                  |
| 17501      | Onions, leeks, shallots, fresh                                    | 1      | 0.2143                | 0.1408                  |
| 17601      | Cucumbers, fresh                                                  | 1      | 0.3717                | 0.2357                  |
| 17701      | Mushrooms, fresh                                                  | 1      | 0.1483                | 0.104                   |
| 17801      | Tomatoes, fresh                                                   | 1      | 0.1582                | 0.0926                  |
| 18301      | Stewpack, stirfry pack, pack of mixed vegetables                  | 1      | 0.3429                | 0.2301                  |
| 18302      | Stem vegetables                                                   | 1      | 0.6075                | 0.453                   |
| 18303      | Marrow, courgettes, aubergine, pumpkin and other fresh vegetables | 1      | 0.1691                | 0.1147                  |
| 18304      | Fresh herbs                                                       | 1      | 0.1267                | 0.091                   |
| 18401      | Tomatoes, canned or bottled                                       | 1      | 0.1582                | 0.0926                  |
| 18501      | Peas, canned                                                      | 1      | 0.0917                | 0.0417                  |
| 18802      | Baked beans in sauce                                              | 1      | 0.0828                | 0.0309                  |
| 18803      | Other canned beans & pulses                                       | 1      | 0.2589                | 0.1589                  |
| 19101      | Other canned vegetables                                           | 1      | 0.2589                | 0.1589                  |
| 19201      | Dried pulses other than air-dried                                 | 6.19   | 0.2589                | 0.1589                  |
| 19501      | Air-dried vegetables                                              | 14.39  | 0.3429                | 0.2301                  |
| 19602      | Tomato puree and vegetable purees                                 | 5.2    | 0.1267                | 0.091                   |
| 20301      | Peas, frozen                                                      | 1      | 0.0917                | 0.0417                  |
| 20401      | Beans, frozen                                                     | 1      | 0.5589                | 0.3071                  |
| 20601      | Ready meals & other vegetable products - frozen or not frozen     | 0.4    | 0.2563                | 0.29                    |
| 20604      | All vegetable takeaway products                                   | 0.4    | 0.2563                | 0.29                    |
| 20801      | Other frozen vegetables                                           | 1      | 0.2589                | 0.1589                  |
| 29601      | Pizzas - frozen and not frozen                                    | 0.16   | 0.2563                | 0.29                    |
| 29602      | Takeaway pizza                                                    | 0.16   | 0.2563                | 0.29                    |
| 31801      | Soups - canned or cartons                                         | 0.3    | 0.2563                | 0.29                    |
| 32001      | Soups - from takeaway                                             | 0.3    | 0.2563                | 0.29                    |
| 32201      | Meals on wheels - items not specified                             | 0.2    | 0.2563                | 0.29                    |

**Eating Out Vegetables - including beans and pulses**

| Defra Code | Food Description                                                          | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 100103     | Vegetable or fruit based curry                                            | 0.4    | 0                     | 0                       |
| 100104     | Dhal & Dhal dishes                                                        | 0.4    | 0                     | 0                       |
| 100106     | Other Indian dishes                                                       | 0.4    | 0                     | 0                       |
| 100108     | Indian buffet or shared meal or unspecified Indian meal                   | 0.2    | 0                     | 0                       |
| 100201     | Chinese or Thai meat or fish based dishes excluding curry                 | 0.2    | 0                     | 0                       |
| 100202     | Chop suey and fu yung dishes                                              | 0.2    | 0                     | 0                       |
| 100203     | Chinese or Thai vegetable based main course dishes                        | 0.4    | 0                     | 0                       |
| 100204     | Chinese or Thai curry                                                     | 0.2    | 0                     | 0                       |
| 100206     | Other Chinese or Thai dishes                                              | 0.2    | 0                     | 0                       |
| 100207     | Chinese or Thai buffet or shared meal or unspecified Chinese or Thai meal | 0.2    | 0                     | 0                       |
| 100301     | All other ethnic meals                                                    | 0.2    | 0                     | 0                       |
| 110601     | Meat and vegetable stews, casseroles or hotpots                           | 0.2    | 0                     | 0                       |
| 110602     | Chicken or turkey stews, casseroles or hotpots                            | 0.2    | 0                     | 0                       |
| 110603     | Meat lasagne, cannelloni, moussaka and other meat-based oven baked dishes | 0.2    | 0                     | 0                       |
| 130201     | Pizza - cheese & tomato, vegetable; incl Pizza, type not specified        | 0.4    | 0                     | 0                       |
| 130202     | Pizza - meat, fish or poultry                                             | 0.16   | 0                     | 0                       |
| 150101     | Lettuce & cress                                                           | 1      | 0                     | 0                       |
| 150102     | Other green vegetables e.g. spinach, cabbage, sprouts                     | 1      | 0                     | 0                       |
| 150201     | Peppers - raw/cooked                                                      | 1      | 0                     | 0                       |
| 150202     | Courgettes, marrow, aubergine, pumpkin, plantain, cucumbers               | 1      | 0                     | 0                       |
| 150203     | Peas & sweetcorn                                                          | 1      | 0                     | 0                       |
| 150204     | Baked Beans and other beans (not green beans) & pulses                    | 1      | 0                     | 0                       |
| 150205     | Tomato - fresh, raw                                                       | 1      | 0                     | 0                       |
| 150206     | Tomato - cooked or processed                                              | 1      | 0                     | 0                       |
| 150301     | Carrots                                                                   | 1      | 0                     | 0                       |
| 150302     | Onions - raw or cooked incl 'onions' type not specified                   | 1      | 0                     | 0                       |
| 150303     | Onions - fried                                                            | 1      | 0                     | 0                       |
| 150304     | Other root vegetables/ tubers e.g. turnip, parsnip, radish, beetroot      | 1      | 0                     | 0                       |
| 150401     | Mushrooms - raw or cooked                                                 | 1      | 0                     | 0                       |
| 150501     | Mixed vegetables and 'veg' type not specified.                            | 1      | 0                     | 0                       |
| 150502     | Other vegetables e.g. artichoke, asparagus                                | 1      | 0                     | 0                       |
| 150503     | Vegetables in batter or breadcrumbs and deep fried veg e.g. onion rings   | 0.4    | 0                     | 0                       |
| 150504     | Onion and other vegetable bhajis & pakora                                 | 0.4    | 0                     | 0                       |
| 150601     | Veggie burger, bean burger, veggie sausage, nut roast                     | 0.4    | 0                     | 0                       |

**Eating Out Vegetables - including beans and pulses (continued)**

| <b>Defra Code</b> | <b>Food Description</b>                                                                     | <b>Factor</b> | <b>Single Adult HH Waste</b> | <b>Multiple Adult HH Waste</b> |
|-------------------|---------------------------------------------------------------------------------------------|---------------|------------------------------|--------------------------------|
| 150602            | Vegetable lasagne, veg cannelloni, veg moussaka and other oven baked vegetable based dishes | 0.4           | 0                            | 0                              |
| 150603            | Stuffed vegetables (e.g. stuffed pepper) and vegetable based starter                        | 0.4           | 0                            | 0                              |
| 150604            | Vegetable based stews & casseroles and veg-based pies                                       | 0.4           | 0                            | 0                              |
| 160101            | Mixed salad, main course - without dressing                                                 | 1             | 0                            | 0                              |
| 160102            | Mixed salad, side dish - without dressing; incl 'salad' type not specified                  | 1             | 0                            | 0                              |
| 160103            | Green salad - without dressing                                                              | 1             | 0                            | 0                              |
| 160201            | Vegetable/ fruit and nut salad - with dressing                                              | 0.4           | 0                            | 0                              |
| 160301            | Meat salad e.g. beef, lamb salads                                                           | 0.2           | 0                            | 0                              |
| 160302            | Chicken or turkey salad                                                                     | 0.2           | 0                            | 0                              |
| 160303            | Fish salad e.g. tuna, salmon salads                                                         | 0.2           | 0                            | 0                              |
| 160401            | Cheese salad including ploughman's                                                          | 0.2           | 0                            | 0                              |
| 160402            | Egg salad                                                                                   | 0.2           | 0                            | 0                              |
| 160501            | Other salads e.g. Greek, Florida, Russian                                                   | 0.2           | 0                            | 0                              |
| 160601            | Salad buffet or buffet meal where items not specified                                       | 0.2           | 0                            | 0                              |
| 170105            | Noodles with meat, vegetables etc.                                                          | 0.2           | 0                            | 0                              |
| 180102            | Vegetable-based soups                                                                       | 0.3           | 0                            | 0                              |
| 180104            | Soups, other; incl soup not specified                                                       | 0.3           | 0                            | 0                              |
| 230207            | Vegetarian based sandwich on white bread or roll                                            | 0.4           | 0                            | 0                              |
| 230208            | Vegetarian based sandwich on brown bread or roll                                            | 0.4           | 0                            | 0                              |
| 230209            | Vegetarian based sandwich bread not specified                                               | 0.4           | 0                            | 0                              |
| 240102            | Meat-based sauce e.g. Bolognese, chilli con carne                                           | 0.2           | 0                            | 0                              |
| 240104            | Tomato-based sauce containing vegetables, incl ratatouille                                  | 0.4           | 0                            | 0                              |
| 240203            | Coleslaw                                                                                    | 0.4           | 0                            | 0                              |
| 240302            | Vegetable filling                                                                           | 0.4           | 0                            | 0                              |
| 240701            | Unspecified meal e.g. 'meal', 'school meal' or 'meal at work'                               | 0.2           | 0                            | 0                              |

## 2. Dietary Goal: Oil rich fish consumption to increase to one portion per person (140g) per week

NB: Factors are multiplied by 7 in order that fish calculations can be carried out alongside those for other foods as the fish target is in grams per week and the other targets are in grams per day

### Household Oil Rich Fish

| Defra Code | Food Description                                         | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------------------------|--------|-----------------------|-------------------------|
| 10601      | Herring & other blue fish, fresh or chilled              | 7      | 0.096                 | 0.0418                  |
| 10602      | Herring & other blue fish, frozen                        | 7      | 0.096                 | 0.0418                  |
| 10701      | Salmon, fresh or chilled                                 | 7      | 0.096                 | 0.0418                  |
| 10702      | Salmon, frozen                                           | 7      | 0.096                 | 0.0418                  |
| 10801      | Blue fish, dried or salted or smoked                     | 7      | 0.096                 | 0.0418                  |
| 11901      | Tinned salmon                                            | 7      | 0.096                 | 0.0418                  |
| 12001      | Other tinned or bottled fish                             | 1.33   | 0.096                 | 0.0418                  |
| 12103      | Ready meals & other fish products - frozen or not frozen | 1.05   | 0.2563                | 0.29                    |

### Eating Out Oil Rich Fish

| Defra Code | Food Description                                                           | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 120201     | Trout, tuna and salmon only - fresh - without sauce/dressing               | 7      | 0                     | 0                       |
| 120202     | Other fatty fish - without sauce/dressing e.g. herring, mackerel, sardines | 7      | 0                     | 0                       |
| 120401     | Kippers and other smoked fish e.g. smoked salmon                           | 7      | 0                     | 0                       |
| 120603     | Fish based pie or other dish e.g. paella, kedgeree, tuna                   | 1.05   | 0                     | 0                       |
| 160303     | Fish salad e.g. tuna, salmon salads                                        | 0.7    | 0                     | 0                       |



**3. Dietary Goal: Average intake of red and processed meat to be pegged at around 70g per person per day. Average intake of the very highest consumers of red and processed meat (90g per person per day) not to increase**

**Household Red and Processed Meat**

| Defra Code | Food Description                                  | Factor   | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------------------------------|----------|-----------------------|-------------------------|
| 5502       | Bacon and ham joints, uncooked                    | 0.69104  | 0.2041                | 0.133                   |
| 5505       | Bacon and ham rashers, uncooked                   | 0.65825  | 0.2041                | 0.133                   |
| 5801       | Cooked ham & bacon                                | 1        | 0.2041                | 0.133                   |
| 3102       | Beef: joints (including sides) on the bone        | 0.561    | 0.0815                | 0.0457                  |
| 3103       | Beef: joints (boned)                              | 0.632697 | 0.0815                | 0.0457                  |
| 3104       | Beef steak (less expensive)                       | 0.636751 | 0.0815                | 0.0457                  |
| 3105       | Beef steak (more expensive)                       | 0.728463 | 0.0815                | 0.0457                  |
| 3106       | Beef, minced                                      | 0.82     | 0.0815                | 0.0457                  |
| 3107       | All other beef and veal                           | 0.62     | 0.0815                | 0.0457                  |
| 3601       | Mutton                                            | 0.617767 | 0.0224                | 0.0262                  |
| 3602       | Lamb joints                                       | 0.589275 | 0.0224                | 0.0262                  |
| 3603       | Lamb chops                                        | 0.549128 | 0.0224                | 0.0262                  |
| 3604       | All other lamb                                    | 0.714897 | 0.0224                | 0.0262                  |
| 4101       | Pork joints                                       | 0.570298 | 0.2041                | 0.133                   |
| 4102       | Pork chops – uncooked                             | 0.588    | 0.2041                | 0.133                   |
| 4103       | Pork fillets and steak                            | 0.65     | 0.2041                | 0.133                   |
| 4104       | All other pork – uncooked                         | 0.625934 | 0.2041                | 0.133                   |
| 4603       | Ox liver                                          | 0.91     | 0.0815                | 0.0457                  |
| 4604       | Lambs liver                                       | 0.78     | 0.0224                | 0.0262                  |
| 4605       | Pigs liver                                        | 0.88     | 0.2041                | 0.133                   |
| 4607       | All other liver                                   | 0.884907 | 0.0584                | 0.0401                  |
| 5101       | All offals other than liver                       | 0.56119  | 0.0584                | 0.0401                  |
| 6201       | Corned beef/ corned meat (canned or sliced)       | 1        | 0.0815                | 0.0457                  |
| 6601       | Other cooked meat                                 | 0.954007 | 0.0584                | 0.0401                  |
| 7102       | Other canned meat and canned meat products        | 0.532811 | 0.0584                | 0.0401                  |
| 7801       | Other meat (rabbit, venison, etc) – uncooked      | 0.594    | 0.0584                | 0.0401                  |
| 7901       | Sausages (uncooked) - pork                        | 0.78     | 0.0584                | 0.0401                  |
| 8001       | Sausages (uncooked) - beef                        | 0.779    | 0.0584                | 0.0401                  |
| 8302       | Meat pies                                         | 0.271562 | 0.2563                | 0.29                    |
| 8303       | Sausage rolls                                     | 0.28     | 0.2563                | 0.29                    |
| 8401       | Meat pies, pasties and puddings                   | 0.27445  | 0.2563                | 0.29                    |
| 8501       | Burgers                                           | 0.73     | 0.0584                | 0.0401                  |
| 8901       | COMPLETE meat-based ready meals                   | 0.144783 | 0.2563                | 0.29                    |
| 8902       | Other convenience meat products                   | 0.240481 | 0.2563                | 0.29                    |
| 9301       | Pâté                                              | 1        | 0.1324                | 0.0755                  |
| 9302       | Delicatessen type sausages: cooked or cured       | 1        | 0.0584                | 0.0401                  |
| 9403       | Meat pastes and spreads                           | 1        | 0.1324                | 0.0755                  |
| 9501       | Takeaway meat pies & pasties                      | 0.266316 | 0.2563                | 0.29                    |
| 9502       | Burger & bun eg hamburger                         | 0.485    | 0.2563                | 0.29                    |
| 9503       | Kebabs                                            | 0.5      | 0.2563                | 0.29                    |
| 9504       | Sausages & saveloys                               | 1        | 0.2563                | 0.29                    |
| 9505       | MEAT- based meals incl Indian & Chinese takeaways | 0.208303 | 0.2563                | 0.29                    |
| 9506       | Miscellaneous meats                               | 0.649653 | 0.2563                | 0.29                    |

**Eating Out Red and Processed Meat**

| Defra Code | Food Description                                                                     | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 100101     | Meat or fish based curry with sauce                                                  | 0.0928 | 0                     | 0                       |
| 100102     | Meat or fish based curry without sauce                                               | 0.5    | 0                     | 0                       |
| 100201     | Chinese or Thai meat or fish based dishes excluding curry                            | 0.17   | 0                     | 0                       |
| 100202     | Chop suey and fu yung dishes                                                         | 0.09   | 0                     | 0                       |
| 110101     | Steak - without sauce e.g. braised, sirloin                                          | 1      | 0                     | 0                       |
| 110102     | Roast meat with sauce or gravy                                                       | 0.64   | 0                     | 0                       |
| 110103     | Pork chops with sauce or gravy                                                       | 0.81   | 0                     | 0                       |
| 110104     | Lamb chops with sauce or gravy                                                       | 0.67   | 0                     | 0                       |
| 110105     | Spare ribs                                                                           | 1      | 0                     | 0                       |
| 110106     | Bacon                                                                                | 1      | 0                     | 0                       |
| 110107     | Gammon or ham                                                                        | 1      | 0                     | 0                       |
| 110108     | All offal including liver, kidney, tongue                                            | 1      | 0                     | 0                       |
| 110204     | Game with sauce or gravy                                                             | 0.71   | 0                     | 0                       |
| 110301     | Small or single burgers                                                              | 0.39   | 0                     | 0                       |
| 110302     | Large or double burgers                                                              | 0.58   | 0                     | 0                       |
| 110401     | Kebabs - all types including chicken                                                 | 0.5    | 0                     | 0                       |
| 110402     | Plain sausages e.g. beef, pork                                                       | 1      | 0                     | 0                       |
| 110403     | Other sausages                                                                       | 1      | 0                     | 0                       |
| 110404     | Hot dogs and sausage sandwiches                                                      | 0.1769 | 0                     | 0                       |
| 110501     | Meat pies (pastry topped) and pasties                                                | 0.16   | 0                     | 0                       |
| 110502     | Meat pies (potato topped e.g. shepherd's pie)                                        | 0.1963 | 0                     | 0                       |
| 110503     | Sausage roll (pastry)                                                                | 0.28   | 0                     | 0                       |
| 110601     | Meat and vegetable stews, casseroles or hotpots                                      | 0.0529 | 0                     | 0                       |
| 110603     | Meat lasagne, cannelloni, moussaka and other meat-based oven baked dishes            | 0.2041 | 0                     | 0                       |
| 110701     | All pates                                                                            | 0.5    | 0                     | 0                       |
| 110801     | Other meat products or dishes                                                        | 0.2592 | 0                     | 0                       |
| 130202     | Pizza - meat, fish or poultry                                                        | 0.0337 | 0                     | 0                       |
| 160301     | Meat salad e.g. beef, lamb salads                                                    | 0.314  | 0                     | 0                       |
| 170105     | Noodles with meat, vegetables etc.                                                   | 0.2    | 0                     | 0                       |
| 230101     | Meat based sandwich on white bread or roll                                           | 0.242  | 0                     | 0                       |
| 230102     | Meat based sandwich on brown bread or roll                                           | 0.242  | 0                     | 0                       |
| 230103     | Meat based sandwich bread not specified                                              | 0.242  | 0                     | 0                       |
| 230107     | Bacon and egg based sandwich on white bread or roll including Bacon and Egg McMuffin | 0.25   | 0                     | 0                       |
| 230108     | Bacon and egg based sandwich on brown bread or roll                                  | 0.25   | 0                     | 0                       |
| 230109     | Bacon and egg based sandwich bread not specified                                     | 0.25   | 0                     | 0                       |
| 240102     | Meat-based sauce e.g. bolognese, chilli con carne                                    | 0.3366 | 0                     | 0                       |

## Additional Foods and Drinks Indicative of Diet Quality

### Brown/Wholemeal and Total Bread (addition of white and brown/wholemeal)

#### Household White Bread

| Defra Code | Food Description                             | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------------|--------|-----------------------|-------------------------|
| 9502       | Takeaway burger & bun                        | 0.55   | 0.2563                | 0.29                    |
| 25102      | White bread, standard, unsliced              | 1      | 0.3335                | 0.2399                  |
| 25202      | White bread, standard, sliced                | 1      | 0.3335                | 0.2399                  |
| 25701      | White bread, premium, sliced and unsliced    | 1      | 0.3335                | 0.2399                  |
| 25801      | White bread, soft grain, sliced and unsliced | 1      | 0.3335                | 0.2399                  |
| 26302      | Rolls - white, brown or wholemeal            | 0.78   | 0.3942                | 0.1718                  |
| 26303      | Malt bread and fruit loaves                  | 1      | 0.0861                | 0.0241                  |
| 26304      | Vienna & French bread                        | 1      | 0.3942                | 0.1718                  |
| 26305      | Starch reduced bread & rolls                 | 1      | 0.3335                | 0.2399                  |
| 26308      | Other breads                                 | 1      | 0.3349                | 0.4585                  |
| 26309      | Sandwiches                                   | 0.3744 | 0.2563                | 0.29                    |
| 26310      | Sandwiches from takeaway                     | 0.3744 | 0.2563                | 0.29                    |
| 26311      | Takeaway breads                              | 1      | 0.3349                | 0.4585                  |
| 26701      | Buns, scones & teacakes                      | 1      | 0.1239                | 0.1163                  |
| 29601      | Pizzas - frozen and not frozen               | 0.57   | 0.2563                | 0.29                    |
| 29602      | Takeaway pizza                               | 0.57   | 0.2563                | 0.29                    |

#### Eating Out White Bread

| Defra Code | Food Description                                              | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------------------------------------------|--------|-----------------------|-------------------------|
| 100107     | Indian breads                                                 | 1      | 0                     | 0                       |
| 110301     | Small or single burgers                                       | 0.66   | 0                     | 0                       |
| 110302     | Large or double burgers                                       | 0.39   | 0                     | 0                       |
| 110303     | Chicken burger                                                | 0.46   | 0                     | 0                       |
| 110404     | Hot dogs and sausage sandwiches                               | 0.54   | 0                     | 0                       |
| 120602     | Fish burgers (in bun)                                         | 0.49   | 0                     | 0                       |
| 130201     | Pizza - cheese & tomato, vegetable; incl pizza, type not spec | 0.57   | 0                     | 0                       |
| 130202     | Pizza - meat, fish or poultry                                 | 0.57   | 0                     | 0                       |
| 220101     | White bread, with or w/o butter/marg (toasted or untoasted)   | 1      | 0                     | 0                       |
| 220103     | White, without butter/marg (or butter/marg not spec)          | 1      | 0                     | 0                       |
| 220105     | Garlic bread                                                  | 1      | 0                     | 0                       |
| 220106     | Croissant                                                     | 1      | 0                     | 0                       |
| 220107     | Continental breads e.g. pitta, ciabatta, focaccia             | 1      | 0                     | 0                       |
| 220108     | Muffins/ crumpets                                             | 1      | 0                     | 0                       |
| 220109     | Fried bread, incl croutons                                    | 1      | 0                     | 0                       |
| 220110     | Bread/ rolls/ toast etc, type not specified                   | 0.78   | 0                     | 0                       |
| 230101     | Meat-based, white bread/roll                                  | 0.52   | 0                     | 0                       |
| 230103     | Meat-based, bread not specified                               | 0.4056 | 0                     | 0                       |
| 230104     | Chicken/turkey-based, white bread/roll                        | 0.52   | 0                     | 0                       |
| 230106     | Chicken/turkey-based, bread not specified                     | 0.4056 | 0                     | 0                       |

### Appendix 3: Monitoring Scottish Dietary Goals and Additional Foods and Drinks Indicative of Diet Quality Coding Frame

|        |                                                           |        |   |   |
|--------|-----------------------------------------------------------|--------|---|---|
| 230107 | Bacon and egg, white bread/roll incl Bacon & Egg McMuffin | 0.52   | 0 | 0 |
| 230109 | Bacon and egg, bread not specified                        | 0.4056 | 0 | 0 |
| 230110 | Fish-based, white bread/roll                              | 0.52   | 0 | 0 |
| 230112 | Fish-based, bread not specified                           | 0.4056 | 0 | 0 |
| 230201 | Cheese-based, white bread/roll                            | 0.52   | 0 | 0 |
| 230203 | Cheese-based, bread not specified                         | 0.4056 | 0 | 0 |
| 230204 | Egg-based, white bread/roll incl Egg McMuffin             | 0.52   | 0 | 0 |
| 230206 | Egg-based, bread not specified                            | 0.4056 | 0 | 0 |
| 230207 | Vegetarian-based, white bread/roll                        | 0.52   | 0 | 0 |
| 230209 | Vegetarian-based, bread not specified                     | 0.4056 | 0 | 0 |
| 230210 | Sweet-filled sandwich                                     | 0.4056 | 0 | 0 |
| 230211 | Unspecified sandwiches or rolls                           | 0.4056 | 0 | 0 |
| 290301 | Waffles & pancakes                                        | 0.5    | 0 | 0 |
| 290401 | Teacakes, scones, currant bun, iced bun                   | 0.5    | 0 | 0 |

#### Household Brown/Wholemeal Bread

| Defra Code | Food Description                               | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|------------------------------------------------|--------|-----------------------|-------------------------|
| 25901      | Brown bread, sliced and unsliced               | 1      | 0.3335                | 0.2399                  |
| 26001      | Wholemeal & granary bread, sliced and unsliced | 1      | 0.3335                | 0.2399                  |
| 26302      | Rolls - white, brown or wholemeal              | 0.22   | 0.3942                | 0.1718                  |
| 26309      | Sandwiches                                     | 0.1056 | 0.2563                | 0.29                    |
| 26310      | Sandwiches from takeaway                       | 0.1056 | 0.2563                | 0.29                    |

#### Eating Out Brown/Wholemeal Bread

| Defra Code | Food Description                                        | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------------------------------------|--------|-----------------------|-------------------------|
| 220102     | Brown or w/m bread, with or w/o butter/marg (inc toast) | 1      | 0                     | 0                       |
| 220104     | Brown/ wholemeal, without butter/margarine              | 1      | 0                     | 0                       |
| 220110     | Bread/ rolls/ toast etc, type not specified             | 0.22   | 0                     | 0                       |
| 230102     | Meat-based, brown bread/roll                            | 0.52   | 0                     | 0                       |
| 230103     | Meat-based, bread not specified                         | 0.1144 | 0                     | 0                       |
| 230105     | Chicken/turkey-based, brown bread/roll                  | 0.52   | 0                     | 0                       |
| 230106     | Chicken/turkey-based, bread not specified               | 0.1144 | 0                     | 0                       |
| 230108     | Bacon and egg, brown bread/roll                         | 0.52   | 0                     | 0                       |
| 230109     | Bacon and egg, bread not specified                      | 0.1144 | 0                     | 0                       |
| 230111     | Fish-based, brown bread/roll                            | 0.52   | 0                     | 0                       |
| 230112     | Fish-based, bread not specified                         | 0.1144 | 0                     | 0                       |
| 230202     | Cheese-based, brown bread/roll                          | 0.52   | 0                     | 0                       |
| 230203     | Cheese-based, bread not specified                       | 0.1144 | 0                     | 0                       |
| 230205     | Egg-based, brown bread/roll                             | 0.52   | 0                     | 0                       |
| 230206     | Egg-based, bread not specified                          | 0.1144 | 0                     | 0                       |
| 230208     | Vegetarian-based, brown bread/roll                      | 0.52   | 0                     | 0                       |
| 230209     | Vegetarian-based, bread not specified                   | 0.1144 | 0                     | 0                       |
| 230210     | Sweet-filled sandwich                                   | 0.1144 | 0                     | 0                       |
| 230211     | Unspecified sandwiches or rolls                         | 0.1144 | 0                     | 0                       |

## Breakfast Cereals

### High Fibre and Total Breakfast Cereal (addition of high and low fibre cereals)

#### Household Wholegrain/High Fibre Breakfast Cereals

| Defra Code | Food Description             | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|------------------------------|--------|-----------------------|-------------------------|
| 28101      | Oatmeal and oat products     | 1      | 0.0275                | 0.0224                  |
| 28202      | Muesli                       | 1      | 0.0275                | 0.0224                  |
| 28203      | High fibre breakfast cereals | 1      | 0.0275                | 0.0224                  |

#### Eating Out Wholegrain/High Fibre Breakfast Cereals

| Defra Code | Food Description                                          | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|-----------------------------------------------------------|--------|-----------------------|-------------------------|
| 190101     | Muesli and Oat Crunch Cereals                             | 1      | 0                     | 0                       |
| 190102     | Other high fibre breakfast cereals e.g. Allbran, Weetabix | 1      | 0                     | 0                       |
| 190104     | Hot breakfast cereals e.g. porridge, Ready Brek           | 1      | 0                     | 0                       |

#### Household Low Fibre or High NMES Breakfast Cereal

| Defra Code | Food Description            | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|-----------------------------|--------|-----------------------|-------------------------|
| 28204      | Sweetened breakfast cereals | 1      | 0.0275                | 0.0224                  |

#### Eating Out Low Fibre or High NMES Breakfast Cereal

| Defra Code | Food Description                                       | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------------------------------------------|--------|-----------------------|-------------------------|
| 190103     | Sweetened breakfast cereals e.g. Frosties, Sugar Puffs | 1      | 0                     | 0                       |

#### Household Low fibre and Lower NMES Breakfast Cereal

| Defra Code | Food Description        | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|-------------------------|--------|-----------------------|-------------------------|
| 28205      | Other breakfast cereals | 1      | 0.0275                | 0.0224                  |

#### Eating Out Low Fibre and Lower NMES Breakfast Cereal

| Defra Code | Food Description                                                                         | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|------------------------------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 190105     | Other breakfast cereals and type not specified e.g. Cornflakes, Rice Krispies, Special K | 1      | 0                     | 0                       |

## Cakes, Sweet Biscuits and Pastries

### Cakes and Pastries; Sweet Biscuits; and Cakes, Sweet Biscuits and Pastries

#### Household Cakes and Pastries

| Defra Code | Food Description             | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|------------------------------|--------|-----------------------|-------------------------|
| 27001      | Cakes & pastries, not frozen | 1      | 0.2802                | 0.1703                  |
| 27002      | Takeaway pastries            | 1      | 0.2802                | 0.1703                  |
| 28601      | Puddings                     | 1      | 0.0638                | 0.0283                  |
| 29402      | Cakes & pastries - frozen    | 1      | 0.2802                | 0.1703                  |

#### Eating Out Cakes and Pastries

| Defra Code | Food Description                                               | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------------------------------|--------|-----------------------|-------------------------|
| 290201     | Doughnut                                                       | 1      | 0                     | 0                       |
| 290202     | Cream pastries e.g. chocolate éclairs, profiteroles            | 1      | 0                     | 0                       |
| 290203     | Cream sponge/ gâteau (not chocolate) e.g. Victoria sandwich    | 1      | 0                     | 0                       |
| 290204     | Rich chocolate cake & chocolate gâteau e.g. Death by Chocolate | 1      | 0                     | 0                       |
| 290205     | Fruit and other pies/pastries                                  | 1      | 0                     | 0                       |
| 290206     | Fruit cake                                                     | 1      | 0                     | 0                       |
| 290207     | Other sponge cakes/desserts (not cream cakes)                  | 1      | 0                     | 0                       |
| 290209     | Meringue desserts incl Pavlova                                 | 1      | 0                     | 0                       |
| 290210     | Cheesecake                                                     | 1      | 0                     | 0                       |
| 290214     | Other cakes and desserts incl not specified                    | 1      | 0                     | 0                       |
| 290301     | Waffles & pancakes                                             | 0.5    | 0                     | 0                       |
| 290401     | Teacakes, scones, currant bun, iced bun                        | 0.5    | 0                     | 0                       |

#### Household Sweet Biscuits

| Defra Code | Food Description                             | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------------|--------|-----------------------|-------------------------|
| 27402      | Sweet biscuits (not chocolate) & cereal bars | 1      | 0.0539                | 0.0438                  |
| 27702      | Chocolate biscuits                           | 1      | 0.0539                | 0.0438                  |

#### Eating Out Sweet Biscuits

| Defra Code | Food Description                                    | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|-----------------------------------------------------|--------|-----------------------|-------------------------|
| 300101     | Fully-coated chocolate biscuits/ wafers             | 1      | 0                     | 0                       |
| 300102     | Sweet biscuits incl half- coated chocolate biscuits | 1      | 0                     | 0                       |
| 300103     | Cereal bars and cereal based cakes                  | 1      | 0                     | 0                       |

## Ice Cream and Dairy Desserts

### Household Ice Cream and Dairy Desserts

| Defra Code | Food Description                                   | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------------------|--------|-----------------------|-------------------------|
| 1603       | Dairy desserts - not frozen                        | 1      | 0.1                   | 0.1                     |
| 33203      | Ice cream tub or block                             | 1      | 0.0638                | 0.0283                  |
| 33302      | Ice lollies, sorbet, frozen mousse, frozen yoghurt | 1      | 0.0638                | 0.0283                  |
| 33303      | Ice lollies, sorbet, frozen mousse, frozen yoghurt | 1      | 0.0638                | 0.0283                  |
| 33304      | Takeaway ice cream, ice cream products, milkshakes | 1      | 0.0638                | 0.0283                  |

### Eating Out Ice Cream and Dairy Desserts

| Defra Code | Food Description                                               | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------------------------------|--------|-----------------------|-------------------------|
| 290101     | Ice cream in a cone, cornet or wafer and ice cream desserts    | 1      | 0                     | 0                       |
| 290103     | Ice cream scoop or tub including ice cream served with dessert | 1      | 0                     | 0                       |
| 290104     | Iced lollies and sorbets                                       | 1      | 0                     | 0                       |
| 290211     | Fool, trifle and mousse desserts                               | 1      | 0                     | 0                       |

## Sugar and Preserves

### Household Sugar and Preserves

| Defra Code | Food Description          | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------|--------|-----------------------|-------------------------|
| 15001      | Sugar                     | 1      | 0.1267                | 0.091                   |
| 15101      | Jams & fruit curds        | 1      | 0.1267                | 0.091                   |
| 15201      | Marmalade                 | 1      | 0.1267                | 0.091                   |
| 15301      | Syrup, treacle            | 1      | 0.1267                | 0.091                   |
| 15401      | Honey                     | 1      | 0.1267                | 0.091                   |
| 32303      | Other spreads & dressings | 1      | 0.1267                | 0.091                   |
| 32901      | Jelly squares or crystals | 1      | 0.0638                | 0.0283                  |

### Eating Out Sugar and Preserves

| Defra Code | Food Description                                 | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------------------------------------|--------|-----------------------|-------------------------|
| 240106     | Sweet sauce e.g. syrup, treacle, chocolate sauce | 1      | 0                     | 0                       |
| 240402     | Jam, marmalade & honey                           | 1      | 0                     | 0                       |
| 240405     | Sugar (as an addition to tea, coffee etc)        | 1      | 0                     | 0                       |
| 290212     | Jelly                                            | 1      | 0                     | 0                       |

## Confectionery

### Chocolate Confectionery, Sugar Confectionery and Total Confectionery

#### Household Chocolate Confectionery

| Defra Code | Food Description        | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|-------------------------|--------|-----------------------|-------------------------|
| 35001      | Chocolate bars - solid  | 1      | 0.0958                | 0.0575                  |
| 35101      | Chocolate bars - filled | 1      | 0.0958                | 0.0575                  |

#### Eating Out Chocolate Confectionery

| Defra Code | Food Description                                                               | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 280101     | Chocolate bars & sweets – solid, unfilled incl 'chocolate', type not specified | 1      | 0                     | 0                       |
| 280102     | Chocolate-coated bars & sweets - filled e.g. Mars, Snickers, Minstrels         | 1      | 0                     | 0                       |
| 280103     | Single chocolate (after dinner)                                                | 1      | 0                     | 0                       |

#### Household Sugar Confectionery

| Defra Code | Food Description          | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------|--------|-----------------------|-------------------------|
| 35301      | Mints                     | 1      | 0.0958                | 0.0575                  |
| 35302      | Boiled sweets             | 1      | 0.0958                | 0.0575                  |
| 35401      | Fudges, toffees, caramels | 1      | 0.0958                | 0.0575                  |
| 35501      | Takeaway confectionery    | 1      | 0.0958                | 0.0575                  |

#### Eating Out Sugar Confectionery

| Defra Code | Food Description                                                         | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 280105     | Mints e.g. Polo, Extra Strong                                            | 1      | 0                     | 0                       |
| 280106     | Boiled sweets, jellies e.g. fruit gums incl 'sweets', type not specified | 1      | 0                     | 0                       |
| 280107     | Toffee/fudge, uncoated eg Toffos, Choc Eclairs, caramels                 | 1      | 0                     | 0                       |
| 280108     | Pick n mix, nougat, liquorice and other sweets                           | 1      | 0                     | 0                       |



## Soft Drinks

### Sugar Containing Soft Drinks, Sugar Free Soft Drinks, and Total Soft Drinks

#### Household Sugar Containing Soft Drinks

| Defra Code | Food Description                               | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|------------------------------------------------|--------|-----------------------|-------------------------|
| 34001      | Soft drinks, concentrated, not low calorie     | 1      | 0.1                   | 0.1                     |
| 34101      | Soft drinks, not concentrated, not low calorie | 1      | 0.1                   | 0.1                     |

#### Eating Out Sugar Containing Soft Drinks

| Defra Code | Food Description                                                                                  | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------------------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 260203     | Soft drink (incl carbonates & still), not low calorie incl low calorie/ not low cal not specified | 1      | 0                     | 0                       |
| 260206     | Soft drink where pure juice or juice drink not specified                                          | 1      | 0                     | 0                       |

#### Household Sugar Free Soft Drinks

| Defra Code | Food Description                           | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------------------------------|--------|-----------------------|-------------------------|
| 34301      | Soft drinks, concentrated, low calorie     | 1      | 0.1                   | 0.1                     |
| 34401      | Soft drinks, not concentrated, low calorie | 1      | 0.1                   | 0.1                     |

#### Eating Out Sugar Free Soft Drinks

| Defra Code | Food Description                                  | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------------------------------|--------|-----------------------|-------------------------|
| 260202     | Soft drink (incl carbonates & still), low calorie | 1      | 0                     | 0                       |

## Meat Products

### Household Bacon and Ham

| Defra Code | Food Description                | Factor  | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------------|---------|-----------------------|-------------------------|
| 5502       | Bacon and ham joints, uncooked  | 0.69104 | 0.2041                | 0.133                   |
| 5505       | Bacon and ham rashers, uncooked | 0.65825 | 0.2041                | 0.133                   |
| 5801       | Cooked ham & bacon              | 1       | 0.2041                | 0.133                   |

### Eating Out Bacon and Ham

| Defra Code | Food Description                                                                     | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 110106     | Bacon                                                                                | 1      | 0                     | 0                       |
| 110107     | Gammon or ham                                                                        | 1      | 0                     | 0                       |
| 230107     | Bacon and egg based sandwich on white bread or roll including Bacon and Egg McMuffin | 0.25   | 0                     | 0                       |
| 230108     | Bacon and egg based sandwich on brown bread or roll                                  | 0.25   | 0                     | 0                       |
| 230109     | Bacon and egg based sandwich bread not specified                                     | 0.25   | 0                     | 0                       |

### Household Other Processed Red Meat Products

| Defra Code | Food Description                            | Factor   | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------------------------|----------|-----------------------|-------------------------|
| 6201       | Corned beef/ corned meat (canned or sliced) | 1        | 0.0815                | 0.0457                  |
| 6601       | Other cooked meat                           | 0.954007 | 0.0584                | 0.0401                  |
| 7102       | Other canned meat and canned meat products  | 0.532811 | 0.0584                | 0.0401                  |
| 7901       | Sausages (uncooked) - pork                  | 0.78     | 0.0584                | 0.0401                  |
| 8001       | Sausages (uncooked) - beef                  | 0.779    | 0.0584                | 0.0401                  |
| 8302       | Meat pies                                   | 0.271562 | 0.2563                | 0.29                    |
| 8303       | Sausage rolls                               | 0.28     | 0.2563                | 0.29                    |
| 8401       | Meat pies, pasties and puddings             | 0.27445  | 0.2563                | 0.29                    |
| 8501       | Burgers                                     | 0.73     | 0.0584                | 0.0401                  |
| 8902       | Other convenience meat products             | 0.240481 | 0.2563                | 0.29                    |
| 9301       | Pâté                                        | 1        | 0.1324                | 0.0755                  |
| 9302       | Delicatessen type sausages: cooked or cured | 1        | 0.0584                | 0.0401                  |
| 9403       | Meat pastes and spreads                     | 1        | 0.1324                | 0.0755                  |
| 9501       | Takeaway meat pies & pasties                | 0.266316 | 0.2563                | 0.29                    |
| 9502       | Burger & bun e.g. hamburger                 | 0.485    | 0.2563                | 0.29                    |
| 9503       | Kebabs                                      | 0.5      | 0.2563                | 0.29                    |
| 9504       | Sausages & saveloys                         | 1        | 0.2563                | 0.29                    |
| 9506       | Miscellaneous meats                         | 0.649653 | 0.2563                | 0.29                    |

### Eating Out Other Processed Red Meat Products

| Defra Code | Food Description                              | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|-----------------------------------------------|--------|-----------------------|-------------------------|
| 110301     | Small or single burgers                       | 0.39   | 0                     | 0                       |
| 110302     | Large or double burgers                       | 0.58   | 0                     | 0                       |
| 110401     | Kebabs - all types including chicken          | 0.5    | 0                     | 0                       |
| 110402     | Plain sausages e.g. beef, pork                | 1      | 0                     | 0                       |
| 110403     | Other sausages                                | 1      | 0                     | 0                       |
| 110404     | Hot dogs and sausage sandwiches               | 0.1769 | 0                     | 0                       |
| 110501     | Meat pies (pastry topped) and pasties         | 0.16   | 0                     | 0                       |
| 110502     | Meat pies (potato topped e.g. shepherd's pie) | 0.1963 | 0                     | 0                       |
| 110503     | Sausage roll (pastry)                         | 0.28   | 0                     | 0                       |
| 110701     | All pates                                     | 0.5    | 0                     | 0                       |
| 110801     | Other meat products or dishes                 | 0.2592 | 0                     | 0                       |
| 130202     | Pizza - meat, fish or poultry                 | 0.0337 | 0                     | 0                       |
| 160301     | Meat salad e.g. beef, lamb salads             | 0.314  | 0                     | 0                       |
| 230101     | Meat based sandwich on white bread or roll    | 0.242  | 0                     | 0                       |
| 230102     | Meat based sandwich on brown bread or roll    | 0.242  | 0                     | 0                       |
| 230103     | Meat based sandwich bread not specified       | 0.242  | 0                     | 0                       |

### Household Savoury Meat Pies

| Defra Code | Food Description                | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------------|--------|-----------------------|-------------------------|
| 8302       | Meat pies                       | 1      | 0.2563                | 0.29                    |
| 8303       | Sausage rolls                   | 1      | 0.2563                | 0.29                    |
| 8401       | Meat pies, pasties and puddings | 1      | 0.2563                | 0.29                    |
| 9501       | Takeaway meat pies & pasties    | 1      | 0.2563                | 0.29                    |

### Eating Out Savoury Meat Pies

| Defra Code | Food Description                      | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------------------|--------|-----------------------|-------------------------|
| 110501     | Meat pies (pastry topped) and pasties | 1      | 0                     | 0                       |
| 110503     | Sausage roll (pastry)                 | 1      | 0                     | 0                       |

## Spreading Fats – Butter, Soft Margarine, Low Fat Spread and Total (addition of others)

### Household Butter

| Defra Code | Food Description | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|------------------|--------|-----------------------|-------------------------|
| 13501      | Butter           | 1      | 0.0386                | 0.0176                  |

### Household Soft Margarine

| Defra Code | Food Description | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|------------------|--------|-----------------------|-------------------------|
| 13801      | Soft margarine   | 1      | 0.0386                | 0.0176                  |

### Household Low Fat Spread

| Defra Code | Food Description    | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------|--------|-----------------------|-------------------------|
| 14802      | Reduced fat spreads | 1      | 0.0386                | 0.0176                  |
| 14802      | Low fat spreads     | 1      | 0.0386                | 0.0176                  |

## Cooking Oil

### Household Cooking Oil

| Defra Code | Food Description             | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|------------------------------|--------|-----------------------|-------------------------|
| 14304      | Olive oil                    | 1      | 0.1267                | 0.091                   |
| 14305      | Other vegetable & salad oils | 1      | 0.1267                | 0.091                   |

## Cream

### Household Cream

| Defra Code | Food Description | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|------------------|--------|-----------------------|-------------------------|
| 1701       | Cream            | 1      | 0.1222                | 0.096                   |

### Eating Out Cream

| Defra Code | Food Description                  | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|-----------------------------------|--------|-----------------------|-------------------------|
| 240403     | Cream - single, double, sour etc. | 1      | 0                     | 0                       |

## Cheese

### Household Cheese

| Defra Code | Food Description                             | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------------|--------|-----------------------|-------------------------|
| 2201       | Hard cheese - Cheddar type                   | 1      | 0.0883                | 0.0829                  |
| 2202       | Hard cheese - Other UK or foreign equivalent | 1      | 0.0883                | 0.0829                  |
| 2203       | Hard cheese - Edam or other foreign          | 1      | 0.0883                | 0.0829                  |
| 2205       | Cottage cheese                               | 1      | 0.0883                | 0.0829                  |
| 2206       | Soft natural cheese                          | 1      | 0.0883                | 0.0829                  |
| 2301       | Processed cheese                             | 1      | 0.0883                | 0.0829                  |

### Eating Out Cheese

| Defra Code | Food Description                                   | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------------------|--------|-----------------------|-------------------------|
| 130101     | Cottage cheese including with pineapple            | 1      | 0                     | 0                       |
| 130102     | Soft, continental or processed cheese e.g. brie    | 1      | 0                     | 0                       |
| 130103     | Cheddar, blue or other hard cheese and unspecified | 1      | 0                     | 0                       |

## Milk

### Household Whole Milk

| Defra Code | Food Description         | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------------|--------|-----------------------|-------------------------|
| 402        | UHT milk                 | 1      | 0.1                   | 0.1                     |
| 403        | Sterilised               | 1      | 0.1                   | 0.1                     |
| 404        | Pasteurised/ homogenised | 1      | 0.1                   | 0.1                     |

### Household Semi-skimmed Milk

| Defra Code | Food Description  | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|-------------------|--------|-----------------------|-------------------------|
| 1503       | Semi-skimmed milk | 1      | 0.1                   | 0.1                     |

### Household Skimmed Milk

| Defra Code | Food Description   | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------|--------|-----------------------|-------------------------|
| 1502       | Fully skimmed milk | 1      | 0.1                   | 0.1                     |

### Household Total Milk

| Defra Code | Food Description                                    | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|-----------------------------------------------------|--------|-----------------------|-------------------------|
| 402        | UHT milk                                            | 1      | 0.1                   | 0.1                     |
| 403        | Sterilised                                          | 1      | 0.1                   | 0.1                     |
| 404        | Pasteurised/ homogenised                            | 1      | 0.1                   | 0.1                     |
| 501        | School milk                                         | 1      | 0.1                   | 0.1                     |
| 601        | Welfare milk                                        | 1      | 0.1                   | 0.1                     |
| 901        | Condensed or evaporated milk                        | 2.6    | 0.1                   | 0.1                     |
| 1102       | Infant or baby milks - ready to drink               | 1      | 0.1                   | 0.1                     |
| 1103       | Infant or baby milks - dried                        | 1      | 0.1                   | 0.1                     |
| 1201       | Instant dried milk                                  | 1      | 0.1                   | 0.1                     |
| 1502       | Fully skimmed milk                                  | 1      | 0.1                   | 0.1                     |
| 1503       | Semi-skimmed milk                                   | 1      | 0.1                   | 0.1                     |
| 1605       | Dried milk products                                 | 1      | 0.1                   | 0.1                     |
| 1606       | Milk drinks & other milks (replaced 200405 onwards) | 1      | 0.1                   | 0.1                     |
| 1607       | Milk drinks & other milks                           | 1      | 0.1                   | 0.1                     |

### Eating Out Total Milk

| Defra Code | Food Description             | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|------------------------------|--------|-----------------------|-------------------------|
| 260301     | Milk as a drink              | 1      | 0                     | 0                       |
| 260302     | Milk on cereal               | 1      | 0                     | 0                       |
| 260303     | Milkshake and flavoured milk | 1      | 0                     | 0                       |
| 260304     | Free school milk             | 1      | 0                     | 0                       |

### White Fish

NB: Factors are multiplied by 7 in order that fish calculations can be carried out alongside those for other foods as the fish target is in grams per week and the other targets are in grams per day

### Household White Fish

| Defra Code | Food Description                                         | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------------------------|--------|-----------------------|-------------------------|
| 10201      | White fish, fresh or chilled                             | 7      | 0.096                 | 0.0418                  |
| 10202      | White fish, frozen                                       | 7      | 0.096                 | 0.0418                  |
| 11401      | White fish, dried or salted or smoked                    | 7      | 0.096                 | 0.0418                  |
| 11702      | Shellfish, fresh or chilled                              | 7      | 0.2178                | 0.0621                  |
| 11703      | Shellfish, frozen                                        | 7      | 0.2178                | 0.0621                  |
| 11801      | Takeaway fish                                            | 3.85   | 0.096                 | 0.0418                  |
| 12001      | Other tinned or bottled fish                             | 5.67   | 0.096                 | 0.0418                  |
| 12103      | Ready meals & other fish products - frozen or not frozen | 2.45   | 0.2563                | 0.29                    |
| 12304      | Takeaway fish products                                   | 3.5    | 0.2563                | 0.29                    |
| 12305      | Takeaway fish based meals                                | 3.5    | 0.2563                | 0.29                    |

### Eating Out White Fish

| Defra Code | Food Description                                                                            | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------------------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 100101     | Meat or fish based curry with sauce                                                         | 1.75   | 0                     | 0                       |
| 100102     | Meat or fish based curry without sauce                                                      | 1.75   | 0                     | 0                       |
| 100201     | Chinese or Thai meat or fish based dishes excluding curry                                   | 1.75   | 0                     | 0                       |
| 120101     | White fish - grilled, steamed, baked or boiled - no sauce                                   | 7      | 0                     | 0                       |
| 120102     | White fish - fried (incl in batter/breadcrumbs) - no sauce                                  | 3.85   | 0                     | 0                       |
| 120301     | Shellfish - without sauce or dressing e.g. prawns, shrimps, oysters, crab                   | 7      | 0                     | 0                       |
| 120501     | Other fish products and unspecified 'fish' e.g. squid, sushi, crabsticks                    | 7      | 0                     | 0                       |
| 120601     | Fish, processed, in breadcrumbs (fish fingers, fish cakes, scampi) - without sauce/dressing | 3.5    | 0                     | 0                       |
| 120602     | Fish burgers [in bun]                                                                       | 1.575  | 0                     | 0                       |
| 120603     | Fish based pie or other dish e.g. paella, kedgeree, tuna pasta bake                         | 2.45   | 0                     | 0                       |
| 130202     | Pizza - meat, fish or poultry                                                               | 0.175  | 0                     | 0                       |
| 160303     | Fish salad e.g. tuna, salmon salads                                                         | 0.7    | 0                     | 0                       |
| 230110     | Fish based sandwich on white bread or roll                                                  | 2.31   | 0                     | 0                       |
| 230111     | Fish based sandwich on brown bread or roll                                                  | 2.31   | 0                     | 0                       |
| 230112     | Fish based sandwich bread not specified                                                     | 2.31   | 0                     | 0                       |
| 240103     | Fish or seafood based sauce                                                                 | 3.43   | 0                     | 0                       |
| 240304     | Fish-based filling e.g. tuna mayonnaise                                                     | 4.55   | 0                     | 0                       |

### Fresh Potatoes

#### Household Fresh Potatoes

| Defra Code | Food Description                       | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------|--------|-----------------------|-------------------------|
| 15501      | Potatoes                               | 1      | 0.3718                | 0.2416                  |
| 15502      | Potatoes                               | 1      | 0.3718                | 0.2416                  |
| 15503      | Potatoes                               | 1      | 0.3718                | 0.2416                  |
| 15504      | Fresh potatoes not specified elsewhere | 1      | 0.3718                | 0.2416                  |
| 15505      | Fresh new potatoes                     | 1      | 0.3718                | 0.2416                  |
| 15506      | Fresh baking potatoes                  | 1      | 0.3718                | 0.2416                  |

#### Eating Out Fresh Potatoes

| Defra Code | Food Description                                                | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|-----------------------------------------------------------------|--------|-----------------------|-------------------------|
| 140103     | Potatoes - boiled & type not specified                          | 1      | 0                     | 0                       |
| 140104     | Potatoes - mashed                                               | 1      | 0                     | 0                       |
| 140105     | Potatoes - roast                                                | 1      | 0                     | 0                       |
| 140106     | Sautéed potatoes/ potato croquettes/ hash browns                | 1      | 0                     | 0                       |
| 140107     | Baked/ jacket potatoes - no filling                             | 1      | 0                     | 0                       |
| 140108     | Other potato dishes (e.g. wedges, potato salad) & not specified | 1      | 0                     | 0                       |

## Processed Potatoes

### Household Processed Potatoes

| Defra Code | Food Description                             | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|----------------------------------------------|--------|-----------------------|-------------------------|
| 19702      | Chips - frozen or not frozen                 | 1      | 0.3718                | 0.2416                  |
| 19703      | Takeaway chips                               | 1      | 0.3718                | 0.2416                  |
| 19801      | Instant potato                               | 1      | 0.3718                | 0.2416                  |
| 19901      | Canned potatoes                              | 1      | 0.3718                | 0.2416                  |
| 20101      | Other potato products - frozen or not frozen | 1      | 0.3718                | 0.2416                  |

### Eating Out Processed Potatoes

| Defra Code | Food Description                                            | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|-------------------------------------------------------------|--------|-----------------------|-------------------------|
| 140101     | Chips & French fries - from fast food outlet e.g. McDonalds | 1      | 0                     | 0                       |
| 140102     | Chips - served with meal e.g. from restaurant, chip shop    | 1      | 0                     | 0                       |

## Nuts

### Household Nuts

| Defra Code | Food Description    | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|---------------------|--------|-----------------------|-------------------------|
| 24502      | Nuts & edible seeds | 1      | 0.0228                | 0.043                   |
| 24503      | Peanut butter       | 1      | 0.0228                | 0.043                   |

### Eating Out Nuts

| Defra Code | Food Description             | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|------------------------------|--------|-----------------------|-------------------------|
| 310101     | Nuts, nut products and seeds | 1      | 0                     | 0                       |

## Savoury Snacks

### Household Savoury Snacks

| Defra Code | Food Description                                                   | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|--------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 20002      | Crisps & potato snacks                                             | 1      | 0.1239                | 0.0809                  |
| 29909      | Cereal snacks                                                      | 1      | 0.0275                | 0.0224                  |
| 29916      | Takeaway crisps, savoury snacks, popcorn, popadums, prawn crackers | 1      | 0.1239                | 0.0809                  |



### Eating Out Savoury Snacks

| Defra Code | Food Description                                                       | Factor | Single Adult HH Waste | Multiple Adult HH Waste |
|------------|------------------------------------------------------------------------|--------|-----------------------|-------------------------|
| 310102     | Potato crisps or snacks including unspecified 'crisps', prawn crackers | 1      | 0                     | 0                       |
| 310103     | Corn snacks, based on maize                                            | 1      | 0                     | 0                       |
| 310104     | Wheat-based savoury snack                                              | 1      | 0                     | 0                       |

**Appendix 4: Energy Density Coding Frame**

| Food Code | Description                                  | HH / EO | Food & Milk | Factor |
|-----------|----------------------------------------------|---------|-------------|--------|
| 402       | UHT whole milk                               | HH      | ✓           | 1      |
| 403       | Sterilised whole milk                        | HH      | ✓           | 1      |
| 404       | Pasteurised or homogenised whole milk        | HH      | ✓           | 1      |
| 501       | School milk                                  | HH      | ✓           | 1      |
| 601       | Welfare milk                                 | HH      | ✓           | 1      |
| 901       | Condensed or evaporated milk                 | HH      | ✓           | 1      |
| 1102      | Infant or baby milks - ready to drink        | HH      | ✓           | 1      |
| 1103      | Infant or baby milks - dried (reconstituted) | HH      | ✓           | 1      |
| 1201      | Instant dried milk (reconstituted)           | HH      | ✓           | 1      |
| 1301      | Yoghurt                                      | HH      | ✓           | 1      |
| 1302      | Fromage frais                                | HH      | ✓           | 1      |
| 1502      | Fully skimmed milk                           | HH      | ✓           | 1      |
| 1503      | Semi-skimmed milk                            | HH      | ✓           | 1      |
| 1603      | Dairy desserts - not frozen                  | HH      | ✓           | 1      |
| 1605      | Dried milk products (reconstituted)          | HH      | ✓           | 1      |
| 1606      | Milk drinks & other milks                    | HH      | ✓           | 1      |
| 1607      | Milk drinks & other milks                    | HH      | ✓           | 1      |
| 1608      | Non-dairy milk substitutes                   | HH      | ✓           | 1      |
| 1701      | Cream                                        | HH      | ✓           | 1      |
| 2201      | Hard cheese - Cheddar type                   | HH      | ✓           | 1      |
| 2202      | Hard cheese - Other                          | HH      | ✓           | 1      |
| 2203      | Hard cheese - Edam                           | HH      | ✓           | 1      |
| 2205      | Cottage cheese                               | HH      | ✓           | 1      |
| 2206      | Soft natural cheese                          | HH      | ✓           | 1      |
| 2301      | Processed cheese                             | HH      | ✓           | 1      |
| 3102      | Beef joints - on the bone                    | HH      | ✓           | 0.56   |
| 3103      | Beef joints - boned                          | HH      | ✓           | 0.63   |
| 3104      | Beef steak - less expensive                  | HH      | ✓           | 0.64   |
| 3105      | Beef steak - more expensive                  | HH      | ✓           | 0.73   |
| 3106      | Minced beef                                  | HH      | ✓           | 0.82   |
| 3107      | All other beef and veal                      | HH      | ✓           | 0.62   |
| 3601      | Mutton                                       | HH      | ✓           | 0.62   |
| 3602      | Lamb joints                                  | HH      | ✓           | 0.59   |
| 3603      | Lamb chops                                   | HH      | ✓           | 0.55   |
| 3604      | All other lamb                               | HH      | ✓           | 0.71   |
| 4101      | Pork joints                                  | HH      | ✓           | 0.57   |
| 4102      | Pork chops                                   | HH      | ✓           | 0.59   |
| 4103      | Pork fillets and steaks                      | HH      | ✓           | 0.65   |
| 4104      | All other pork                               | HH      | ✓           | 0.63   |
| 4603      | Ox liver                                     | HH      | ✓           | 0.91   |
| 4604      | Lambs liver                                  | HH      | ✓           | 0.78   |
| 4605      | Pigs liver                                   | HH      | ✓           | 0.88   |
| 4607      | All other liver                              | HH      | ✓           | 0.88   |
| 5101      | All offal other than liver                   | HH      | ✓           | 0.56   |
| 5502      | Bacon and ham joints, uncooked               | HH      | ✓           | 0.69   |
| 5505      | Bacon and ham rashers, uncooked              | HH      | ✓           | 0.66   |
| 5801      | Ham and bacon (cooked)                       | HH      | ✓           | 1      |
| 5903      | Cooked chicken and turkey                    | HH      | ✓           | 1      |
| 5904      | Takeaway chicken                             | HH      | ✓           | 1      |
| 6201      | Corned beef - canned or sliced               | HH      | ✓           | 1      |
| 6601      | Other cooked meat                            | HH      | ✓           | 1      |
| 7102      | Other canned meat and meat products          | HH      | ✓           | 1      |
| 7401      | Chicken - whole or part                      | HH      | ✓           | 0.54   |
| 7703      | Turkey - whole or part                       | HH      | ✓           | 0.55   |
| 7704      | Poultry other than chicken or turkey         | HH      | ✓           | 0.46   |
| 7801      | Other fresh, chilled or frozen meat          | HH      | ✓           | 0.59   |
| 7901      | Sausages, uncooked - pork                    | HH      | ✓           | 0.78   |
| 8001      | Sausages, uncooked - beef etc.               | HH      | ✓           | 0.78   |
| 8302      | Meat pies - ready to eat                     | HH      | ✓           | 1      |
| 8303      | Sausage rolls - ready to eat                 | HH      | ✓           | 1      |
| 8401      | Meat pies, pasties and puddings              | HH      | ✓           | 1      |
| 8501      | Burgers - frozen or not frozen               | HH      | ✓           | 0.73   |
| 8901      | Complete meat-based ready meals              | HH      | ✓           | 1      |

#### Appendix 4: Energy Density Coding Frame

|       |                                                            |    |   |      |
|-------|------------------------------------------------------------|----|---|------|
| 8902  | Other convenience meat products                            | HH | ✓ | 1    |
| 9301  | Pate                                                       | HH | ✓ | 1    |
| 9302  | Delicatessen type sausages                                 | HH | ✓ | 1    |
| 9403  | Meat pastes and spreads                                    | HH | ✓ | 1    |
| 9501  | Takeaway meat pies and pasties                             | HH | ✓ | 1    |
| 9502  | Takeaway burger and bun                                    | HH | ✓ | 1    |
| 9503  | Takeaway kebabs                                            | HH | ✓ | 1    |
| 9504  | Takeaway sausages and saveloys                             | HH | ✓ | 1    |
| 9505  | Takeaway meat based meals                                  | HH | ✓ | 1    |
| 9506  | Takeaway miscellaneous meats                               | HH | ✓ | 1    |
| 10201 | White fish, fresh or chilled                               | HH | ✓ | 0.94 |
| 10202 | White fish, frozen                                         | HH | ✓ | 0.94 |
| 10601 | Herrings and other blue fish, fresh/chilled                | HH | ✓ | 0.89 |
| 10602 | Herrings and other blue fish, frozen                       | HH | ✓ | 0.89 |
| 10701 | Salmon, fresh or chilled                                   | HH | ✓ | 0.94 |
| 10702 | Salmon, frozen                                             | HH | ✓ | 0.94 |
| 10801 | Blue fish, dried or salted or smoked                       | HH | ✓ | 0.71 |
| 11401 | White fish, dried or salted or smoked                      | HH | ✓ | 0.97 |
| 11702 | Shellfish, fresh or chilled                                | HH | ✓ | 1    |
| 11703 | Shellfish, frozen                                          | HH | ✓ | 1    |
| 11801 | Takeaway fish                                              | HH | ✓ | 1    |
| 11901 | Tinned salmon                                              | HH | ✓ | 1    |
| 12001 | Other tinned or bottled fish                               | HH | ✓ | 1    |
| 12103 | Ready meals and other fish products                        | HH | ✓ | 1    |
| 12304 | Takeaway fish products                                     | HH | ✓ | 1    |
| 12305 | Takeaway fish based meals                                  | HH | ✓ | 1    |
| 12901 | Eggs                                                       | HH | ✓ | 50   |
| 13501 | Butter                                                     | HH | ✓ | 1    |
| 13801 | Soft margarine                                             | HH | ✓ | 1    |
| 13802 | Other margarine                                            | HH | ✓ | 1    |
| 13901 | Lard, cooking fat                                          | HH | ✓ | 1    |
| 14304 | Olive Oil                                                  | HH | ✓ | 1    |
| 14305 | Other vegetable and salad oils                             | HH | ✓ | 1    |
| 14802 | Reduced fat spreads                                        | HH | ✓ | 1    |
| 14803 | Low fat spreads                                            | HH | ✓ | 1    |
| 14805 | Suet and dripping                                          | HH | ✓ | 1    |
| 14807 | Imitation cream                                            | HH | ✓ | 1    |
| 15001 | Sugar                                                      | HH | ✓ | 1    |
| 15101 | Jams and fruit curds                                       | HH | ✓ | 1    |
| 15201 | Marmalade                                                  | HH | ✓ | 1    |
| 15301 | Syrup, treacle                                             | HH | ✓ | 1    |
| 15401 | Honey                                                      | HH | ✓ | 1    |
| 15501 | Potatoes                                                   | HH | ✓ | 1    |
| 15502 | Potatoes                                                   | HH | ✓ | 1    |
| 15503 | Potatoes                                                   | HH | ✓ | 1    |
| 15504 | Fresh potatoes not specified elsewhere                     | HH | ✓ | 1    |
| 15505 | Fresh new potatoes                                         | HH | ✓ | 1    |
| 15506 | Fresh baking potatoes                                      | HH | ✓ | 1    |
| 16201 | Fresh cabbages                                             | HH | ✓ | 1    |
| 16301 | Fresh Brussels sprouts                                     | HH | ✓ | 1    |
| 16401 | Fresh cauliflower                                          | HH | ✓ | 1    |
| 16701 | Lettuce and leafy salads                                   | HH | ✓ | 1    |
| 16702 | Prepared lettuce salads                                    | HH | ✓ | 1    |
| 16801 | Fresh peas                                                 | HH | ✓ | 1    |
| 16901 | Fresh beans                                                | HH | ✓ | 1    |
| 17101 | Other fresh green vegetables                               | HH | ✓ | 1    |
| 17201 | Fresh carrots                                              | HH | ✓ | 1    |
| 17301 | Fresh turnips and swede                                    | HH | ✓ | 1    |
| 17401 | Other fresh root vegetables                                | HH | ✓ | 1    |
| 17501 | Fresh onions, leeks and shallots                           | HH | ✓ | 1    |
| 17601 | Fresh cucumbers                                            | HH | ✓ | 1    |
| 17701 | Fresh mushrooms                                            | HH | ✓ | 1    |
| 17801 | Fresh tomatoes                                             | HH | ✓ | 1    |
| 18301 | Fresh vegetable stewpack, stirfry pack etc.                | HH | ✓ | 1    |
| 18302 | Fresh stem vegetables                                      | HH | ✓ | 1    |
| 18303 | Fresh marrow, courgettes, aubergine, pumpkin and other veg | HH | ✓ | 1    |
| 18304 | Fresh herbs                                                | HH | ✓ | 1    |

#### Appendix 4: Energy Density Coding Frame

|       |                                                                   |    |   |       |
|-------|-------------------------------------------------------------------|----|---|-------|
| 18401 | Tomatoes, canned or bottled                                       | HH | ✓ | 1     |
| 18501 | Peas, canned                                                      | HH | ✓ | 1     |
| 18802 | Baked beans in sauce                                              | HH | ✓ | 1     |
| 18803 | Other canned beans and pulses                                     | HH | ✓ | 1     |
| 19101 | Other canned vegetables                                           | HH | ✓ | 1     |
| 19201 | Dried pulses, other than air-dried                                | HH | ✓ | 6.19  |
| 19501 | Air-dried vegetables                                              | HH | ✓ | 14.39 |
| 19602 | Tomato puree and vegetable purees                                 | HH | ✓ | 1     |
| 19603 | Vegetable juices e.g. tomato, carrot                              | HH | ✗ | 1     |
| 19702 | Chips - frozen or not frozen                                      | HH | ✓ | 1     |
| 19703 | Takeaway chips                                                    | HH | ✓ | 1     |
| 19801 | Instant potato                                                    | HH | ✓ | 1     |
| 19901 | Canned potatoes                                                   | HH | ✓ | 1     |
| 20002 | Crisps and potato snacks                                          | HH | ✓ | 1     |
| 20101 | Other potato products                                             | HH | ✓ | 1     |
| 20301 | Peas, frozen                                                      | HH | ✓ | 1     |
| 20401 | Beans, frozen                                                     | HH | ✓ | 1     |
| 20601 | Ready meals & other vegetable products                            | HH | ✓ | 1     |
| 20604 | All vegetable takeaway products                                   | HH | ✓ | 1     |
| 20801 | Other frozen vegetables                                           | HH | ✓ | 1     |
| 21001 | Fresh oranges                                                     | HH | ✓ | 1     |
| 21401 | Other fresh citrus fruits                                         | HH | ✓ | 1     |
| 21701 | Fresh apples                                                      | HH | ✓ | 1     |
| 21801 | Fresh pears                                                       | HH | ✓ | 1     |
| 22101 | Fresh stone fruit                                                 | HH | ✓ | 1     |
| 22201 | Fresh grapes                                                      | HH | ✓ | 1     |
| 22701 | Other fresh soft fruit                                            | HH | ✓ | 1     |
| 22801 | Fresh bananas                                                     | HH | ✓ | 1     |
| 22901 | Fresh melons                                                      | HH | ✓ | 1     |
| 23101 | Other fresh fruit                                                 | HH | ✓ | 1     |
| 23301 | Tinned peaches, pears and pineapples                              | HH | ✓ | 1     |
| 23601 | All other tinned or bottled fruit                                 | HH | ✓ | 1     |
| 24001 | Dried fruit                                                       | HH | ✓ | 1     |
| 24101 | Frozen strawberries, apples, peach halves, oranges & other fruits | HH | ✓ | 1     |
| 24502 | Nuts & edible seeds                                               | HH | ✓ | 1     |
| 24503 | Peanut butter                                                     | HH | ✓ | 1     |
| 24801 | Pure fruit juices                                                 | HH | ✗ | 1     |
| 25102 | White bread, standard, unsliced                                   | HH | ✓ | 1     |
| 25202 | White bread, standard, sliced                                     | HH | ✓ | 1     |
| 25701 | White bread, premium, sliced and unsliced                         | HH | ✓ | 1     |
| 25801 | White bread, soft grain, sliced and unsliced                      | HH | ✓ | 1     |
| 25901 | Brown bread, sliced and unsliced                                  | HH | ✓ | 1     |
| 26001 | Wholemeal and granary bread                                       | HH | ✓ | 1     |
| 26302 | Rolls - white, brown or wholemeal                                 | HH | ✓ | 1     |
| 26303 | Malt bread and fruit loaves                                       | HH | ✓ | 1     |
| 26304 | Vienna and French bread                                           | HH | ✓ | 1     |
| 26305 | Starch reduced bread and rolls                                    | HH | ✓ | 1     |
| 26308 | Other breads                                                      | HH | ✓ | 1     |
| 26309 | Sandwiches                                                        | HH | ✓ | 1     |
| 26310 | Sandwiches from takeaway                                          | HH | ✓ | 1     |
| 26311 | Takeaway breads                                                   | HH | ✓ | 1     |
| 26401 | Flour                                                             | HH | ✓ | 1     |
| 26701 | Buns, scones and teacakes                                         | HH | ✓ | 1     |
| 27001 | Cakes and pastries, not frozen                                    | HH | ✓ | 1     |
| 27002 | Takeaway pastries                                                 | HH | ✓ | 1     |
| 27101 | Crispbread                                                        | HH | ✓ | 1     |
| 27402 | Sweet biscuits (not choc) and cereal bars                         | HH | ✓ | 1     |
| 27403 | Cream crackers & other unsweetened biscuits                       | HH | ✓ | 1     |
| 27702 | Chocolate biscuits                                                | HH | ✓ | 1     |
| 28101 | Oatmeal and oat products                                          | HH | ✓ | 1     |
| 28202 | Muesli                                                            | HH | ✓ | 1     |
| 28203 | High fibre breakfast cereals                                      | HH | ✓ | 1     |
| 28204 | Sweetened breakfast cereals                                       | HH | ✓ | 1     |
| 28205 | Other breakfast cereals                                           | HH | ✓ | 1     |
| 28502 | Canned or fresh carton custard                                    | HH | ✓ | 1     |
| 28503 | All canned milk puddings                                          | HH | ✓ | 1     |
| 28601 | Puddings                                                          | HH | ✓ | 1     |

#### Appendix 4: Energy Density Coding Frame

|       |                                                                |    |   |      |
|-------|----------------------------------------------------------------|----|---|------|
| 28702 | Dried rice                                                     | HH | ✓ | 2.77 |
| 28703 | Cooked rice                                                    | HH | ✓ | 1    |
| 28704 | Takeaway rice                                                  | HH | ✓ | 1    |
| 29001 | Invalid, slimming and sports foods                             | HH | ✓ | 1    |
| 29101 | Infant cereal foods                                            | HH | ✓ | 1    |
| 29402 | Cakes and pastries - frozen                                    | HH | ✓ | 1    |
| 29501 | Canned pasta                                                   | HH | ✓ | 1    |
| 29502 | Dried and fresh pasta                                          | HH | ✓ | 2.27 |
| 29503 | Takeaway pasta and noodles                                     | HH | ✓ | 1    |
| 29601 | Pizzas - frozen and not frozen                                 | HH | ✓ | 1    |
| 29602 | Takeaway pizza                                                 | HH | ✓ | 1    |
| 29907 | Cake, pudding and dessert mixes                                | HH | ✓ | 8.50 |
| 29909 | Cereal snacks                                                  | HH | ✓ | 1    |
| 29915 | Quiches and flans - frozen and not frozen                      | HH | ✓ | 1    |
| 29916 | T/A crisps, savoury snacks, popcorn, popadums, prawn crackers  | HH | ✓ | 1    |
| 29919 | Other cereal foods - frozen and not frozen                     | HH | ✓ | 1    |
| 30101 | Other cereals                                                  | HH | ✓ | 1    |
| 30401 | Tea                                                            | HH | ✗ | 83   |
| 30701 | Coffee beans and ground coffee                                 | HH | ✗ | 52   |
| 30801 | Instant coffee                                                 | HH | ✗ | 173  |
| 30901 | Coffee essences                                                | HH | ✗ | 20.8 |
| 31001 | Tea and coffee from takeaway                                   | HH | ✗ | 1    |
| 31201 | Cocoa and chocolate drinks                                     | HH | ✓ | 1    |
| 31301 | Malt drinks and chocolate versions of malted drinks            | HH | ✓ | 1    |
| 31401 | Mineral or spring waters                                       | HH | ✗ | 1    |
| 31501 | Baby foods                                                     | HH | ✓ | 1    |
| 31801 | Soups - canned or cartons                                      | HH | ✓ | 1    |
| 31901 | Soups - dehydrated or powdered                                 | HH | ✓ | 9.40 |
| 32001 | Soups - from takeaway                                          | HH | ✓ | 1    |
| 32101 | Other takeaway food brought home                               | HH | ✗ |      |
| 32201 | Meals on wheels - items not specified                          | HH | ✓ | 1    |
| 32302 | Salad dressings                                                | HH | ✓ | 1    |
| 32303 | Other spreads and dressings                                    | HH | ✓ | 1    |
| 32702 | Pickles                                                        | HH | ✓ | 1    |
| 32703 | Sauces                                                         | HH | ✓ | 1    |
| 32704 | Takeaway sauces and mayonnaise                                 | HH | ✓ | 1    |
| 32801 | Stock cubes and meat and yeast extracts                        | HH | ✓ | 1    |
| 32901 | Jelly squares or crystals                                      | HH | ✓ | 1    |
| 33203 | Ice cream tub or block                                         | HH | ✓ | 1    |
| 33302 | Ice cream cornets, choc-ices, lollies with ice cream           | HH | ✓ | 1    |
| 33303 | Ice lollies, sorbet, frozen mousse, frozen yoghurt             | HH | ✓ | 1    |
| 33304 | Takeaway ice cream, ice cream products, milkshakes             | HH | ✓ | 1    |
| 33401 | Salt                                                           | HH | ✗ |      |
| 33501 | Artificial sweeteners                                          | HH | ✗ |      |
| 33602 | Vinegar                                                        | HH | ✗ |      |
| 33603 | Spices and dried herbs                                         | HH | ✗ |      |
| 33604 | Bisto, gravy granules, stuffing mix, baking powder, yeast      | HH | ✗ |      |
| 33605 | Wine and beer making kits                                      | HH | ✗ |      |
| 33606 | Fruit teas, instant tea, herbal tea, rosehip tea               | HH | ✗ |      |
| 33607 | Payment for food, type not specified                           | HH | ✗ |      |
| 33901 | Soya and novel protein foods                                   | HH | ✓ | 1    |
| 34001 | Soft drinks, concentrated, not low calorie (reconstituted)     | HH | ✗ | 1    |
| 34101 | Soft drinks, not concentrated, not low calorie (reconstituted) | HH | ✗ | 1    |
| 34301 | Soft drinks, concentrated, low calorie                         | HH | ✗ | 1    |
| 34401 | Soft drinks, not concentrated, low calorie                     | HH | ✗ | 1    |
| 35001 | Chocolate bars - solid                                         | HH | ✓ | 1    |
| 35101 | Chocolate bars - filled                                        | HH | ✓ | 1    |
| 35202 | Chewing gum                                                    | HH | ✓ | 1    |
| 35301 | Mints                                                          | HH | ✓ | 1    |
| 35302 | Boiled sweets                                                  | HH | ✓ | 1    |
| 35401 | Fudges, toffees, caramels                                      | HH | ✓ | 1    |
| 35501 | Takeaway confectionery                                         | HH | ✓ | 1    |
| 38102 | Beers                                                          | HH | ✗ | 1    |
| 38202 | Lagers and continental beers                                   | HH | ✗ | 1    |
| 38302 | Ciders and perry                                               | HH | ✗ | 1    |
| 38402 | Champagne, sparkling wines & wine with mixer                   | HH | ✗ | 1    |
| 38403 | Table wine                                                     | HH | ✗ | 1    |

## Appendix 4: Energy Density Coding Frame

|        |                                                                           |    |   |   |
|--------|---------------------------------------------------------------------------|----|---|---|
| 38501  | Spirits with mixer                                                        | HH | × | 1 |
| 38601  | Fortified wines                                                           | HH | × | 1 |
| 38701  | Spirits                                                                   | HH | × | 1 |
| 38801  | Liqueurs and cocktails                                                    | HH | × | 1 |
| 38901  | Alcopops                                                                  | HH | × | 1 |
| 100101 | Meat or fish based curry with sauce                                       | EO | ✓ | 1 |
| 100102 | Meat or fish based curry without sauce                                    | EO | ✓ | 1 |
| 100103 | Vegetable or fruit based curry                                            | EO | ✓ | 1 |
| 100104 | Dhal and dhal dishes                                                      | EO | ✓ | 1 |
| 100105 | Samosas                                                                   | EO | ✓ | 1 |
| 100106 | Other Indian dishes                                                       | EO | ✓ | 1 |
| 100107 | Indian breads                                                             | EO | ✓ | 1 |
| 100108 | Indian buffet or shared meal or unspecified Indian meal                   | EO | ✓ | 1 |
| 100201 | Chinese or Thai meat or fish based dishes excluding curry                 | EO | ✓ | 1 |
| 100202 | Chop suey and fu yung dishes                                              | EO | ✓ | 1 |
| 100203 | Chinese or Thai vegetable based main course dishes ex. curry              | EO | ✓ | 1 |
| 100204 | Chinese or Thai curry                                                     | EO | ✓ | 1 |
| 100205 | Spring rolls                                                              | EO | ✓ | 1 |
| 100206 | Other Chinese or Thai dishes                                              | EO | ✓ | 1 |
| 100207 | Chinese or Thai buffet or shared meal or unspecified meal                 | EO | ✓ | 1 |
| 100301 | All other ethnic meals                                                    | EO | ✓ | 1 |
| 110101 | Steak - without sauce e.g. braised, sirloin                               | EO | ✓ | 1 |
| 110102 | Roast meat with sauce or gravy                                            | EO | ✓ | 1 |
| 110103 | Pork chops with sauce or gravy                                            | EO | ✓ | 1 |
| 110104 | Lamb chops with sauce or gravy                                            | EO | ✓ | 1 |
| 110105 | Spare ribs                                                                | EO | ✓ | 1 |
| 110106 | Bacon                                                                     | EO | ✓ | 1 |
| 110107 | Gammon or ham                                                             | EO | ✓ | 1 |
| 110108 | All offal including liver, kidney, tongue                                 | EO | ✓ | 1 |
| 110201 | Chicken or turkey with sauce or gravy                                     | EO | ✓ | 1 |
| 110202 | Chicken or turkey in breadcrumbs or batter                                | EO | ✓ | 1 |
| 110203 | Duck with sauce or gravy                                                  | EO | ✓ | 1 |
| 110204 | Game with sauce or gravy                                                  | EO | ✓ | 1 |
| 110301 | Small or single burgers                                                   | EO | ✓ | 1 |
| 110302 | Large or double burgers                                                   | EO | ✓ | 1 |
| 110303 | Chicken burger                                                            | EO | ✓ | 1 |
| 110401 | Kebabs - all types including chicken                                      | EO | ✓ | 1 |
| 110402 | Plain sausages e.g. beef, pork                                            | EO | ✓ | 1 |
| 110403 | Other sausages                                                            | EO | ✓ | 1 |
| 110404 | Hot dogs and sausage sandwiches                                           | EO | ✓ | 1 |
| 110501 | Meat pies (pastry topped) and pasties                                     | EO | ✓ | 1 |
| 110502 | Meat pies (potato topped e.g. shepherd's pie)                             | EO | ✓ | 1 |
| 110503 | Sausage roll (pastry)                                                     | EO | ✓ | 1 |
| 110601 | Meat and vegetable stews, casseroles or hotpots                           | EO | ✓ | 1 |
| 110602 | Chicken or turkey stews, casseroles or hotpots                            | EO | ✓ | 1 |
| 110603 | Lasagne, cannelloni, moussaka & other meat-based oven baked dishes        | EO | ✓ | 1 |
| 110701 | All pates                                                                 | EO | ✓ | 1 |
| 110801 | Other meat products or dishes                                             | EO | ✓ | 1 |
| 120101 | White fish - grilled, steamed, baked or boiled - without sauce            | EO | ✓ | 1 |
| 120102 | White fish - fried (incl in batter/breadcrumbs) - without sauce           | EO | ✓ | 1 |
| 120201 | Trout, tuna and salmon only - fresh - without sauce or dressing           | EO | ✓ | 1 |
| 120202 | Other fatty fish – w/o sauce or dressing e.g. herring, mackerel, sardines | EO | ✓ | 1 |
| 120301 | Shellfish w/o sauce or dressing e.g. prawns, shrimps, oysters, crab       | EO | ✓ | 1 |
| 120401 | Kippers and other smoked fish e.g. salmon                                 | EO | ✓ | 1 |
| 120501 | Other fish products and unspecified 'fish' e.g. squid, sushi, crabsticks  | EO | ✓ | 1 |
| 120601 | Fish processed in breadcrumbs (fish fingers, fish cakes, scampi)          | EO | ✓ | 1 |
| 120602 | Fish burgers (in bun)                                                     | EO | ✓ | 1 |
| 120603 | Fish based pie or other dish e.g. paella, kedgeree, tuna pasta bake       | EO | ✓ | 1 |
| 130101 | Cottage cheese including with pineapple                                   | EO | ✓ | 1 |
| 130102 | Soft, continental or proc cheese e.g. brie                                | EO | ✓ | 1 |
| 130103 | Cheddar, blue or other hard cheese and unspecified 'cheese'               | EO | ✓ | 1 |
| 130104 | Quiche and cheese pies or pasties                                         | EO | ✓ | 1 |
| 130105 | Other cheese dishes e.g. Welsh rarebit, cheese and biscuits               | EO | ✓ | 1 |
| 130201 | Pizza - cheese and tomato, vegetable or unspecified 'pizza'               | EO | ✓ | 1 |
| 130202 | Pizza - meat, fish or poultry                                             | EO | ✓ | 1 |
| 130301 | Eggs - boiled or poached                                                  | EO | ✓ | 1 |
| 130302 | Eggs - scrambled, fried, omelettes or unspecified 'egg'                   | EO | ✓ | 1 |

#### Appendix 4: Energy Density Coding Frame

|        |                                                                             |    |   |   |
|--------|-----------------------------------------------------------------------------|----|---|---|
| 130303 | Other egg dishes e.g. egg mayonnaise                                        | EO | ✓ | 1 |
| 140101 | Chips and French fries - from fast food outlet e.g. McDonalds               | EO | ✓ | 1 |
| 140102 | Chips - served with meal e.g. from restaurant or chip shop                  | EO | ✓ | 1 |
| 140103 | Potatoes - boiled or unspecified 'potato'                                   | EO | ✓ | 1 |
| 140104 | Potatoes - mashed                                                           | EO | ✓ | 1 |
| 140105 | Potatoes - roast                                                            | EO | ✓ | 1 |
| 140106 | Sautéed potatoes, potato croquettes, hash browns etc.                       | EO | ✓ | 1 |
| 140107 | Baked or jacket potatoes - without filling                                  | EO | ✓ | 1 |
| 140108 | Other potato dishes (e.g. wedges, potato salad) including unspecified       | EO | ✓ | 1 |
| 150101 | Lettuce and cress                                                           | EO | ✓ | 1 |
| 150102 | Other green vegetables e.g. spinach, cabbage, sprouts                       | EO | ✓ | 1 |
| 150201 | Peppers - raw or cooked                                                     | EO | ✓ | 1 |
| 150202 | Courgettes, marrow, aubergine, pumpkin, plantain, cucumbers                 | EO | ✓ | 1 |
| 150203 | Peas and sweetcorn                                                          | EO | ✓ | 1 |
| 150204 | Baked beans and other beans (not green beans) and pulses                    | EO | ✓ | 1 |
| 150205 | Tomato - fresh or raw                                                       | EO | ✓ | 1 |
| 150206 | Tomato - cooked or processed                                                | EO | ✓ | 1 |
| 150301 | Carrots                                                                     | EO | ✓ | 1 |
| 150302 | Onions - raw, cooked or unspecified 'onions'                                | EO | ✓ | 1 |
| 150303 | Onions - fried                                                              | EO | ✓ | 1 |
| 150304 | Other root vegetables or tubers e.g. turnip, parsnip, radish, beetroot      | EO | ✓ | 1 |
| 150401 | Mushrooms - raw or cooked                                                   | EO | ✓ | 1 |
| 150501 | Mixed vegetables or unspecified 'vegetable'                                 | EO | ✓ | 1 |
| 150502 | Other vegetables e.g. artichoke, asparagus                                  | EO | ✓ | 1 |
| 150503 | Veg in batter or breadcrumbs and deep fried vegetables e.g. onion rings     | EO | ✓ | 1 |
| 150504 | Onion and other vegetable bhajis and pakora                                 | EO | ✓ | 1 |
| 150601 | Veggie burger, bean burger, veggie sausage, nut roast                       | EO | ✓ | 1 |
| 150602 | Veg lasagne, cannelloni, moussaka & other oven baked veg dishes             | EO | ✓ | 1 |
| 150603 | Stuffed vegetables (e.g. stuffed pepper) and vegetable based starter        | EO | ✓ | 1 |
| 150604 | Vegetable based stews and casseroles and vegetable based pies               | EO | ✓ | 1 |
| 160101 | Mixed salad, main course - without dressing                                 | EO | ✓ | 1 |
| 160102 | Mixed salad, side dish - without dressing - including unspecified 'salad'   | EO | ✓ | 1 |
| 160103 | Green salad - without dressing                                              | EO | ✓ | 1 |
| 160201 | Vegetable or fruit and nut salad - with dressing                            | EO | ✓ | 1 |
| 160202 | Pasta, rice, mixed bean or cereal-based salads - with dressing              | EO | ✓ | 1 |
| 160301 | Meat salad e.g. beef, lamb salads                                           | EO | ✓ | 1 |
| 160302 | Chicken or turkey salad                                                     | EO | ✓ | 1 |
| 160303 | Fish salad e.g. tuna, salmon salads                                         | EO | ✓ | 1 |
| 160401 | Cheese salad including ploughmans                                           | EO | ✓ | 1 |
| 160402 | Egg salad                                                                   | EO | ✓ | 1 |
| 160501 | Other salads e.g. Greek, Florida, Russian                                   | EO | ✓ | 1 |
| 160601 | Salad buffet or buffet meal items not spec                                  | EO | ✓ | 1 |
| 170101 | Fried rice and risotto                                                      | EO | ✓ | 1 |
| 170102 | All cooked rice excluding fried rice e.g. boiled, pilau, savoury            | EO | ✓ | 1 |
| 170103 | Pasta - not filled and plain noodles (inc. pot noodle) – w/o sauce          | EO | ✓ | 1 |
| 170104 | Pasta - filled e.g. ravioli, tortellini - w/o sauce                         | EO | ✓ | 1 |
| 170105 | Noodles with meat, vegetables etc.                                          | EO | ✓ | 1 |
| 180101 | Meat & fish soups                                                           | EO | ✓ | 1 |
| 180102 | Vegetable based soups                                                       | EO | ✓ | 1 |
| 180103 | Chinese soups, consommé                                                     | EO | ✓ | 1 |
| 180104 | Other soups including unspecified 'soup'                                    | EO | ✓ | 1 |
| 190101 | Muesli and oat crunch cereals                                               | EO | ✓ | 1 |
| 190102 | Other high fibre breakfast cereals e.g. Allbran, Weetabix                   | EO | ✓ | 1 |
| 190103 | Sweetened breakfast cereals e.g. Frosties, Sugar Puffs                      | EO | ✓ | 1 |
| 190104 | Hot breakfast cereals e.g. porridge, Ready Brek                             | EO | ✓ | 1 |
| 190105 | Other break cereals / unspecified e.g. Cornflakes, Rice Krispies, Special K | EO | ✓ | 1 |
| 200101 | All citrus fruit, fresh e.g. orange, grapefruit                             | EO | ✓ | 1 |
| 200102 | Banana, fresh                                                               | EO | ✓ | 1 |
| 200103 | Apples, fresh                                                               | EO | ✓ | 1 |
| 200104 | Pears, fresh                                                                | EO | ✓ | 1 |
| 200105 | Stone fruit, fresh e.g. apricot, plum, peach, cherry, avocado               | EO | ✓ | 1 |
| 200106 | Grapes, fresh                                                               | EO | ✓ | 1 |
| 200107 | Soft fruit or berries, fresh e.g. strawberries – w/o cream or ice cream     | EO | ✓ | 1 |
| 200108 | Melon, fresh                                                                | EO | ✓ | 1 |
| 200109 | Pineapple, fresh                                                            | EO | ✓ | 1 |
| 200110 | Fresh fruit salad                                                           | EO | ✓ | 1 |
| 200111 | Other fresh fruit (kiwi, passion) and unspec                                | EO | ✓ | 1 |

#### Appendix 4: Energy Density Coding Frame

|        |                                                                     |    |   |   |
|--------|---------------------------------------------------------------------|----|---|---|
| 200112 | Free school fruit                                                   | EO | ✓ | 1 |
| 200201 | Dried fruit e.g. sultanas, raisins                                  | EO | ✓ | 1 |
| 200301 | Tinned, stewed, baked or processed fruit w/o cream or ice cream     | EO | ✓ | 1 |
| 210101 | Yoghurt and fromage frais                                           | EO | ✓ | 1 |
| 220101 | White bread, with or w/o butter or margarine (toasted or untoasted) | EO | ✓ | 1 |
| 220102 | Brown/w meal bread, with or w/o butter or marg (toasted/untoasted)  | EO | ✓ | 1 |
| 220103 | White rolls, baguettes etc. w/o butter/ margarine (or not spec.)    | EO | ✓ | 1 |
| 220104 | Brown or w meal rolls, baguettes w/o butter/marg (or not spec.)     | EO | ✓ | 1 |
| 220105 | Garlic bread                                                        | EO | ✓ | 1 |
| 220106 | Croissant                                                           | EO | ✓ | 1 |
| 220107 | Continental breads e.g. pitta, ciabatta, focaccio                   | EO | ✓ | 1 |
| 220108 | Muffins, crumpets                                                   | EO | ✓ | 1 |
| 220109 | Fried bread, including croutons                                     | EO | ✓ | 1 |
| 220110 | Other bread, rolls, toast, unspec 'bread' etc.                      | EO | ✓ | 1 |
| 230101 | Meat based sandwich on white bread/roll                             | EO | ✓ | 1 |
| 230102 | Meat based sandwich on brown bread/roll                             | EO | ✓ | 1 |
| 230103 | Meat based sandwich bread not specified                             | EO | ✓ | 1 |
| 230104 | Chicken/turkey s'wich on white bread/roll                           | EO | ✓ | 1 |
| 230105 | Chicken/ turkey s'wich on brown bread/ roll                         | EO | ✓ | 1 |
| 230106 | Chicken/ turkey s'wich bread not specified                          | EO | ✓ | 1 |
| 230107 | Bacon & egg based sandwich on white bread/roll inc McMuffin         | EO | ✓ | 1 |
| 230108 | Bacon & egg sandwich - brown bread or roll                          | EO | ✓ | 1 |
| 230109 | Bacon & egg sandwich bread not specified                            | EO | ✓ | 1 |
| 230110 | Fish based sandwich on white bread or roll                          | EO | ✓ | 1 |
| 230111 | Fish based sandwich on brown bread or roll                          | EO | ✓ | 1 |
| 230112 | Fish based sandwich bread not specified                             | EO | ✓ | 1 |
| 230201 | Cheese sandwich on white bread or roll                              | EO | ✓ | 1 |
| 230202 | Cheese sandwich on brown bread or roll                              | EO | ✓ | 1 |
| 230203 | Cheese based sandwich bread not specified                           | EO | ✓ | 1 |
| 230204 | Egg based sandwich on white bread or roll inc. Egg McMuffin         | EO | ✓ | 1 |
| 230205 | Egg based sandwich on brown bread or roll                           | EO | ✓ | 1 |
| 230206 | Egg based sandwich bread not specified                              | EO | ✓ | 1 |
| 230207 | Vegetarian sandwich on white bread or roll                          | EO | ✓ | 1 |
| 230208 | Vegetarian sandwich on brown bread or roll                          | EO | ✓ | 1 |
| 230209 | Vegetarian sandwich bread not specified                             | EO | ✓ | 1 |
| 230210 | Sweet-filled sandwich                                               | EO | ✓ | 1 |
| 230211 | Unspecified sandwiches or rolls                                     | EO | ✓ | 1 |
| 240101 | Cheese or cream based sauce e.g. carbonara, cauliflower cheese      | EO | ✓ | 1 |
| 240102 | Meat-based sauce e.g. bolognese, chilli                             | EO | ✓ | 1 |
| 240103 | Fish or seafood based sauce                                         | EO | ✓ | 1 |
| 240104 | Tomato based sauce cont veg inc ratatouille                         | EO | ✓ | 1 |
| 240105 | Other savoury sauce or unspecified 'sauce'                          | EO | ✓ | 1 |
| 240106 | Sweet sauce e.g. syrup, treacle, chocolate                          | EO | ✓ | 1 |
| 240107 | Fruit or vegetable based condiments                                 | EO | ✓ | 1 |
| 240108 | Other condiments or sauces                                          | EO | ✓ | 1 |
| 240201 | Salad dressings and dips                                            | EO | ✓ | 1 |
| 240202 | Mayonnaise                                                          | EO | ✓ | 1 |
| 240203 | Coleslaw                                                            | EO | ✓ | 1 |
| 240301 | Fruit filling e.g. peaches for pancakes                             | EO | ✓ | 1 |
| 240302 | Vegetable filling                                                   | EO | ✓ | 1 |
| 240303 | Cheese filling inc cheddar / cottage cheese                         | EO | ✓ | 1 |
| 240304 | Fish based filling e.g. tuna mayonnaise                             | EO | ✓ | 1 |
| 240401 | Butter and margarine                                                | EO | ✓ | 1 |
| 240402 | Jam, marmalade and honey                                            | EO | ✓ | 1 |
| 240403 | Cream - single, double, sour etc.                                   | EO | ✓ | 1 |
| 240404 | Custard                                                             | EO | ✓ | 1 |
| 240405 | Sugar (as an addition to tea, coffee etc.)                          | EO | ✓ | 1 |
| 240501 | Commercial baby food in a jar or can                                | EO | ✓ | 1 |
| 240601 | Yorkshire puddings and dumplings                                    | EO | ✓ | 1 |
| 240701 | Unspec meal e.g. school meal / meal at work                         | EO | ✓ | 1 |
| 250101 | Coffee, black including espresso                                    | EO | ✗ | 1 |
| 250102 | Coffee, white including cappuccino, latte                           | EO | ✗ | 1 |
| 250103 | Coffee, black or white not specified                                | EO | ✗ | 1 |
| 250104 | Tea, white                                                          | EO | ✗ | 1 |
| 250105 | Tea, black                                                          | EO | ✗ | 1 |
| 250106 | Hot chocolate or cocoa, with milk or water                          | EO | ✓ | 1 |
| 260201 | Mineral water                                                       | EO | ✗ | 1 |



## Appendix 4: Energy Density Coding Frame

|        |                                                                              |    |   |   |
|--------|------------------------------------------------------------------------------|----|---|---|
| 260202 | Soft drink (incl carbonates and still) - low calorie                         | EO | ✖ | 1 |
| 260203 | Soft drink (incl carbonates & still) - not low calorie /calories unspecified | EO | ✖ | 1 |
| 260204 | Pure fruit juices                                                            | EO | ✖ | 1 |
| 260205 | Vegetable juices e.g. tomato, carrot juice                                   | EO | ✖ | 1 |
| 260206 | Soft drink - pure juice or juice drink not spec                              | EO | ✖ | 1 |
| 260301 | Milk as a drink                                                              | EO | ✓ | 1 |
| 260302 | Milk on cereal                                                               | EO | ✓ | 1 |
| 260303 | Milkshake and flavoured milk                                                 | EO | ✓ | 1 |
| 260304 | Free school milk                                                             | EO | ✓ | 1 |
| 270101 | Spirits                                                                      | EO | ✖ | 1 |
| 270102 | Liqueurs                                                                     | EO | ✖ | 1 |
| 270103 | Cocktails                                                                    | EO | ✖ | 1 |
| 270104 | Spirits or liqueurs with mixer e.g. gin & tonic, Bacardi & coke              | EO | ✖ | 1 |
| 270201 | Wine (not sparkling) including unspec 'wine'                                 | EO | ✖ | 1 |
| 270202 | Sparkling wines (e.g. Champagne) and wine with mixer (e.g. Bucks Fizz)       | EO | ✖ | 1 |
| 270203 | Fortified wine e.g. sherry, port, vermouth                                   | EO | ✖ | 1 |
| 270204 | Cider or perry - half pint or bottle                                         | EO | ✖ | 1 |
| 270205 | Cider or perry - pint / can / size not spec                                  | EO | ✖ | 1 |
| 270206 | Alcoholic soft drinks (alcopops), and ready-mixed bottled drinks             | EO | ✖ | 1 |
| 270301 | Bitter - half pint or bottle                                                 | EO | ✖ | 1 |
| 270302 | Bitter - pint or can or size not specified                                   | EO | ✖ | 1 |
| 270303 | Lager or other beers - half pint or bottle                                   | EO | ✖ | 1 |
| 270304 | Lager or other beers - pint/can/size not spec                                | EO | ✖ | 1 |
| 270401 | Round of drinks, alcohol specified                                           | EO | ✖ | 1 |
| 280101 | Solid, unfilled chocolate bars and sweets & unspecified chocolate            | EO | ✓ | 1 |
| 280102 | Filled chocolate-coated bars and sweets e.g. Mars, Snickers, Minstrels       | EO | ✓ | 1 |
| 280103 | Single chocolate (after dinner)                                              | EO | ✓ | 1 |
| 280104 | Chewing gum and bubble gum                                                   | EO | ✓ | 1 |
| 280105 | Mints e.g. Polo, Extra Strong                                                | EO | ✓ | 1 |
| 280106 | Boiled sweets, jellies and unspecified 'sweets' e.g. fruit gums              | EO | ✓ | 1 |
| 280107 | Uncoated toffee or fudge e.g. Toffos, chocolate eclairs, caramels            | EO | ✓ | 1 |
| 280108 | Pick 'n' mix, nougat, liquorice & other sweets                               | EO | ✓ | 1 |
| 290101 | Ice cream in a cone, cornet or wafer and ice cream desserts                  | EO | ✓ | 1 |
| 290103 | Ice cream scoop or tub including ice cream served with dessert               | EO | ✓ | 1 |
| 290104 | Iced lollies and sorbets                                                     | EO | ✓ | 1 |
| 290201 | Doughnut                                                                     | EO | ✓ | 1 |
| 290202 | Cream pastries e.g. choc eclairs, profiteroles                               | EO | ✓ | 1 |
| 290203 | Cream sponge or gateau (not chocolate)                                       | EO | ✓ | 1 |
| 290204 | Rich chocolate cake or chocolate gateau                                      | EO | ✓ | 1 |
| 290205 | Fruit and other pies or pastries                                             | EO | ✓ | 1 |
| 290206 | Fruit cake                                                                   | EO | ✓ | 1 |
| 290207 | Other sponge cakes or desserts (not cream)                                   | EO | ✓ | 1 |
| 290208 | Custard desserts or sweet soufflé                                            | EO | ✓ | 1 |
| 290209 | Meringue desserts including pavlova                                          | EO | ✓ | 1 |
| 290210 | Cheesecake                                                                   | EO | ✓ | 1 |
| 290211 | Fool, trifle and mousse desserts                                             | EO | ✓ | 1 |
| 290212 | Jelly                                                                        | EO | ✓ | 1 |
| 290213 | Milk and rice puddings inc tapioca, semolina                                 | EO | ✓ | 1 |
| 290214 | Other cakes and desserts                                                     | EO | ✓ | 1 |
| 290301 | Waffles and pancakes                                                         | EO | ✓ | 1 |
| 290401 | Teacakes, scones, currant buns, iced buns                                    | EO | ✓ | 1 |
| 300101 | Fully-coated chocolate biscuits or wafers                                    | EO | ✓ | 1 |
| 300102 | Sweet biscuits including half-coated choc                                    | EO | ✓ | 1 |
| 300103 | Cereal bars and cereal based cakes                                           | EO | ✓ | 1 |
| 300104 | Savoury biscuits                                                             | EO | ✓ | 1 |
| 310101 | Nuts, nut products and seeds                                                 | EO | ✓ | 1 |
| 310102 | Potato crisps or savoury snacks                                              | EO | ✓ | 1 |
| 310103 | Cornsnacks, based on maize                                                   | EO | ✓ | 1 |
| 310104 | Wheat based savoury snack                                                    | EO | ✓ | 1 |
| 310201 | Popcorn                                                                      | EO | ✓ | 1 |
| 310301 | Other savoury snacks (inc hors d'oeuvres)                                    | EO | ✓ | 1 |

HH = Household; EO = Eating Out

| Key                                |  |
|------------------------------------|--|
| Food - no factor required          |  |
| Food - cooked edible weight factor |  |
| Food - dried weight factor & eggs  |  |

#### Appendix 4: Energy Density Coding Frame

|                                   |
|-----------------------------------|
| No nutritional information        |
| Milk                              |
| Other energy containing NA drinks |
| No / low energy drinks            |
| Alcohol                           |

## Appendix 5: Defra Food Codes with Recommended Estimates of Edible Food Waste

The following figures for estimated waste are from the Waste and Resource Action Programme Survey (WRAP) (2008). The incorporation of these figures in the estimation of food consumption and nutrient intakes from the EFS were discussed in the Annex of the 2007 Family Food report (Department for Environment Food & Rural Affairs (Defra), 2008) and were mapped to the EFS food codes for this purpose by Defra (personal communication).

| Defra Code | Description                                         | Single Adult Waste | Multiple Adult Waste |
|------------|-----------------------------------------------------|--------------------|----------------------|
| 402        | UHT whole milk                                      | 0.1                | 0.1                  |
| 403        | Sterilised whole milk                               | 0.1                | 0.1                  |
| 404        | Pasteurised or homogenised whole milk               | 0.1                | 0.1                  |
| 501        | School Milk                                         | 0.1                | 0.1                  |
| 601        | Welfare milk                                        | 0.1                | 0.1                  |
| 901        | Condensed or evaporated milk                        | 0.1                | 0.1                  |
| 1102       | Infant or baby milks - ready to drink               | 0.1                | 0.1                  |
| 1103       | Infant or baby milks - dried                        | 0.1                | 0.1                  |
| 1201       | Instant dried milk                                  | 0.1                | 0.1                  |
| 1301       | Yoghurt                                             | 0.1146             | 0.0802               |
| 1302       | Fromage frais                                       | 0.1                | 0.1                  |
| 1502       | Fully skimmed milk                                  | 0.1                | 0.1                  |
| 1503       | Semi-skimmed milk                                   | 0.1                | 0.1                  |
| 1603       | Dairy desserts - not frozen                         | 0.1                | 0.1                  |
| 1605       | Dried milk products                                 | 0.1                | 0.1                  |
| 1606       | Milk drinks & other milks (replaced 200405 onwards) | 0.1                | 0.1                  |
| 1607       | Milk drinks & other milks                           | 0.1                | 0.1                  |
| 1608       | Non-dairy milk substitutes                          | 0.1                | 0.1                  |
| 1701       | Cream                                               | 0.1222             | 0.096                |
| 2201       | Hard cheese - Cheddar type                          | 0.0883             | 0.0829               |
| 2202       | Hard cheese - Other UK or foreign equivalent        | 0.0883             | 0.0829               |
| 2203       | Hard cheese - Edam or other foreign                 | 0.0883             | 0.0829               |
| 2205       | Cottage cheese                                      | 0.0883             | 0.0829               |
| 2206       | Soft natural cheese                                 | 0.0883             | 0.0829               |
| 2301       | Processed cheese                                    | 0.0883             | 0.0829               |
| 3102       | Beef joints - on the bone                           | 0.0815             | 0.0457               |
| 3103       | Beef joints - boned                                 | 0.0815             | 0.0457               |
| 3104       | Beef steak - less expensive                         | 0.0815             | 0.0457               |
| 3105       | Beef steak - more expensive                         | 0.0815             | 0.0457               |
| 3106       | Minced beef                                         | 0.0815             | 0.0457               |
| 3107       | All other beef and veal                             | 0.0815             | 0.0457               |
| 3601       | Mutton                                              | 0.0224             | 0.0262               |
| 3602       | Lamb joints                                         | 0.0224             | 0.0262               |
| 3603       | Lamb chops                                          | 0.0224             | 0.0262               |
| 3604       | All other lamb                                      | 0.0224             | 0.0262               |
| 4101       | Pork joints                                         | 0.2041             | 0.133                |
| 4102       | Pork chops                                          | 0.2041             | 0.133                |
| 4103       | Pork fillets and steaks                             | 0.2041             | 0.133                |
| 4104       | All other pork                                      | 0.2041             | 0.133                |
| 4603       | Ox liver                                            | 0.0815             | 0.0457               |
| 4604       | Lambs liver                                         | 0.0224             | 0.0262               |
| 4605       | Pigs liver                                          | 0.2041             | 0.133                |
| 4607       | All other liver                                     | 0.0584             | 0.0401               |
| 5101       | All offal other than liver                          | 0.0584             | 0.0401               |
| 5502       | Bacon and ham joints, uncooked                      | 0.2041             | 0.133                |
| 5505       | Bacon and ham rashers, uncooked                     | 0.2041             | 0.133                |
| 5801       | Ham and bacon                                       | 0.2041             | 0.133                |
| 5903       | Cooked chicken and turkey                           | 0.1855             | 0.0837               |
| 5904       | Takeaway chicken                                    | 0.1855             | 0.0837               |

# Appendix 5: Defra Food Codes with Recommended Estimates of Edible Food Waste

|       |                                                            |        |        |
|-------|------------------------------------------------------------|--------|--------|
| 6201  | Corned beef - canned or sliced                             | 0.0815 | 0.0457 |
| 6601  | Other cooked meat                                          | 0.0584 | 0.0401 |
| 7102  | Other canned meat and canned meat products                 | 0.0584 | 0.0401 |
| 7401  | Chicken - whole or part                                    | 0.1855 | 0.0837 |
| 7703  | Turkey - whole or part                                     | 0.1855 | 0.0837 |
| 7704  | Poultry other than chicken or turkey                       | 0.1855 | 0.0837 |
| 7801  | Other fresh, chilled or frozen meat                        | 0.0584 | 0.0401 |
| 7901  | Sausages, uncooked - pork                                  | 0.0584 | 0.0401 |
| 8001  | Sausages, uncooked - beef etc.                             | 0.0584 | 0.0401 |
| 8302  | Meat pies - ready to eat                                   | 0.2563 | 0.29   |
| 8303  | Sausage rolls - ready to eat                               | 0.2563 | 0.29   |
| 8401  | Meat pies, pasties and puddings - frozen or not frozen     | 0.2563 | 0.29   |
| 8501  | Burgers - frozen or not frozen                             | 0.0584 | 0.0401 |
| 8901  | Complete meat-based ready meals - frozen or not frozen     | 0.2563 | 0.29   |
| 8902  | Other convenience meat products - frozen or not frozen     | 0.2563 | 0.29   |
| 9301  | Pate                                                       | 0.1324 | 0.0755 |
| 9302  | Delicatessen type sausages                                 | 0.0584 | 0.0401 |
| 9403  | Meat pastes and spreads                                    | 0.1324 | 0.0755 |
| 9501  | Takeaway meat pies and pasties                             | 0.2563 | 0.29   |
| 9502  | Takeaway burger and bun                                    | 0.2563 | 0.29   |
| 9503  | Takeaway kebabs                                            | 0.2563 | 0.29   |
| 9504  | Takeaway sausages and saveloys                             | 0.2563 | 0.29   |
| 9505  | Takeaway meat based meals                                  | 0.2563 | 0.29   |
| 9506  | Takeaway miscellaneous meats                               | 0.2563 | 0.29   |
| 10201 | White fish, fresh or chilled                               | 0.096  | 0.0418 |
| 10202 | White fish, frozen                                         | 0.096  | 0.0418 |
| 10601 | Herrings and other blue fish, fresh or chilled             | 0.096  | 0.0418 |
| 10602 | Herrings and other blue fish, frozen                       | 0.096  | 0.0418 |
| 10701 | Salmon, fresh or chilled                                   | 0.096  | 0.0418 |
| 10702 | Salmon, frozen                                             | 0.096  | 0.0418 |
| 10801 | Blue fish, dried or salted or smoked                       | 0.096  | 0.0418 |
| 11401 | White fish, dried or salted or smoked                      | 0.096  | 0.0418 |
| 11702 | Shellfish, fresh or chilled                                | 0.2178 | 0.0621 |
| 11703 | Shellfish, frozen                                          | 0.2178 | 0.0621 |
| 11801 | Takeaway fish                                              | 0.096  | 0.0418 |
| 11901 | Tinned salmon                                              | 0.096  | 0.0418 |
| 12001 | Other tinned or bottled fish                               | 0.096  | 0.0418 |
| 12103 | Ready meals and other fish products - frozen or not frozen | 0.2563 | 0.29   |
| 12304 | Takeaway fish products                                     | 0.2563 | 0.29   |
| 12305 | Takeaway fish based meals                                  | 0.2563 | 0.29   |
| 12901 | Eggs                                                       | 0.073  | 0.0463 |
| 13501 | Butter                                                     | 0.0386 | 0.0176 |
| 13801 | Soft margarine                                             | 0.0386 | 0.0176 |
| 13802 | Other margarine                                            | 0.0386 | 0.0176 |
| 13901 | Lard, cooking fat                                          | 0.1267 | 0.091  |
| 14304 | Olive Oil                                                  | 0.1267 | 0.091  |
| 14305 | Other vegetable and salad oils                             | 0.1267 | 0.091  |
| 14802 | Reduced fat spreads                                        | 0.0386 | 0.0176 |
| 14803 | Low fat spreads                                            | 0.0386 | 0.0176 |
| 14805 | Suet and dripping                                          | 0.0584 | 0.0401 |
| 14807 | Imitation cream                                            | 0.1    | 0.1    |
| 15001 | Sugar                                                      | 0.1267 | 0.091  |
| 15101 | Jams and fruit curds                                       | 0.1267 | 0.091  |
| 15201 | Marmalade                                                  | 0.1267 | 0.091  |
| 15301 | Syrup, treacle                                             | 0.1267 | 0.091  |
| 15401 | Honey                                                      | 0.1267 | 0.091  |
| 15501 | Potatoes - bought Jan-Aug, previous year's crop            | 0.3718 | 0.2416 |
| 15502 | Potatoes - bought Jan-Aug, this year's crop                | 0.3718 | 0.2416 |
| 15503 | Potatoes - bought Sep-Dec, current crop or new imported    | 0.3718 | 0.2416 |
| 15504 | Fresh potatoes not specified elsewhere                     | 0.3718 | 0.2416 |
| 15505 | Fresh new potatoes                                         | 0.3718 | 0.2416 |

# Appendix 5: Defra Food Codes with Recommended Estimates of Edible Food Waste

|       |                                                                                  |        |        |
|-------|----------------------------------------------------------------------------------|--------|--------|
| 15506 | Fresh baking potatoes                                                            | 0.3718 | 0.2416 |
| 16201 | Fresh cabbages                                                                   | 0.7014 | 0.4155 |
| 16301 | Fresh brussels sprouts                                                           | 0.1701 | 0.0794 |
| 16401 | Fresh cauliflower                                                                | 0.1449 | 0.1019 |
| 16701 | Lettuce and leafy salads                                                         | 0.5069 | 0.3519 |
| 16702 | Prepared lettuce salads                                                          | 0.6023 | 0.4633 |
| 16801 | Fresh peas                                                                       | 0.0917 | 0.0417 |
| 16901 | Fresh beans                                                                      | 0.5589 | 0.3071 |
| 17101 | Other fresh green vegetables                                                     | 0.2589 | 0.1589 |
| 17201 | Fresh carrots                                                                    | 0.3835 | 0.1681 |
| 17301 | Fresh turnips and swede                                                          | 0.1231 | 0.0669 |
| 17401 | Other fresh root vegetables                                                      | 0.225  | 0.1511 |
| 17501 | Fresh onions, leeks and shallots                                                 | 0.2143 | 0.1408 |
| 17601 | Fresh cucumbers                                                                  | 0.3717 | 0.2357 |
| 17701 | Fresh mushrooms                                                                  | 0.1483 | 0.104  |
| 17801 | Fresh tomatoes                                                                   | 0.1582 | 0.0926 |
| 18301 | Fresh vegetable stew pack, stir-fry pack etc.                                    | 0.3429 | 0.2301 |
| 18302 | Fresh stem vegetables                                                            | 0.6075 | 0.453  |
| 18303 | Fresh marrow, courgettes, aubergine, pumpkin and other vegetables                | 0.1691 | 0.1147 |
| 18304 | Fresh herbs                                                                      | 0.1267 | 0.091  |
| 18401 | Tomatoes, canned or bottled                                                      | 0.1582 | 0.0926 |
| 18501 | Peas, canned                                                                     | 0.0917 | 0.0417 |
| 18802 | Baked beans in sauce                                                             | 0.0828 | 0.0309 |
| 18803 | Other canned beans and pulses                                                    | 0.2589 | 0.1589 |
| 19101 | Other canned vegetables                                                          | 0.2589 | 0.1589 |
| 19201 | Dried pulses, other than air-dried                                               | 0.2589 | 0.1589 |
| 19501 | Air-dried vegetables                                                             | 0.3429 | 0.2301 |
| 19602 | Tomato puree and vegetable purees                                                | 0.1267 | 0.091  |
| 19603 | Vegetable juices e.g. tomato juice, carrot juice                                 | 0.1    | 0.1    |
| 19702 | Chips - frozen or not frozen                                                     | 0.3718 | 0.2416 |
| 19703 | Takeaway chips                                                                   | 0.3718 | 0.2416 |
| 19801 | Instant potato                                                                   | 0.3718 | 0.2416 |
| 19901 | Canned potatoes                                                                  | 0.3718 | 0.2416 |
| 20002 | Crisps and potato snacks                                                         | 0.1239 | 0.0809 |
| 20101 | Other potato products - frozen or not frozen                                     | 0.3718 | 0.2416 |
| 20301 | Peas, frozen                                                                     | 0.0917 | 0.0417 |
| 20401 | Beans, frozen                                                                    | 0.5589 | 0.3071 |
| 20601 | Ready meals and other vegetable products - frozen or not frozen                  | 0.2563 | 0.29   |
| 20604 | All vegetable takeaway products                                                  | 0.2563 | 0.29   |
| 20801 | Other frozen vegetables                                                          | 0.2589 | 0.1589 |
| 21001 | Fresh oranges                                                                    | 0.3382 | 0.2325 |
| 21401 | Other fresh citrus fruits                                                        | 0.0536 | 0.041  |
| 21701 | Fresh apples                                                                     | 0.6627 | 0.2772 |
| 21801 | Fresh pears                                                                      | 0.1442 | 0.1929 |
| 22101 | Fresh stone fruit                                                                | 0.2036 | 0.1797 |
| 22201 | Fresh grapes                                                                     | 0.0833 | 0.0778 |
| 22701 | Other fresh soft fruit                                                           | 0.433  | 0.2521 |
| 22801 | Fresh bananas                                                                    | 0.1545 | 0.082  |
| 22901 | Fresh melons                                                                     | 0.2848 | 0.1797 |
| 23101 | Other fresh fruit                                                                | 0.1404 | 0.0938 |
| 23301 | Tinned peaches, pears and pineapples                                             | 0.0806 | 0.0899 |
| 23601 | All other tinned or bottled fruit                                                | 0.0806 | 0.0899 |
| 24001 | Dried fruit                                                                      | 0.0806 | 0.0899 |
| 24101 | Frozen strawberries, apple slices, peach halves, oranges and other frozen fruits | 0.0806 | 0.0899 |
| 24502 | Nuts & edible seeds                                                              | 0.0228 | 0.043  |
| 24503 | Peanut butter                                                                    | 0.0228 | 0.043  |
| 24801 | Pure fruit juices                                                                | 0.1    | 0.1    |
| 25102 | White bread, standard, unsliced                                                  | 0.3335 | 0.2399 |
| 25202 | White bread, standard, sliced                                                    | 0.3335 | 0.2399 |
| 25701 | White bread, premium, sliced and unsliced                                        | 0.3335 | 0.2399 |

Appendix 5: Defra Food Codes with Recommended Estimates of Edible Food Waste

|       |                                                                     |        |        |
|-------|---------------------------------------------------------------------|--------|--------|
| 25801 | White bread, soft grain, sliced and unsliced                        | 0.3335 | 0.2399 |
| 25901 | Brown bread, sliced and unsliced                                    | 0.3335 | 0.2399 |
| 26001 | Wholemeal and granary bread, sliced and unsliced                    | 0.3335 | 0.2399 |
| 26302 | Rolls - white, brown or wholemeal                                   | 0.3942 | 0.1718 |
| 26303 | Malt bread and fruit loaves                                         | 0.0861 | 0.0241 |
| 26304 | Vienna and French bread                                             | 0.3942 | 0.1718 |
| 26305 | Starch reduced bread and rolls                                      | 0.3335 | 0.2399 |
| 26308 | Other breads                                                        | 0.3349 | 0.4585 |
| 26309 | Sandwiches                                                          | 0.2563 | 0.29   |
| 26310 | Sandwiches from takeaway                                            | 0.2563 | 0.29   |
| 26311 | Takeaway breads                                                     | 0.3349 | 0.4585 |
| 26401 | Flour                                                               | 0.0677 | 0.0641 |
| 26701 | Buns, scones and teacakes                                           | 0.1239 | 0.1163 |
| 27001 | Cakes and pastries, not frozen                                      | 0.2802 | 0.1703 |
| 27002 | Takeaway pastries                                                   | 0.2802 | 0.1703 |
| 27101 | Crisp bread                                                         | 0.0539 | 0.0438 |
| 27402 | Sweet biscuits (not chocolate) and cereal bars                      | 0.0539 | 0.0438 |
| 27403 | Cream crackers and other unsweetened biscuits                       | 0.0539 | 0.0438 |
| 27702 | Chocolate biscuits                                                  | 0.0539 | 0.0438 |
| 28101 | Oatmeal and oat products                                            | 0.0275 | 0.0224 |
| 28202 | Muesli                                                              | 0.0275 | 0.0224 |
| 28203 | High fibre breakfast cereals                                        | 0.0275 | 0.0224 |
| 28204 | Sweetened breakfast cereals                                         | 0.0275 | 0.0224 |
| 28205 | Other breakfast cereals                                             | 0.0275 | 0.0224 |
| 28502 | Canned or fresh carton custard                                      | 0.0638 | 0.0283 |
| 28503 | All canned milk puddings                                            | 0.0638 | 0.0283 |
| 28601 | Puddings                                                            | 0.0638 | 0.0283 |
| 28702 | Dried rice                                                          | 0.2335 | 0.1402 |
| 28703 | Cooked rice                                                         | 0.2335 | 0.1402 |
| 28704 | Takeaway rice                                                       | 0.2335 | 0.1402 |
| 29001 | Invalid foods, slimming foods and sports foods                      | 0.0448 | 0.0656 |
| 29101 | Infant cereal foods                                                 | 0.1    | 0.1    |
| 29402 | Cakes and pastries - frozen                                         | 0.2802 | 0.1703 |
| 29501 | Canned pasta                                                        | 0.2563 | 0.29   |
| 29502 | Dried and fresh pasta                                               | 0.1848 | 0.1595 |
| 29503 | Takeaway pasta and noodles                                          | 0.2563 | 0.29   |
| 29601 | Pizzas - frozen and not frozen                                      | 0.2563 | 0.29   |
| 29602 | Takeaway pizza                                                      | 0.2563 | 0.29   |
| 29907 | Cake, pudding and dessert mixes                                     | 0.298  | 0.4353 |
| 29909 | Cereal snacks                                                       | 0.0275 | 0.0224 |
| 29915 | Quiches and flans - frozen and not frozen                           | 0.2563 | 0.29   |
| 29916 | Takeaway crisps, savoury snacks, popcorn, poppadums, prawn crackers | 0.1239 | 0.0809 |
| 29919 | Other cereal foods - frozen and not frozen                          | 0.0275 | 0.0224 |
| 30101 | Other cereals                                                       | 0      | 0      |
| 30401 | Tea                                                                 | 0.1    | 0.1    |
| 30701 | Coffee beans and ground coffee                                      | 0.1    | 0.1    |
| 30801 | Instant coffee                                                      | 0.1    | 0.1    |
| 30901 | Coffee essences                                                     | 0.1    | 0.1    |
| 31001 | Tea and coffee from takeaway                                        | 0.1    | 0.1    |
| 31201 | Cocoa and chocolate drinks                                          | 0.0448 | 0.0656 |
| 31301 | Malt drinks and chocolate versions of malted drinks                 | 0.0448 | 0.0656 |
| 31401 | Mineral or spring waters                                            | 0.1    | 0.1    |
| 31501 | Baby foods                                                          | 0.1    | 0.1    |
| 31801 | Soups - canned or cartons                                           | 0.2563 | 0.29   |
| 31901 | Soups - dehydrated or powdered                                      | 0.0448 | 0.0656 |
| 32001 | Soups - from takeaway                                               | 0.2563 | 0.29   |
| 32101 | Other takeaway food brought home                                    | 0.2563 | 0.29   |
| 32201 | Meals on wheels - items not specified                               | 0.2563 | 0.29   |

## Appendix 5: Defra Food Codes with Recommended Estimates of Edible Food Waste

|        |                                                                           |        |        |
|--------|---------------------------------------------------------------------------|--------|--------|
| 32302  | Salad dressings                                                           | 0.1267 | 0.091  |
| 32303  | Other spreads and dressings                                               | 0.1267 | 0.091  |
| 32702  | Pickles                                                                   | 0.1267 | 0.091  |
| 32703  | Sauces                                                                    | 0.1267 | 0.091  |
| 32704  | Takeaway sauces and mayonnaise                                            | 0.1267 | 0.091  |
| 32801  | Stock cubes and meat and yeast extracts                                   | 0.298  | 0.4353 |
| 32901  | Jelly squares or crystals                                                 | 0.0638 | 0.0283 |
| 33203  | Ice cream tub or block                                                    | 0.0638 | 0.0283 |
| 33302  | Ice cream cornets, choc-ices, lollies with ice cream                      | 0.0638 | 0.0283 |
| 33303  | Ice lollies, sorbet, frozen mousse, frozen yoghurt                        | 0.0638 | 0.0283 |
| 33304  | Takeaway ice cream, ice cream products, milkshakes                        | 0.0638 | 0.0283 |
| 33401  | Salt                                                                      | 0.1267 | 0.091  |
| 33501  | Artificial sweeteners                                                     | 0.1267 | 0.091  |
| 33602  | Vinegar                                                                   | 0.1267 | 0.091  |
| 33603  | Spices and dried herbs                                                    | 0.1267 | 0.091  |
| 33604  | Bisto, gravy granules, stuffing mix, baking powder, yeast                 | 0.298  | 0.4353 |
| 33605  | Wine and beer making kits                                                 | 0.1    | 0.1    |
| 33606  | Fruit teas, instant tea, herbal tea, rosehip tea                          | 0.1    | 0.1    |
| 33607  | Payment for food, type not specified                                      | 0.1    | 0.1    |
| 33901  | Soya and novel protein foods                                              | 0.2589 | 0.1589 |
| 34001  | Soft drinks, concentrated, not low calorie                                | 0.1    | 0.1    |
| 34101  | Soft drinks, not concentrated, not low calorie                            | 0.1    | 0.1    |
| 34301  | Soft drinks, concentrated, low calorie                                    | 0.1    | 0.1    |
| 34401  | Soft drinks, not concentrated, low calorie                                | 0.1    | 0.1    |
| 35001  | Chocolate bars - solid                                                    | 0.0958 | 0.0575 |
| 35101  | Chocolate bars - filled                                                   | 0.0958 | 0.0575 |
| 35202  | Chewing gum                                                               | 0.1239 | 0.0809 |
| 35301  | Mints                                                                     | 0.0958 | 0.0575 |
| 35302  | Boiled sweets                                                             | 0.0958 | 0.0575 |
| 35401  | Fudges, toffees, caramels                                                 | 0.0958 | 0.0575 |
| 35501  | Takeaway confectionery                                                    | 0.0958 | 0.0575 |
| 38102  | Beers                                                                     | 0.1    | 0.1    |
| 38202  | Lagers and continental beers                                              | 0.1    | 0.1    |
| 38302  | Ciders and perry                                                          | 0.1    | 0.1    |
| 38402  | Champagne, sparkling wines and wine with mixer                            | 0.1    | 0.1    |
| 38403  | Table wine                                                                | 0.1    | 0.1    |
| 38501  | Spirits with mixer                                                        | 0.1    | 0.1    |
| 38601  | Fortified wines                                                           | 0.1    | 0.1    |
| 38701  | Spirits                                                                   | 0.1    | 0.1    |
| 38801  | Liqueurs and cocktails                                                    | 0.1    | 0.1    |
| 38901  | Alcopops                                                                  | 0.1    | 0.1    |
| 100101 | Meat or fish based curry with sauce                                       | 0      | 0      |
| 100102 | Meat or fish based curry without sauce                                    | 0      | 0      |
| 100103 | Vegetable or fruit based curry                                            | 0      | 0      |
| 100104 | Dhal and dhal dishes                                                      | 0      | 0      |
| 100105 | Samosas                                                                   | 0      | 0      |
| 100106 | Other Indian dishes                                                       | 0      | 0      |
| 100107 | Indian breads                                                             | 0      | 0      |
| 100108 | Indian buffet or shared meal or unspecified Indian meal                   | 0      | 0      |
| 100201 | Chinese or Thai meat or fish based dishes excluding curry                 | 0      | 0      |
| 100202 | Chop suey and fu yung dishes                                              | 0      | 0      |
| 100203 | Chinese or Thai vegetable based main course dishes excluding curry        | 0      | 0      |
| 100204 | Chinese or Thai curry                                                     | 0      | 0      |
| 100205 | Spring rolls                                                              | 0      | 0      |
| 100206 | Other Chinese or Thai dishes                                              | 0      | 0      |
| 100207 | Chinese or Thai buffet or shared meal or unspecified Chinese or Thai meal | 0      | 0      |
| 100301 | All other ethnic meals                                                    | 0      | 0      |
| 110101 | Steak - without sauce e.g. braised, sirloin                               | 0      | 0      |

## Appendix 5: Defra Food Codes with Recommended Estimates of Edible Food Waste

|        |                                                                                                |   |   |
|--------|------------------------------------------------------------------------------------------------|---|---|
| 110102 | Roast meat with sauce or gravy                                                                 | 0 | 0 |
| 110103 | Pork chops with sauce or gravy                                                                 | 0 | 0 |
| 110104 | Lamb chops with sauce or gravy                                                                 | 0 | 0 |
| 110105 | Spare ribs                                                                                     | 0 | 0 |
| 110106 | Bacon                                                                                          | 0 | 0 |
| 110107 | Gammon or ham                                                                                  | 0 | 0 |
| 110108 | All offal including liver, kidney, tongue                                                      | 0 | 0 |
| 110201 | Chicken or turkey with sauce or gravy                                                          | 0 | 0 |
| 110202 | Chicken or turkey in breadcrumbs or batter                                                     | 0 | 0 |
| 110203 | Duck with sauce or gravy                                                                       | 0 | 0 |
| 110204 | Game with sauce or gravy                                                                       | 0 | 0 |
| 110301 | Small or single burgers                                                                        | 0 | 0 |
| 110302 | Large or double burgers                                                                        | 0 | 0 |
| 110303 | Chicken burger                                                                                 | 0 | 0 |
| 110401 | Kebabs - all types including chicken                                                           | 0 | 0 |
| 110402 | Plain sausages e.g. beef, pork                                                                 | 0 | 0 |
| 110403 | Other sausages                                                                                 | 0 | 0 |
| 110404 | Hot dogs and sausage sandwiches                                                                | 0 | 0 |
| 110501 | Meat pies (pastry topped) and pasties                                                          | 0 | 0 |
| 110502 | Meat pies (potato topped e.g. shepherd's pie)                                                  | 0 | 0 |
| 110503 | Sausage roll (pastry)                                                                          | 0 | 0 |
| 110601 | Meat and vegetable stews, casseroles or hotpots                                                | 0 | 0 |
| 110602 | Chicken or turkey stews, casseroles or hotpots                                                 | 0 | 0 |
| 110603 | Meat lasagne, cannelloni, moussaka and other meat-based oven baked dishes                      | 0 | 0 |
| 110701 | All pates                                                                                      | 0 | 0 |
| 110801 | Other meat products or dishes                                                                  | 0 | 0 |
| 120101 | White fish - grilled, steamed, baked or boiled - without sauce                                 | 0 | 0 |
| 120102 | White fish - fried (incl. in batter/breadcrumbs) - without sauce                               | 0 | 0 |
| 120201 | Trout, tuna and salmon only - fresh - without sauce or dressing                                | 0 | 0 |
| 120202 | Other fatty fish - without sauce or dressing e.g. herring, mackerel, sardines                  | 0 | 0 |
| 120301 | Shellfish - without sauce or dressing e.g. prawns, shrimps, oysters, crab                      | 0 | 0 |
| 120401 | Kippers and other smoked fish e.g. smoked salmon                                               | 0 | 0 |
| 120501 | Other fish products and unspecified 'fish' e.g. squid, sushi, crabsticks                       | 0 | 0 |
| 120601 | Fish, processed, in breadcrumbs (fish fingers, fish cakes, scampi) - without sauce or dressing | 0 | 0 |
| 120602 | Fish burgers (in bun)                                                                          | 0 | 0 |
| 120603 | Fish based pie or other dish e.g. paella, kedgeree, tuna pasta bake                            | 0 | 0 |
| 130101 | Cottage cheese including with pineapple                                                        | 0 | 0 |
| 130102 | Soft, continental or processed cheese e.g. brie                                                | 0 | 0 |
| 130103 | Cheddar, blue or other hard cheese and unspecified 'cheese'                                    | 0 | 0 |
| 130104 | Quiche and cheese pies or pasties                                                              | 0 | 0 |
| 130105 | Other cheese dishes e.g. Welsh rarebit, cheese and biscuits                                    | 0 | 0 |
| 130201 | Pizza - cheese and tomato, vegetable or unspecified 'pizza'                                    | 0 | 0 |
| 130202 | Pizza - meat, fish or poultry                                                                  | 0 | 0 |
| 130301 | Eggs - boiled or poached                                                                       | 0 | 0 |
| 130302 | Eggs - scrambled, fried, omelettes or unspecified 'egg'                                        | 0 | 0 |
| 130303 | Other egg dishes e.g. egg mayonnaise                                                           | 0 | 0 |
| 140101 | Chips and French fries - from fast food outlet e.g. McDonalds                                  | 0 | 0 |
| 140102 | Chips - served with meal e.g. from restaurant or chip shop                                     | 0 | 0 |
| 140103 | Potatoes - boiled or unspecified 'potato'                                                      | 0 | 0 |
| 140104 | Potatoes - mashed                                                                              | 0 | 0 |
| 140105 | Potatoes - roast                                                                               | 0 | 0 |
| 140106 | Sautéed potatoes, potato croquettes, hash browns etc.                                          | 0 | 0 |
| 140107 | Baked or jacket potatoes - without filling                                                     | 0 | 0 |
| 140108 | Other potato dishes (e.g. wedges, potato salad) including unspecified 'potato dish'            | 0 | 0 |



## Appendix 5: Defra Food Codes with Recommended Estimates of Edible Food Waste

|        |                                                                                                         |   |   |
|--------|---------------------------------------------------------------------------------------------------------|---|---|
| 150101 | Lettuce and cress                                                                                       | 0 | 0 |
| 150102 | Other green vegetables e.g. spinach, cabbage, sprouts                                                   | 0 | 0 |
| 150201 | Peppers - raw or cooked                                                                                 | 0 | 0 |
| 150202 | Courgettes, marrow, aubergine, pumpkin, plantain, cucumbers                                             | 0 | 0 |
| 150203 | Peas and sweetcorn                                                                                      | 0 | 0 |
| 150204 | Baked beans and other beans (not green beans) and pulses                                                | 0 | 0 |
| 150205 | Tomato - fresh or raw                                                                                   | 0 | 0 |
| 150206 | Tomato - cooked or processed                                                                            | 0 | 0 |
| 150301 | Carrots                                                                                                 | 0 | 0 |
| 150302 | Onions - raw, cooked or unspecified 'onions'                                                            | 0 | 0 |
| 150303 | Onions - fried                                                                                          | 0 | 0 |
| 150304 | Other root vegetables or tubers e.g. turnip, parsnip, radish, beetroot                                  | 0 | 0 |
| 150401 | Mushrooms - raw or cooked                                                                               | 0 | 0 |
| 150501 | Mixed vegetables or unspecified 'vegetable'                                                             | 0 | 0 |
| 150502 | Other vegetables e.g. artichoke, asparagus                                                              | 0 | 0 |
| 150503 | Vegetables in batter or breadcrumbs and deep fried vegetables e.g. onion rings                          | 0 | 0 |
| 150504 | Onion and other vegetable bhajis and pakora                                                             | 0 | 0 |
| 150601 | Veggie burger, bean burger, veggie sausage, nut roast                                                   | 0 | 0 |
| 150602 | Vegetable lasagne, vegetable cannelloni, vegetable moussaka and other oven baked vegetable based dishes | 0 | 0 |
| 150603 | Stuffed vegetables (e.g. stuffed pepper) and vegetable based starter                                    | 0 | 0 |
| 150604 | Vegetable based stews and casseroles and vegetable based pies                                           | 0 | 0 |
| 160101 | Mixed salad, main course - without dressing                                                             | 0 | 0 |
| 160102 | Mixed salad, side dish - without dressing - including unspecified 'salad'                               | 0 | 0 |
| 160103 | Green salad - without dressing                                                                          | 0 | 0 |
| 160201 | Vegetable or fruit and nut salad - with dressing                                                        | 0 | 0 |
| 160202 | Pasta, rice, mixed bean or cereal-based salads - with dressing                                          | 0 | 0 |
| 160301 | Meat salad e.g. beef, lamb salads                                                                       | 0 | 0 |
| 160302 | Chicken or turkey salad                                                                                 | 0 | 0 |
| 160303 | Fish salad e.g. tuna, salmon salads                                                                     | 0 | 0 |
| 160401 | Cheese salad including ploughman's                                                                      | 0 | 0 |
| 160402 | Egg salad                                                                                               | 0 | 0 |
| 160501 | Other salads e.g. Greek, Florida, Russian                                                               | 0 | 0 |
| 160601 | Salad buffet or buffet meal where items not specified                                                   | 0 | 0 |
| 170101 | Fried rice and risotto                                                                                  | 0 | 0 |
| 170102 | All cooked rice excluding fried rice e.g. boiled, pilau, savoury                                        | 0 | 0 |
| 170103 | Pasta - not filled and plain noodles (including pot noodle) - without sauce                             | 0 | 0 |
| 170104 | Pasta - filled e.g. ravioli, tortellini - without sauce                                                 | 0 | 0 |
| 170105 | Noodles with meat, vegetables etc.                                                                      | 0 | 0 |
| 180101 | Meat & fish soups                                                                                       | 0 | 0 |
| 180102 | Vegetable based soups                                                                                   | 0 | 0 |
| 180103 | Chinese soups, consommé (meat, fish or veg)                                                             | 0 | 0 |
| 180104 | Other soups including unspecified 'soup'                                                                | 0 | 0 |
| 190101 | Muesli and oat crunch cereals                                                                           | 0 | 0 |
| 190102 | Other high fibre breakfast cereals e.g. Allbran, Weetabix                                               | 0 | 0 |
| 190103 | Sweetened breakfast cereals e.g. Frosties, Sugar Puffs                                                  | 0 | 0 |
| 190104 | Hot breakfast cereals e.g. porridge, Ready Brek                                                         | 0 | 0 |
| 190105 | Other breakfast cereals and unspecified 'cereal' e.g. Cornflakes, Rice Krispies, Special K              | 0 | 0 |
| 200101 | All citrus fruit, fresh e.g. orange, grapefruit                                                         | 0 | 0 |
| 200102 | Banana, fresh                                                                                           | 0 | 0 |
| 200103 | Apples, fresh                                                                                           | 0 | 0 |
| 200104 | Pears, fresh                                                                                            | 0 | 0 |
| 200105 | Stone fruit, fresh e.g. apricot, plum, peach, cherry, avocado                                           | 0 | 0 |
| 200106 | Grapes, fresh                                                                                           | 0 | 0 |
| 200107 | Soft fruit or berries, fresh e.g. strawberries, blackberries - without cream or ice cream               | 0 | 0 |

# Appendix 5: Defra Food Codes with Recommended Estimates of Edible Food Waste

|        |                                                                                                             |   |   |
|--------|-------------------------------------------------------------------------------------------------------------|---|---|
| 200108 | Melon, fresh                                                                                                | 0 | 0 |
| 200109 | Pineapple, fresh                                                                                            | 0 | 0 |
| 200110 | Fresh fruit salad - without cream or ice cream                                                              | 0 | 0 |
| 200111 | Other fresh fruit (kiwi, passion) and unspecified 'fruit'                                                   | 0 | 0 |
| 200112 | Free school fruit                                                                                           | 0 | 0 |
| 200201 | Dried fruit e.g. sultanas, raisins                                                                          | 0 | 0 |
| 200301 | Tinned, stewed, baked or processed fruit - without cream or ice cream                                       | 0 | 0 |
| 210101 | Yoghurt and fromage frais                                                                                   | 0 | 0 |
| 220101 | White bread, with or without butter or margarine (toasted or untoasted)                                     | 0 | 0 |
| 220102 | Brown or wholemeal bread, with or without butter or margarine (toasted or untoasted)                        | 0 | 0 |
| 220103 | White rolls, baguettes etc. without butter or margarine (or butter or margarine not specified)              | 0 | 0 |
| 220104 | Brown or wholemeal rolls, baguettes etc. without butter or margarine (or butter or margarine not specified) | 0 | 0 |
| 220105 | Garlic bread                                                                                                | 0 | 0 |
| 220106 | Croissant                                                                                                   | 0 | 0 |
| 220107 | Continental breads e.g. pitta, ciabatta, focaccia                                                           | 0 | 0 |
| 220108 | Muffins, crumpets                                                                                           | 0 | 0 |
| 220109 | Fried bread, including croutons                                                                             | 0 | 0 |
| 220110 | Other bread, rolls, toast, unspecified 'bread' etc.                                                         | 0 | 0 |
| 230101 | Meat based sandwich on white bread or roll                                                                  | 0 | 0 |
| 230102 | Meat based sandwich on brown bread or roll                                                                  | 0 | 0 |
| 230103 | Meat based sandwich bread not specified                                                                     | 0 | 0 |
| 230104 | Chicken or turkey based sandwich on white bread or roll                                                     | 0 | 0 |
| 230105 | Chicken or turkey based sandwich on brown bread or roll                                                     | 0 | 0 |
| 230106 | Chicken or turkey based sandwich bread not specified                                                        | 0 | 0 |
| 230107 | Bacon and egg based sandwich on white bread or roll including Bacon and Egg McMuffin                        | 0 | 0 |
| 230108 | Bacon and egg based sandwich on brown bread or roll                                                         | 0 | 0 |
| 230109 | Bacon and egg based sandwich bread not specified                                                            | 0 | 0 |
| 230110 | Fish based sandwich on white bread or roll                                                                  | 0 | 0 |
| 230111 | Fish based sandwich on brown bread or roll                                                                  | 0 | 0 |
| 230112 | Fish based sandwich bread not specified                                                                     | 0 | 0 |
| 230201 | Cheese based sandwich on white bread or roll                                                                | 0 | 0 |
| 230202 | Cheese based sandwich on brown bread or roll                                                                | 0 | 0 |
| 230203 | Cheese based sandwich bread not specified                                                                   | 0 | 0 |
| 230204 | Egg based sandwich on white bread or roll including Egg McMuffin                                            | 0 | 0 |
| 230205 | Egg based sandwich on brown bread or roll                                                                   | 0 | 0 |
| 230206 | Egg based sandwich bread not specified                                                                      | 0 | 0 |
| 230207 | Vegetarian based sandwich on white bread or roll                                                            | 0 | 0 |
| 230208 | Vegetarian based sandwich on brown bread or roll                                                            | 0 | 0 |
| 230209 | Vegetarian based sandwich bread not specified                                                               | 0 | 0 |
| 230210 | Sweet-filled sandwich                                                                                       | 0 | 0 |
| 230211 | Unspecified sandwiches or rolls                                                                             | 0 | 0 |
| 240101 | Cheese or cream based sauce e.g. carbonara, cauliflower cheese                                              | 0 | 0 |
| 240102 | Meat-based sauce e.g. Bolognese, chilli con carne                                                           | 0 | 0 |
| 240103 | Fish or seafood based sauce                                                                                 | 0 | 0 |
| 240104 | Tomato based sauce containing vegetables including ratatouille                                              | 0 | 0 |
| 240105 | Other savoury sauce or unspecified 'sauce'                                                                  | 0 | 0 |
| 240106 | Sweet sauce e.g. syrup, treacle, chocolate sauce                                                            | 0 | 0 |
| 240107 | Fruit or vegetable based condiments                                                                         | 0 | 0 |
| 240108 | Other condiments or sauces                                                                                  | 0 | 0 |
| 240201 | Salad dressings and dips                                                                                    | 0 | 0 |
| 240202 | Mayonnaise                                                                                                  | 0 | 0 |
| 240203 | Coleslaw                                                                                                    | 0 | 0 |
| 240301 | Fruit filling e.g. peaches for pancakes                                                                     | 0 | 0 |
| 240302 | Vegetable filling                                                                                           | 0 | 0 |

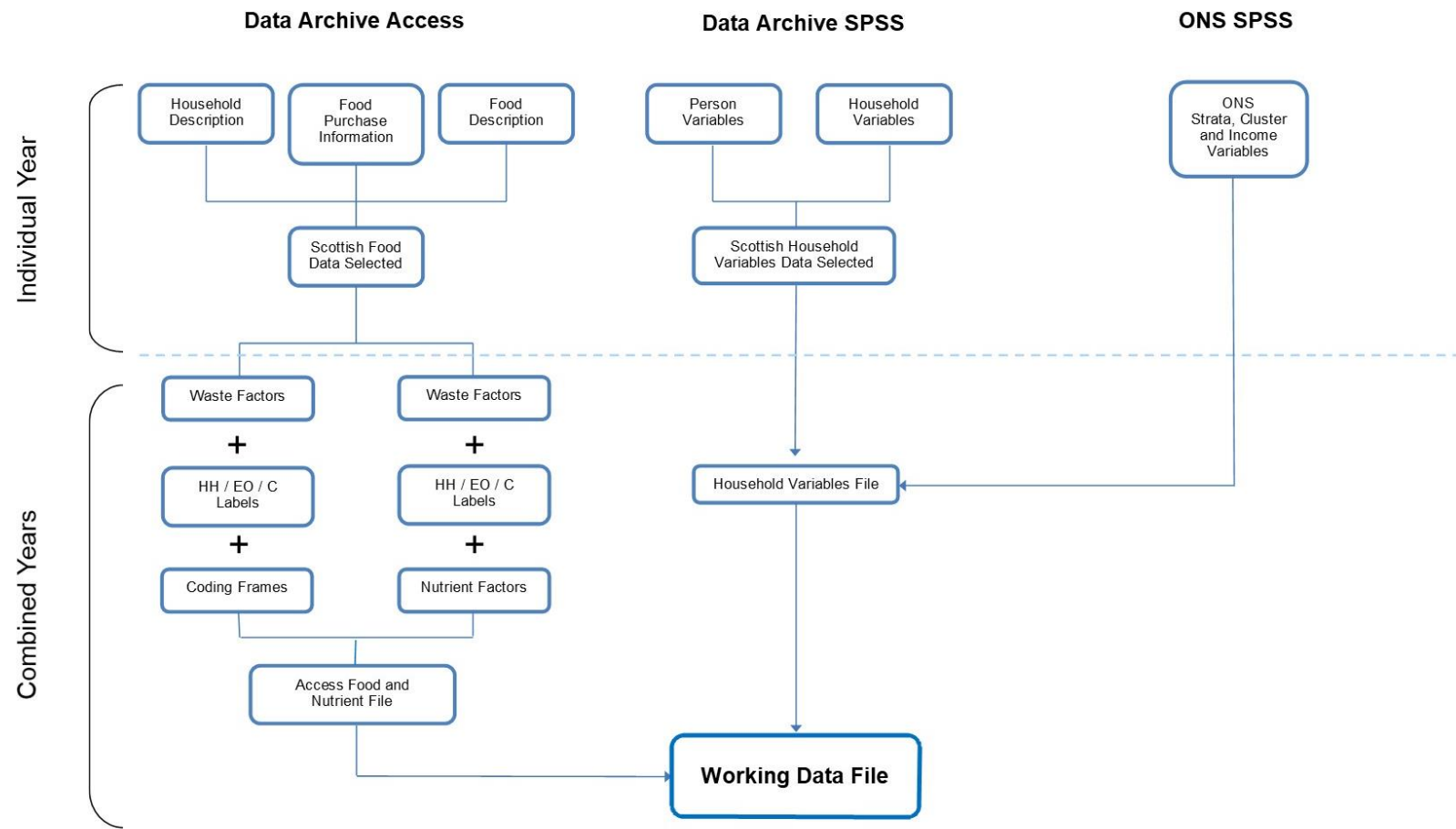
## Appendix 5: Defra Food Codes with Recommended Estimates of Edible Food Waste

|        |                                                                                                              |   |   |
|--------|--------------------------------------------------------------------------------------------------------------|---|---|
| 240303 | Cheese filling including cheddar cheese, cottage cheese                                                      | 0 | 0 |
| 240304 | Fish based filling e.g. tuna mayonnaise                                                                      | 0 | 0 |
| 240401 | Butter and margarine                                                                                         | 0 | 0 |
| 240402 | Jam, marmalade and honey                                                                                     | 0 | 0 |
| 240403 | Cream - single, double, sour etc.                                                                            | 0 | 0 |
| 240404 | Custard                                                                                                      | 0 | 0 |
| 240405 | Sugar (as an addition to tea, coffee etc.)                                                                   | 0 | 0 |
| 240501 | Commercial baby food in a jar or can                                                                         | 0 | 0 |
| 240601 | Yorkshire puddings and dumplings                                                                             | 0 | 0 |
| 240701 | Unspecified meal e.g. 'meal', 'school meal' or 'meal at work'                                                | 0 | 0 |
| 250101 | Coffee, black including espresso                                                                             | 0 | 0 |
| 250102 | Coffee, white including cappuccino, latte                                                                    | 0 | 0 |
| 250103 | Coffee, black or white not specified                                                                         | 0 | 0 |
| 250104 | Tea, white (including black or white not specified)                                                          | 0 | 0 |
| 250105 | Tea, black including Chinese tea, herbal tea, fruit tea                                                      | 0 | 0 |
| 250106 | Hot chocolate or cocoa, with milk or water                                                                   | 0 | 0 |
| 260201 | Mineral water                                                                                                | 0 | 0 |
| 260202 | Soft drink (incl. carbonates and still) - low calorie                                                        | 0 | 0 |
| 260203 | Soft drink (incl. carbonates & still) - not low calorie (including drinks where calorie content unspecified) | 0 | 0 |
| 260204 | Pure fruit juices                                                                                            | 0 | 0 |
| 260205 | Vegetable juices e.g. tomato juice, carrot juice                                                             | 0 | 0 |
| 260206 | Soft drink where pure juice or juice drink not specified                                                     | 0 | 0 |
| 260301 | Milk as a drink                                                                                              | 0 | 0 |
| 260302 | Milk on cereal                                                                                               | 0 | 0 |
| 260303 | Milkshake and flavoured milk                                                                                 | 0 | 0 |
| 260304 | Free school milk                                                                                             | 0 | 0 |
| 270101 | Spirits                                                                                                      | 0 | 0 |
| 270102 | Liqueurs                                                                                                     | 0 | 0 |
| 270103 | Cocktails                                                                                                    | 0 | 0 |
| 270104 | Spirits or liqueurs with mixer e.g. gin & tonic, Bacardi & coke                                              | 0 | 0 |
| 270201 | Wine (not sparkling) including unspecified 'wine'                                                            | 0 | 0 |
| 270202 | Sparkling wines (e.g. Champagne) and wine with mixer (e.g. Bucks Fizz)                                       | 0 | 0 |
| 270203 | Fortified wine e.g. sherry, port, vermouth                                                                   | 0 | 0 |
| 270204 | Cider or perry - half pint or bottle                                                                         | 0 | 0 |
| 270205 | Cider or perry - pint or can or size not specified                                                           | 0 | 0 |
| 270206 | Alcoholic soft drinks (alcopops), and ready-mixed bottled drinks                                             | 0 | 0 |
| 270301 | Bitter - half pint or bottle                                                                                 | 0 | 0 |
| 270302 | Bitter - pint or can or size not specified                                                                   | 0 | 0 |
| 270303 | Lager or other beers including unspecified 'beer' - half pint or bottle                                      | 0 | 0 |
| 270304 | Lager or other beers including unspecified 'beer' - pint or can or size not specified                        | 0 | 0 |
| 270401 | Round of drinks, alcohol not otherwise specified                                                             | 0 | 0 |
| 280101 | Solid, unfilled chocolate bars and sweets and unspecified 'chocolate'                                        | 0 | 0 |
| 280102 | Filled chocolate-coated bars and sweets e.g. Mars, Snickers, Minstrels                                       | 0 | 0 |
| 280103 | Single chocolate (after dinner)                                                                              | 0 | 0 |
| 280104 | Chewing gum and bubble gum                                                                                   | 0 | 0 |
| 280105 | Mints e.g. Polo, Extra Strong                                                                                | 0 | 0 |
| 280106 | Boiled sweets, jellies and unspecified 'sweets' e.g. fruit gums                                              | 0 | 0 |
| 280107 | Uncoated toffee or fudge, uncoated e.g. Toffos, chocolate éclairs, caramels                                  | 0 | 0 |
| 280108 | Pick 'n' mix, nougat, liquorice and other sweets                                                             | 0 | 0 |
| 290101 | Ice cream in a cone, cornet or wafer and ice cream desserts                                                  | 0 | 0 |
| 290103 | Ice cream scoop or tub including ice cream served with dessert                                               | 0 | 0 |
| 290104 | Iced lollies and sorbets                                                                                     | 0 | 0 |
| 290201 | Doughnut                                                                                                     | 0 | 0 |
| 290202 | Cream pastries e.g. chocolate éclairs, profiteroles                                                          | 0 | 0 |
| 290203 | Cream sponge or gâteau (not chocolate) e.g. Victoria sandwich                                                | 0 | 0 |

## Appendix 5: Defra Food Codes with Recommended Estimates of Edible Food Waste

|        |                                                                        |   |   |
|--------|------------------------------------------------------------------------|---|---|
| 290204 | Rich chocolate cake or chocolate gateau e.g. Death by Chocolate        | 0 | 0 |
| 290205 | Fruit and other pies or pastries                                       | 0 | 0 |
| 290206 | Fruit cake                                                             | 0 | 0 |
| 290207 | Other sponge cakes or desserts (not cream cakes)                       | 0 | 0 |
| 290208 | Custard desserts or sweet soufflé                                      | 0 | 0 |
| 290209 | Meringue desserts including pavlova                                    | 0 | 0 |
| 290210 | Cheesecake                                                             | 0 | 0 |
| 290211 | Fool, trifle and mousse desserts                                       | 0 | 0 |
| 290212 | Jelly                                                                  | 0 | 0 |
| 290213 | Milk and rice puddings including tapioca, semolina                     | 0 | 0 |
| 290214 | Other cakes and desserts, unspecified 'cake' or 'dessert'              | 0 | 0 |
| 290301 | Waffles and pancakes                                                   | 0 | 0 |
| 290401 | Teacakes, scones, currant buns, iced buns                              | 0 | 0 |
| 300101 | Fully-coated chocolate biscuits or wafers                              | 0 | 0 |
| 300102 | Sweet biscuits including half-coated chocolate biscuits                | 0 | 0 |
| 300103 | Cereal bars and cereal based cakes                                     | 0 | 0 |
| 300104 | Savoury biscuits                                                       | 0 | 0 |
| 310101 | Nuts, nut products and seeds                                           | 0 | 0 |
| 310102 | Potato crisps or snacks including unspecified 'crisps', prawn crackers | 0 | 0 |
| 310103 | Corn snacks, based on maize                                            | 0 | 0 |
| 310104 | Wheat based savoury snack                                              | 0 | 0 |
| 310201 | Popcorn                                                                | 0 | 0 |
| 310301 | Other savoury snacks (including hors d'oeuvres)                        | 0 | 0 |

Appendix 6: Flowchart of Data Handling Process for Monitoring Work\*



\*Variables detailed at ONS SPSS stage are not required for every analysis  
HH = Household; EO = Eating Out; C = Combined; ONS = Office for National Statistics

**Appendix 7: Food Groupings Used for Contributing Foods Analysis<sup>1</sup>**

| Food Grouping Code | Food Grouping Description                 | Weight <sup>2</sup> | Secondary Food Grouping Code | Secondary Food Grouping Description | Weight <sup>2</sup> |
|--------------------|-------------------------------------------|---------------------|------------------------------|-------------------------------------|---------------------|
| 48                 | Semi-skimmed Milk                         | 114                 | 62                           | Total Milk                          | 199                 |
| 49                 | Skimmed Milk                              | 16.9                |                              |                                     |                     |
| 67                 | Whole Milk                                | 47.5                |                              |                                     |                     |
| 28                 | Milk Drinks                               | 1.2                 |                              |                                     |                     |
| 69                 | Yoghurt and Fromage Frais                 | 26.6                |                              |                                     |                     |
| 11                 | Cream                                     | 3.0                 |                              |                                     |                     |
| 23                 | Low Fat Cheese                            | 0.3                 | 60                           | Total Cheese                        | 16.6                |
| 27                 | Medium Fat Cheese                         | 6.4                 |                              |                                     |                     |
| 19                 | Full Fat Cheese                           | 10.0                |                              |                                     |                     |
| 3                  | Block Margarine                           | 0.2                 |                              |                                     |                     |
| 9                  | Cooking Fat                               | 0.3                 |                              |                                     |                     |
| 10                 | Cooking Oil                               | 3.3                 |                              |                                     |                     |
| 6                  | Butter                                    | 4.7                 | 52                           | Total Spreading Fats                | 13.6                |
| 50                 | Soft Margarine                            | 4.9                 |                              |                                     |                     |
| 43                 | Reduced and Low Fat Spread                | 4.0                 |                              |                                     |                     |
| 15                 | Eggs                                      | 1.2                 |                              |                                     |                     |
| 17                 | Fruit                                     | 97.4                | 61                           | Total Fruit and Vegetables          | 243                 |
| 18                 | Fruit (and veg) juice                     | 34.1                |                              |                                     |                     |
| 66                 | Vegetables                                | 111                 |                              |                                     |                     |
| 51                 | Soup                                      | 14.1                |                              |                                     |                     |
| 37                 | Potatoes                                  | 38.4                |                              |                                     |                     |
| 40                 | Processed Potatoes                        | 28.6                |                              |                                     |                     |
| 65                 | Unprocessed Red Meat                      | 22.8                |                              |                                     |                     |
| 2                  | Bacon and Ham                             | 12.5                | 63                           | Total Processed Red Meat            | 60.2                |
| 5                  | Burgers and Kebabs                        | 7.0                 |                              |                                     |                     |
| 26                 | Meat Filled Pastry                        | 8.8                 |                              |                                     |                     |
| 45                 | Sausages                                  | 13.4                |                              |                                     |                     |
| 33                 | Other processed meat                      | 18.5                |                              |                                     |                     |
| 38                 | Poultry                                   | 30.5                |                              |                                     |                     |
| 41                 | Processed Poultry                         | 1.6                 |                              |                                     |                     |
| 64                 | Unprocessed Fish                          | 9.2                 |                              |                                     |                     |
| 39                 | Processed Fish                            | 3.7                 |                              |                                     |                     |
| 30                 | Non Meat Savoury Pastry                   | 0.9                 |                              |                                     |                     |
| 34                 | Pasta, Rice and Noodles                   | 22.9                |                              |                                     |                     |
| 36                 | Pizza                                     | 12.2                |                              |                                     |                     |
| 16                 | Flour                                     | 4.2                 |                              |                                     |                     |
| 24                 | Low fibre and lower NMES Breakfast Cereal | 3.2                 | 59                           | Total Breakfast Cereal              | 19.8                |
| 25                 | Low fibre or high NMES Breakfast Cereal   | 4.0                 |                              |                                     |                     |
| 68                 | Wholegrain/ high fibre Breakfast Cereal   | 12.6                |                              |                                     |                     |
| 4                  | Bread and Rolls                           | 53.1                |                              |                                     |                     |
| 32                 | Other Baked Goods                         | 13.5                |                              |                                     |                     |
| 7                  | Cakes, Pastries and Puddings              | 16.2                |                              |                                     |                     |

## Appendix 7: Food Groupings Used for Contributing Foods Analysis

|              |                                         |      |    |                     |      |
|--------------|-----------------------------------------|------|----|---------------------|------|
| 29           | Milk Puddings                           | 3.0  |    |                     |      |
| 20           | Ice Cream and Dairy Desserts            | 34.8 |    |                     |      |
| 22           | Jelly, Ice Lollies and Sorbets          | 0.8  |    |                     |      |
| 21           | Jam, marmalade, honey and sweet spreads | 5.6  |    |                     |      |
| 53           | Sugar                                   | 6.7  |    |                     |      |
| 8            | Chocolate Confectionery                 | 15.1 | 70 | Total Confectionery | 22.4 |
| 54           | Sugar Confectionery                     | 7.3  |    |                     |      |
| 57           | Sweet Biscuits                          | 20.4 |    |                     |      |
| 46           | Savoury Biscuits                        | 3.3  |    |                     |      |
| 47           | Savoury Sauces and Dressings            | 22.3 |    |                     |      |
| 42           | Ready Meals                             | 23.4 |    |                     |      |
| 58           | Takeaway Main Meal Component            | 4.7  |    |                     |      |
| 13           | Eating Out Main Meal Component          | 5.8  |    |                     |      |
| 14           | Eating Out Side Dish                    | 0.3  |    |                     |      |
| 44           | Sandwiches                              | 11.1 |    |                     |      |
| 12           | Crisps and Savoury Snacks               | 12.8 |    |                     |      |
| 31           | Nuts                                    | 2.9  |    |                     |      |
| 35           | Peanut Butter                           | 1.0  |    |                     |      |
| 55           | Sugar Containing Soft Drinks            | 138  |    |                     |      |
| 56           | Sugar Free Soft Drinks                  | 158  |    |                     |      |
| 1            | Alcoholic Drinks                        | 123  |    |                     |      |
| -8           | Unclassified Foods                      | 25.4 |    |                     |      |
| -9           | Foods of Little Nutritional Value       | 85.7 |    |                     |      |
| <b>Total</b> |                                         | 1550 |    |                     |      |

<sup>1</sup>Appendix 8 provides detail on the breakdown of each of these food groupings by food code; <sup>2</sup>Average weight in grams, per food group, per person, per day - 2013-2015 data combined.

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

### Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

| Food Code | Description                                                     | Food Grouping Code | Food Grouping Description         | Factor |
|-----------|-----------------------------------------------------------------|--------------------|-----------------------------------|--------|
| 30401     | Tea                                                             | -9                 | Foods of Little Nutritional Value | 1      |
| 30701     | Coffee beans and ground coffee                                  | -9                 | Foods of Little Nutritional Value | 1      |
| 30801     | Instant coffee                                                  | -9                 | Foods of Little Nutritional Value | 1      |
| 30901     | Coffee essences                                                 | -9                 | Foods of Little Nutritional Value | 1      |
| 31001     | Tea and coffee from takeaway                                    | -9                 | Foods of Little Nutritional Value | 1      |
| 31401     | Mineral or spring waters                                        | -9                 | Foods of Little Nutritional Value | 1      |
| 33401     | Salt                                                            | -9                 | Foods of Little Nutritional Value | 1      |
| 250101    | Coffee, black including espresso                                | -9                 | Foods of Little Nutritional Value | 1      |
| 250102    | Coffee, white including cappuccino, latte                       | -9                 | Foods of Little Nutritional Value | 1      |
| 250103    | Coffee, black or white not specified                            | -9                 | Foods of Little Nutritional Value | 1      |
| 250104    | Tea, white (including black or white not specified)             | -9                 | Foods of Little Nutritional Value | 1      |
| 250105    | Tea, black including Chinese tea, herbal tea, fruit tea         | -9                 | Foods of Little Nutritional Value | 1      |
| 260201    | Mineral water                                                   | -9                 | Foods of Little Nutritional Value | 1      |
| 14807     | Imitation cream                                                 | -8                 | Unclassified Foods                | 1      |
| 29001     | Invalid foods, slimming foods and sports foods                  | -8                 | Unclassified Foods                | 1      |
| 29101     | Infant cereal foods                                             | -8                 | Unclassified Foods                | 1      |
| 29919     | Other cereal foods - frozen and not frozen                      | -8                 | Unclassified Foods                | 1      |
| 30101     | Other cereals                                                   | -8                 | Unclassified Foods                | 1      |
| 31501     | Baby foods                                                      | -8                 | Unclassified Foods                | 1      |
| 32201     | Meals on wheels - items not specified                           | -8                 | Unclassified Foods                | 1      |
| 32801     | Stock cubes and meat and yeast extracts                         | -8                 | Unclassified Foods                | 1      |
| 33901     | Soya and novel protein foods                                    | -8                 | Unclassified Foods                | 1      |
| 35202     | Chewing gum                                                     | -8                 | Unclassified Foods                | 1      |
| 240501    | Commercial baby food in a jar or can                            | -8                 | Unclassified Foods                | 1      |
| 240601    | Yorkshire puddings and dumplings                                | -8                 | Unclassified Foods                | 1      |
| 240701    | Unspecified meal e.g. 'meal', 'school meal' or 'meal at work'   | -8                 | Unclassified Foods                | 1      |
| 280104    | Chewing gum and bubble gum                                      | -8                 | Unclassified Foods                | 1      |
| 310201    | Popcorn                                                         | -8                 | Unclassified Foods                | 1      |
| 310301    | Other savoury snacks (including hors d'oeuvres)                 | -8                 | Unclassified Foods                | 1      |
| 38102     | Beers                                                           | 1                  | Alcoholic Drinks                  | 1      |
| 38202     | Lagers and continental beers                                    | 1                  | Alcoholic Drinks                  | 1      |
| 38302     | Ciders and perry                                                | 1                  | Alcoholic Drinks                  | 1      |
| 38402     | Champagne, sparkling wines and wine with mixer                  | 1                  | Alcoholic Drinks                  | 1      |
| 38403     | Table wine                                                      | 1                  | Alcoholic Drinks                  | 1      |
| 38501     | Spirits with mixer                                              | 1                  | Alcoholic Drinks                  | 0.15   |
| 38601     | Fortified wines                                                 | 1                  | Alcoholic Drinks                  | 1      |
| 38701     | Spirits                                                         | 1                  | Alcoholic Drinks                  | 1      |
| 38801     | Liqueurs and cocktails                                          | 1                  | Alcoholic Drinks                  | 1      |
| 38901     | Alcopops                                                        | 1                  | Alcoholic Drinks                  | 0.15   |
| 270101    | Spirits                                                         | 1                  | Alcoholic Drinks                  | 1      |
| 270102    | Liqueurs                                                        | 1                  | Alcoholic Drinks                  | 1      |
| 270103    | Cocktails                                                       | 1                  | Alcoholic Drinks                  | 1      |
| 270104    | Spirits or liqueurs with mixer e.g. gin & tonic, Bacardi & coke | 1                  | Alcoholic Drinks                  | 0.15   |



## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                                                             |   |                              |      |
|--------|-------------------------------------------------------------------------------------------------------------|---|------------------------------|------|
| 270201 | Wine (not sparkling) including unspecified 'wine'                                                           | 1 | Alcoholic Drinks             | 1    |
| 270202 | Sparkling wines (e.g. Champagne) and wine with mixer (e.g. Bucks Fizz)                                      | 1 | Alcoholic Drinks             | 1    |
| 270203 | Fortified wine e.g. sherry, port, vermouth                                                                  | 1 | Alcoholic Drinks             | 1    |
| 270204 | Cider or perry - half pint or bottle                                                                        | 1 | Alcoholic Drinks             | 1    |
| 270205 | Cider or perry - pint or can or size not specified                                                          | 1 | Alcoholic Drinks             | 1    |
| 270206 | Alcoholic soft drinks (alcopops), and ready-mixed bottled drinks                                            | 1 | Alcoholic Drinks             | 0.15 |
| 270301 | Bitter - half pint or bottle                                                                                | 1 | Alcoholic Drinks             | 1    |
| 270302 | Bitter - pint or can or size not specified                                                                  | 1 | Alcoholic Drinks             | 1    |
| 270303 | Lager or other beers including unspecified 'beer' - half pint or bottle                                     | 1 | Alcoholic Drinks             | 1    |
| 270304 | Lager or other beers including unspecified 'beer' - pint can or size not specified                          | 1 | Alcoholic Drinks             | 1    |
| 270401 | Round of drinks, alcohol not otherwise specified                                                            | 1 | Alcoholic Drinks             | 1    |
| 5502   | Bacon and ham joints, uncooked                                                                              | 2 | Bacon and Ham                | 1    |
| 5505   | Bacon and ham rashers, uncooked                                                                             | 2 | Bacon and Ham                | 1    |
| 5801   | Ham and bacon                                                                                               | 2 | Bacon and Ham                | 1    |
| 110106 | Bacon                                                                                                       | 2 | Bacon and Ham                | 1    |
| 110107 | Gammon or ham                                                                                               | 2 | Bacon and Ham                | 1    |
| 13802  | Other margarine                                                                                             | 3 | Block Margarine              | 1    |
| 25102  | White bread, standard, unsliced                                                                             | 4 | Bread and Rolls              | 1    |
| 25202  | White bread, standard, sliced                                                                               | 4 | Bread and Rolls              | 1    |
| 25701  | White bread, premium, sliced and unsliced                                                                   | 4 | Bread and Rolls              | 1    |
| 25801  | White bread, soft grain, sliced and unsliced                                                                | 4 | Bread and Rolls              | 1    |
| 25901  | Brown bread, sliced and unsliced                                                                            | 4 | Bread and Rolls              | 1    |
| 26001  | Wholemeal and granary bread, sliced and unsliced                                                            | 4 | Bread and Rolls              | 1    |
| 26302  | Rolls - white, brown or wholemeal                                                                           | 4 | Bread and Rolls              | 1    |
| 26304  | Vienna and French bread                                                                                     | 4 | Bread and Rolls              | 1    |
| 26305  | Starch reduced bread and rolls                                                                              | 4 | Bread and Rolls              | 1    |
| 220101 | White bread, with or without butter or margarine (toasted or untoasted)                                     | 4 | Bread and Rolls              | 1    |
| 220102 | Brown or wholemeal bread, with or without butter or margarine (toasted or untoasted)                        | 4 | Bread and Rolls              | 1    |
| 220103 | White rolls, baguettes etc. without butter or margarine (or butter or margarine not specified)              | 4 | Bread and Rolls              | 1    |
| 220104 | Brown or wholemeal rolls, baguettes etc. without butter or margarine (or butter or margarine not specified) | 4 | Bread and Rolls              | 1    |
| 220108 | Muffins, crumpets                                                                                           | 4 | Bread and Rolls              | 1    |
| 220110 | Other bread, rolls, toast, unspecified 'bread' etc.                                                         | 4 | Bread and Rolls              | 1    |
| 8501   | Burgers - frozen or not frozen                                                                              | 5 | Burgers and Kebabs           | 1    |
| 9502   | Takeaway burger and bun                                                                                     | 5 | Burgers and Kebabs           | 1    |
| 9503   | Takeaway kebabs                                                                                             | 5 | Burgers and Kebabs           | 1    |
| 110301 | Small or single burgers                                                                                     | 5 | Burgers and Kebabs           | 1    |
| 110302 | Large or double burgers                                                                                     | 5 | Burgers and Kebabs           | 1    |
| 110401 | Kebabs - all types including chicken                                                                        | 5 | Burgers and Kebabs           | 1    |
| 13501  | Butter                                                                                                      | 6 | Butter                       | 1    |
| 27001  | Cakes and pastries, not frozen                                                                              | 7 | Cakes, Pastries and Puddings | 1    |
| 27002  | Takeaway pastries                                                                                           | 7 | Cakes, Pastries and Puddings | 1    |
| 28601  | Puddings                                                                                                    | 7 | Cakes, Pastries and Puddings | 1    |
| 29402  | Cakes and pastries - frozen                                                                                 | 7 | Cakes, Pastries and Puddings | 1    |
| 29907  | Cake, pudding and dessert mixes                                                                             | 7 | Cakes, Pastries and Puddings | 1    |
| 290201 | Doughnut                                                                                                    | 7 | Cakes, Pastries and Puddings | 1    |
| 290202 | Cream pastries e.g. chocolate éclairs, profiteroles                                                         | 7 | Cakes, Pastries and Puddings | 1    |

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                                                         |    |                                |   |
|--------|---------------------------------------------------------------------------------------------------------|----|--------------------------------|---|
| 290203 | Cream sponge or gateau (not chocolate) e.g. Victoria sandwich                                           | 7  | Cakes, Pastries and Puddings   | 1 |
| 290204 | Rich chocolate cake or chocolate gateau e.g. Death by Chocolate                                         | 7  | Cakes, Pastries and Puddings   | 1 |
| 290205 | Fruit and other pies or pastries                                                                        | 7  | Cakes, Pastries and Puddings   | 1 |
| 290206 | Fruit cake                                                                                              | 7  | Cakes, Pastries and Puddings   | 1 |
| 290207 | Other sponge cakes or desserts (not cream cakes)                                                        | 7  | Cakes, Pastries and Puddings   | 1 |
| 290209 | Meringue desserts including pavlova                                                                     | 7  | Cakes, Pastries and Puddings   | 1 |
| 290210 | Cheesecake                                                                                              | 7  | Cakes, Pastries and Puddings   | 1 |
| 290214 | Other cakes and desserts, unspecified 'cake' or 'dessert'                                               | 7  | Cakes, Pastries and Puddings   | 1 |
| 35001  | Chocolate bars - solid                                                                                  | 8  | Chocolate Confectionery        | 1 |
| 35101  | Chocolate bars - filled                                                                                 | 8  | Chocolate Confectionery        | 1 |
| 280101 | Solid, unfilled chocolate bars and sweets and unspecified 'chocolate'                                   | 8  | Chocolate Confectionery        | 1 |
| 280102 | Filled chocolate-coated bars and sweets e.g. Mars, Snickers, Minstrels                                  | 8  | Chocolate Confectionery        | 1 |
| 280103 | Single chocolate (after dinner)                                                                         | 8  | Chocolate Confectionery        | 1 |
| 13901  | Lard, cooking fat                                                                                       | 9  | Cooking Fat                    | 1 |
| 14805  | Suet and dripping                                                                                       | 9  | Cooking Fat                    | 1 |
| 14304  | Olive Oil                                                                                               | 10 | Cooking Oil                    | 1 |
| 14305  | Other vegetable and salad oils                                                                          | 10 | Cooking Oil                    | 1 |
| 1701   | Cream                                                                                                   | 11 | Cream                          | 1 |
| 240403 | Cream - single, double, sour etc.                                                                       | 11 | Cream                          | 1 |
| 20002  | Crisps and potato snacks                                                                                | 12 | Crisps and Savoury Snacks      | 1 |
| 29909  | Cereal snacks                                                                                           | 12 | Crisps and Savoury Snacks      | 1 |
| 29916  | Takeaway crisps, savoury snacks, popcorn, poppadums, prawn crackers                                     | 12 | Crisps and Savoury Snacks      | 1 |
| 310102 | Potato crisps or snacks including unspecified 'crisps', prawn crackers                                  | 12 | Crisps and Savoury Snacks      | 1 |
| 310103 | Cornsnacks, based on maize                                                                              | 12 | Crisps and Savoury Snacks      | 1 |
| 310104 | Wheat based savoury snack                                                                               | 12 | Crisps and Savoury Snacks      | 1 |
| 100101 | Meat or fish based curry with sauce                                                                     | 13 | Eating Out Main Meal Component | 1 |
| 100102 | Meat or fish based curry without sauce                                                                  | 13 | Eating Out Main Meal Component | 1 |
| 100103 | Vegetable or fruit based curry                                                                          | 13 | Eating Out Main Meal Component | 1 |
| 100104 | Dhal and dhal dishes                                                                                    | 13 | Eating Out Main Meal Component | 1 |
| 100108 | Indian buffet or shared meal or unspecified Indian meal                                                 | 13 | Eating Out Main Meal Component | 1 |
| 100201 | Chinese or Thai meat or fish based dishes excluding curry                                               | 13 | Eating Out Main Meal Component | 1 |
| 100202 | Chop suey and fu yung dishes                                                                            | 13 | Eating Out Main Meal Component | 1 |
| 100203 | Chinese or Thai vegetable based main course dishes excluding curry                                      | 13 | Eating Out Main Meal Component | 1 |
| 100204 | Chinese or Thai curry                                                                                   | 13 | Eating Out Main Meal Component | 1 |
| 100207 | Chinese or Thai buffet or shared meal or unspecified Chinese or Thai meal                               | 13 | Eating Out Main Meal Component | 1 |
| 100301 | All other ethnic meals                                                                                  | 13 | Eating Out Main Meal Component | 1 |
| 110502 | Meat pies (potato topped e.g. shepherd's pie)                                                           | 13 | Eating Out Main Meal Component | 1 |
| 110601 | Meat and vegetable stews, casseroles or hotpots                                                         | 13 | Eating Out Main Meal Component | 1 |
| 110602 | Chicken or turkey stews, casseroles or hotpots                                                          | 13 | Eating Out Main Meal Component | 1 |
| 110603 | Meat lasagne, cannelloni, moussaka and other meat-based oven baked dishes                               | 13 | Eating Out Main Meal Component | 1 |
| 120603 | Fish based pie or other dish e.g. paella, kedgeree, tuna pasta bake                                     | 13 | Eating Out Main Meal Component | 1 |
| 150601 | Veggie burger, bean burger, veggie sausage, nut roast                                                   | 13 | Eating Out Main Meal Component | 1 |
| 150602 | Vegetable lasagne, vegetable cannelloni, vegetable moussaka and other oven baked vegetable based dishes | 13 | Eating Out Main Meal Component | 1 |
| 150604 | Vegetable based stews and casseroles and vegetable based pies                                           | 13 | Eating Out Main Meal Component | 1 |
| 160301 | Meat salad e.g. beef, lamb salads                                                                       | 13 | Eating Out Main Meal Component | 1 |
| 160302 | Chicken or turkey salad                                                                                 | 13 | Eating Out Main Meal Component | 1 |
| 160303 | Fish salad e.g. tuna, salmon salads                                                                     | 13 | Eating Out Main Meal Component | 1 |

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                                           |    |                                |   |
|--------|-------------------------------------------------------------------------------------------|----|--------------------------------|---|
| 160401 | Cheese salad including ploughmans                                                         | 13 | Eating Out Main Meal Component | 1 |
| 160402 | Egg salad                                                                                 | 13 | Eating Out Main Meal Component | 1 |
| 160601 | Salad buffet or buffet meal where items not specified                                     | 13 | Eating Out Main Meal Component | 1 |
| 170105 | Noodles with meat, vegetables etc.                                                        | 13 | Eating Out Main Meal Component | 1 |
| 100105 | Samosas                                                                                   | 14 | Eating Out Side Dish           | 1 |
| 100106 | Other Indian dishes                                                                       | 14 | Eating Out Side Dish           | 1 |
| 100205 | Spring rolls                                                                              | 14 | Eating Out Side Dish           | 1 |
| 100206 | Other Chinese or Thai dishes                                                              | 14 | Eating Out Side Dish           | 1 |
| 130303 | Other egg dishes e.g. egg mayonnaise                                                      | 14 | Eating Out Side Dish           | 1 |
| 150503 | Vegetables in batter or breadcrumbs and deep fried vegetables e.g. onion rings            | 14 | Eating Out Side Dish           | 1 |
| 150504 | Onion and other vegetable bhajis and pakora                                               | 14 | Eating Out Side Dish           | 1 |
| 150603 | Stuffed vegetables (e.g. stuffed pepper) and vegetable based starter                      | 14 | Eating Out Side Dish           | 1 |
| 160201 | Vegetable or fruit and nut salad - with dressing                                          | 14 | Eating Out Side Dish           | 1 |
| 160501 | Other salads e.g. Greek, Florida, Russian                                                 | 14 | Eating Out Side Dish           | 1 |
| 12901  | Eggs                                                                                      | 15 | Eggs                           | 1 |
| 130301 | Eggs - boiled or poached                                                                  | 15 | Eggs                           | 1 |
| 130302 | Eggs - scrambled, fried, omelettes or unspecified 'egg'                                   | 15 | Eggs                           | 1 |
| 26401  | Flour                                                                                     | 16 | Flour                          | 1 |
| 21001  | Fresh oranges                                                                             | 17 | Fruit                          | 1 |
| 21401  | Other fresh citrus fruits                                                                 | 17 | Fruit                          | 1 |
| 21701  | Fresh apples                                                                              | 17 | Fruit                          | 1 |
| 21801  | Fresh pears                                                                               | 17 | Fruit                          | 1 |
| 22101  | Fresh stone fruit                                                                         | 17 | Fruit                          | 1 |
| 22201  | Fresh grapes                                                                              | 17 | Fruit                          | 1 |
| 22701  | Other fresh soft fruit                                                                    | 17 | Fruit                          | 1 |
| 22801  | Fresh bananas                                                                             | 17 | Fruit                          | 1 |
| 22901  | Fresh melons                                                                              | 17 | Fruit                          | 1 |
| 23101  | Other fresh fruit                                                                         | 17 | Fruit                          | 1 |
| 23301  | Tinned peaches, pears and pineapples                                                      | 17 | Fruit                          | 1 |
| 23601  | All other tinned or bottled fruit                                                         | 17 | Fruit                          | 1 |
| 24001  | Dried fruit                                                                               | 17 | Fruit                          | 1 |
| 24101  | Frozen strawberries, apple slices, peach halves, oranges and other frozen fruits          | 17 | Fruit                          | 1 |
| 200101 | All citrus fruit, fresh e.g. orange, grapefruit                                           | 17 | Fruit                          | 1 |
| 200102 | Banana, fresh                                                                             | 17 | Fruit                          | 1 |
| 200103 | Apples, fresh                                                                             | 17 | Fruit                          | 1 |
| 200104 | Pears, fresh                                                                              | 17 | Fruit                          | 1 |
| 200105 | Stone fruit, fresh e.g. apricot, plum, peach, cherry, avocado                             | 17 | Fruit                          | 1 |
| 200106 | Grapes, fresh                                                                             | 17 | Fruit                          | 1 |
| 200107 | Soft fruit or berries, fresh e.g. strawberries, blackberries - without cream or ice cream | 17 | Fruit                          | 1 |
| 200108 | Melon, fresh                                                                              | 17 | Fruit                          | 1 |
| 200109 | Pineapple, fresh                                                                          | 17 | Fruit                          | 1 |
| 200110 | Fresh fruit salad - without cream or ice cream                                            | 17 | Fruit                          | 1 |
| 200111 | Other fresh fruit (kiwi, passion) and unspecified 'fruit'                                 | 17 | Fruit                          | 1 |
| 200112 | Free school fruit                                                                         | 17 | Fruit                          | 1 |
| 200201 | Dried fruit e.g. sultanas, raisins                                                        | 17 | Fruit                          | 1 |
| 200301 | Tinned, stewed, baked or processed fruit - without cream or ice cream                     | 17 | Fruit                          | 1 |
| 240301 | Fruit filling e.g. peaches for pancakes                                                   | 17 | Fruit                          | 1 |

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                                            |    |                                           |   |
|--------|--------------------------------------------------------------------------------------------|----|-------------------------------------------|---|
| 19603  | Vegetable juices e.g. tomato juice, carrot juice                                           | 18 | Fruit (and veg) juice                     | 1 |
| 24801  | Pure fruit juices                                                                          | 18 | Fruit (and veg) juice                     | 1 |
| 260204 | Pure fruit juices                                                                          | 18 | Fruit (and veg) juice                     | 1 |
| 260205 | Vegetable juices e.g. tomato juice, carrot juice                                           | 18 | Fruit (and veg) juice                     | 1 |
| 2201   | Hard cheese - Cheddar type                                                                 | 19 | Full Fat Cheese                           | 1 |
| 2202   | Hard cheese - Other UK or foreign equivalent                                               | 19 | Full Fat Cheese                           | 1 |
| 130103 | Cheddar, blue or other hard cheese and unspecified 'cheese'                                | 19 | Full Fat Cheese                           | 1 |
| 1603   | Dairy desserts - not frozen                                                                | 20 | Ice Cream and Dairy Desserts              | 1 |
| 33203  | Ice cream tub or block                                                                     | 20 | Ice Cream and Dairy Desserts              | 1 |
| 33302  | Ice cream cornets, choc-ices, lollies with ice cream                                       | 20 | Ice Cream and Dairy Desserts              | 1 |
| 33303  | Ice lollies, sorbet, frozen mousse, frozen yoghurt                                         | 20 | Ice Cream and Dairy Desserts              | 1 |
| 33304  | Takeaway ice cream, ice cream products, milkshakes                                         | 20 | Ice Cream and Dairy Desserts              | 1 |
| 290101 | Ice cream in a cone, cornet or wafer and ice cream desserts                                | 20 | Ice Cream and Dairy Desserts              | 1 |
| 290103 | Ice cream scoop or tub including ice cream served with dessert                             | 20 | Ice Cream and Dairy Desserts              | 1 |
| 290211 | Fool, trifle and mousse desserts                                                           | 20 | Ice Cream and Dairy Desserts              | 1 |
| 15101  | Jams and fruit curds                                                                       | 21 | Jam, marmalade, honey and sweet spreads   | 1 |
| 15201  | Marmalade                                                                                  | 21 | Jam, marmalade, honey and sweet spreads   | 1 |
| 15301  | Syrup, treacle                                                                             | 21 | Jam, marmalade, honey and sweet spreads   | 1 |
| 15401  | Honey                                                                                      | 21 | Jam, marmalade, honey and sweet spreads   | 1 |
| 32303  | Other spreads and dressings                                                                | 21 | Jam, marmalade, honey and sweet spreads   | 1 |
| 240106 | Sweet sauce e.g. syrup, treacle, chocolate sauce                                           | 21 | Jam, marmalade, honey and sweet spreads   | 1 |
| 240107 | Fruit or vegetable based condiments                                                        | 21 | Jam, marmalade, honey and sweet spreads   | 1 |
| 240402 | Jam, marmalade and honey                                                                   | 21 | Jam, marmalade, honey and sweet spreads   | 1 |
| 32901  | Jelly squares or crystals                                                                  | 22 | Jelly, Ice Lollies and Sorbets            | 1 |
| 290104 | Iced lollies and sorbets                                                                   | 22 | Jelly, Ice Lollies and Sorbets            | 1 |
| 290212 | Jelly                                                                                      | 22 | Jelly, Ice Lollies and Sorbets            | 1 |
| 2205   | Cottage cheese                                                                             | 23 | Low Fat Cheese                            | 1 |
| 130101 | Cottage cheese including with pineapple                                                    | 23 | Low Fat Cheese                            | 1 |
| 28205  | Other breakfast cereals                                                                    | 24 | Low fibre and lower NMES Breakfast Cereal | 1 |
| 28204  | Sweetened breakfast cereals                                                                | 25 | Low fibre or high NMES Breakfast Cereal   | 1 |
| 190103 | Sweetened breakfast cereals e.g. Frosties, Sugar Puffs                                     | 25 | Low fibre or high NMES Breakfast Cereal   | 1 |
| 190105 | Other breakfast cereals and unspecified 'cereal' e.g. Cornflakes, Rice Krispies, Special K | 25 | Low fibre or high NMES Breakfast Cereal   | 1 |
| 8302   | Meat pies - ready to eat                                                                   | 26 | Meat Filled Pastry                        | 1 |
| 8303   | Sausage rolls - ready to eat                                                               | 26 | Meat Filled Pastry                        | 1 |
| 8401   | Meat pies, pasties and puddings - frozen or not frozen                                     | 26 | Meat Filled Pastry                        | 1 |
| 9501   | Takeaway meat pies and pasties                                                             | 26 | Meat Filled Pastry                        | 1 |
| 110501 | Meat pies (pastry topped) and pasties                                                      | 26 | Meat Filled Pastry                        | 1 |
| 110503 | Sausage roll (pastry)                                                                      | 26 | Meat Filled Pastry                        | 1 |
| 2203   | Hard cheese - Edam or other foreign                                                        | 27 | Medium Fat Cheese                         | 1 |
| 2206   | Soft natural cheese                                                                        | 27 | Medium Fat Cheese                         | 1 |
| 2301   | Processed cheese                                                                           | 27 | Medium Fat Cheese                         | 1 |
| 130102 | Soft, continental or processed cheese e.g. brie                                            | 27 | Medium Fat Cheese                         | 1 |
| 31201  | Cocoa and chocolate drinks                                                                 | 28 | Milk Drinks                               | 1 |
| 31301  | Malt drinks and chocolate versions of malted drinks                                        | 28 | Milk Drinks                               | 1 |
| 250106 | Hot chocolate or cocoa, with milk or water                                                 | 28 | Milk Drinks                               | 1 |
| 28502  | Canned or fresh carton custard                                                             | 29 | Milk Puddings                             | 1 |

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                             |    |                         |   |
|--------|-----------------------------------------------------------------------------|----|-------------------------|---|
| 28503  | All canned milk puddings                                                    | 29 | Milk Puddings           | 1 |
| 240404 | Custard                                                                     | 29 | Milk Puddings           | 1 |
| 290208 | Custard desserts or sweet soufflé                                           | 29 | Milk Puddings           | 1 |
| 290213 | Milk and rice puddings including tapioca, semolina                          | 29 | Milk Puddings           | 1 |
| 29915  | Quiches and flans - frozen and not frozen                                   | 30 | Non Meat Savoury Pastry | 1 |
| 130104 | Quiche and cheese pies or pasties                                           | 30 | Non Meat Savoury Pastry | 1 |
| 24502  | Nuts & edible seeds                                                         | 31 | Nuts                    | 1 |
| 310101 | Nuts, nut products and seeds                                                | 31 | Nuts                    | 1 |
| 26303  | Malt bread and fruit loaves                                                 | 32 | Other Baked Goods       | 1 |
| 26308  | Other breads                                                                | 32 | Other Baked Goods       | 1 |
| 26311  | Takeaway breads                                                             | 32 | Other Baked Goods       | 1 |
| 26701  | Buns, scones and teacakes                                                   | 32 | Other Baked Goods       | 1 |
| 100107 | Indian breads                                                               | 32 | Other Baked Goods       | 1 |
| 220105 | Garlic bread                                                                | 32 | Other Baked Goods       | 1 |
| 220106 | Croissant                                                                   | 32 | Other Baked Goods       | 1 |
| 220107 | Continental breads e.g. pitta, ciabatta, focaccia                           | 32 | Other Baked Goods       | 1 |
| 220109 | Fried bread, including croutons                                             | 32 | Other Baked Goods       | 1 |
| 290301 | Waffles and pancakes                                                        | 32 | Other Baked Goods       | 1 |
| 290401 | Teacakes, scones, currant buns, iced buns                                   | 32 | Other Baked Goods       | 1 |
| 6201   | Corned beef - canned or sliced                                              | 33 | Other processed meat    | 1 |
| 6601   | Other cooked meat                                                           | 33 | Other processed meat    | 1 |
| 7102   | Other canned meat and canned meat products                                  | 33 | Other processed meat    | 1 |
| 8902   | Other convenience meat products - frozen or not frozen                      | 33 | Other processed meat    | 1 |
| 9301   | Pate                                                                        | 33 | Other processed meat    | 1 |
| 9403   | Meat pastes and spreads                                                     | 33 | Other processed meat    | 1 |
| 9506   | Takeaway miscellaneous meats                                                | 33 | Other processed meat    | 1 |
| 110701 | All pates                                                                   | 33 | Other processed meat    | 1 |
| 110801 | Other meat products or dishes                                               | 33 | Other processed meat    | 1 |
| 28702  | Dried rice                                                                  | 34 | Pasta, Rice and Noodles | 1 |
| 28703  | Cooked rice                                                                 | 34 | Pasta, Rice and Noodles | 1 |
| 28704  | Takeaway rice                                                               | 34 | Pasta, Rice and Noodles | 1 |
| 29501  | Canned pasta                                                                | 34 | Pasta, Rice and Noodles | 1 |
| 29502  | Dried and fresh pasta                                                       | 34 | Pasta, Rice and Noodles | 1 |
| 29503  | Takeaway pasta and noodles                                                  | 34 | Pasta, Rice and Noodles | 1 |
| 160202 | Pasta, rice, mixed bean or cereal-based salads - with dressing              | 34 | Pasta, Rice and Noodles | 1 |
| 170101 | Fried rice and risotto                                                      | 34 | Pasta, Rice and Noodles | 1 |
| 170102 | All cooked rice excluding fried rice e.g. boiled, pilau, savoury            | 34 | Pasta, Rice and Noodles | 1 |
| 170103 | Pasta - not filled and plain noodles (including pot noodle) - without sauce | 34 | Pasta, Rice and Noodles | 1 |
| 170104 | Pasta - filled e.g. ravioli, tortellini - without sauce                     | 34 | Pasta, Rice and Noodles | 1 |
| 24503  | Peanut butter                                                               | 35 | Peanut Butter           | 1 |
| 29601  | Pizzas - frozen and not frozen                                              | 36 | Pizza                   | 1 |
| 29602  | Takeaway pizza                                                              | 36 | Pizza                   | 1 |
| 130201 | Pizza - cheese and tomato, vegetable or unspecified 'pizza'                 | 36 | Pizza                   | 1 |
| 130202 | Pizza - meat, fish or poultry                                               | 36 | Pizza                   | 1 |
| 15501  | Potatoes - bought Jan-Aug, previous year's crop                             | 37 | Potatoes                | 1 |
| 15502  | Potatoes - bought Jan-Aug, this year's crop                                 | 37 | Potatoes                | 1 |
| 15503  | Potatoes - bought Sep-Dec, current crop or new imported                     | 37 | Potatoes                | 1 |
| 15504  | Fresh potatoes not specified elsewhere                                      | 37 | Potatoes                | 1 |

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                                                |    |                            |   |
|--------|------------------------------------------------------------------------------------------------|----|----------------------------|---|
| 15505  | Fresh new potatoes                                                                             | 37 | Potatoes                   | 1 |
| 15506  | Fresh baking potatoes                                                                          | 37 | Potatoes                   | 1 |
| 19901  | Canned potatoes                                                                                | 37 | Potatoes                   | 1 |
| 140103 | Potatoes - boiled or unspecified 'potato'                                                      | 37 | Potatoes                   | 1 |
| 140104 | Potatoes - mashed                                                                              | 37 | Potatoes                   | 1 |
| 140105 | Potatoes - roast                                                                               | 37 | Potatoes                   | 1 |
| 140106 | Sautéed potatoes, potato croquettes, hash browns etc.                                          | 37 | Potatoes                   | 1 |
| 140107 | Baked or jacket potatoes - without filling                                                     | 37 | Potatoes                   | 1 |
| 140108 | Other potato dishes (e.g. wedges, potato salad) including unspecified 'potato dish'            | 37 | Potatoes                   | 1 |
| 5903   | Cooked chicken and turkey                                                                      | 38 | Poultry                    | 1 |
| 7401   | Chicken - whole or part                                                                        | 38 | Poultry                    | 1 |
| 7703   | Turkey - whole or part                                                                         | 38 | Poultry                    | 1 |
| 7704   | Poultry other than chicken or turkey                                                           | 38 | Poultry                    | 1 |
| 110201 | Chicken or turkey with sauce or gravy                                                          | 38 | Poultry                    | 1 |
| 110202 | Chicken or turkey in breadcrumbs or batter                                                     | 38 | Poultry                    | 1 |
| 110203 | Duck with sauce or gravy                                                                       | 38 | Poultry                    | 1 |
| 11801  | Takeaway fish                                                                                  | 39 | Processed Fish             | 1 |
| 12001  | Other tinned or bottled fish                                                                   | 39 | Processed Fish             | 1 |
| 12304  | Takeaway fish products                                                                         | 39 | Processed Fish             | 1 |
| 120601 | Fish, processed, in breadcrumbs (fish fingers, fish cakes, scampi) - without sauce or dressing | 39 | Processed Fish             | 1 |
| 120602 | Fish burgers (in bun)                                                                          | 39 | Processed Fish             | 1 |
| 240304 | Fish based filling e.g. tuna mayonnaise                                                        | 39 | Processed Fish             | 1 |
| 19702  | Chips - frozen or not frozen                                                                   | 40 | Processed Potatoes         | 1 |
| 19703  | Takeaway chips                                                                                 | 40 | Processed Potatoes         | 1 |
| 19801  | Instant potato                                                                                 | 40 | Processed Potatoes         | 1 |
| 20101  | Other potato products - frozen or not frozen                                                   | 40 | Processed Potatoes         | 1 |
| 140101 | Chips and French fries - from fast food outlet e.g. McDonalds                                  | 40 | Processed Potatoes         | 1 |
| 140102 | Chips - served with meal e.g. from restaurant or chip shop                                     | 40 | Processed Potatoes         | 1 |
| 5904   | Takeaway chicken                                                                               | 41 | Processed Poultry          | 1 |
| 110303 | Chicken burger                                                                                 | 41 | Processed Poultry          | 1 |
| 8901   | Complete meat-based ready meals - frozen or not frozen                                         | 42 | Ready Meals                | 1 |
| 12103  | Ready meals and other fish products - frozen or not frozen                                     | 42 | Ready Meals                | 1 |
| 20601  | Ready meals and other vegetable products - frozen or not frozen                                | 42 | Ready Meals                | 1 |
| 14802  | Reduced fat spreads                                                                            | 43 | Reduced and Low Fat Spread | 1 |
| 14803  | Low fat spreads                                                                                | 43 | Reduced and Low Fat Spread | 1 |
| 26309  | Sandwiches                                                                                     | 44 | Sandwiches                 | 1 |
| 26310  | Sandwiches from takeaway                                                                       | 44 | Sandwiches                 | 1 |
| 230101 | Meat based sandwich on white bread or roll                                                     | 44 | Sandwiches                 | 1 |
| 230102 | Meat based sandwich on brown bread or roll                                                     | 44 | Sandwiches                 | 1 |
| 230103 | Meat based sandwich bread not specified                                                        | 44 | Sandwiches                 | 1 |
| 230104 | Chicken or turkey based sandwich on white bread or roll                                        | 44 | Sandwiches                 | 1 |
| 230105 | Chicken or turkey based sandwich on brown bread or roll                                        | 44 | Sandwiches                 | 1 |
| 230106 | Chicken or turkey based sandwich bread not specified                                           | 44 | Sandwiches                 | 1 |
| 230107 | Bacon and egg based sandwich on white bread or roll including Bacon and Egg McMuffin           | 44 | Sandwiches                 | 1 |
| 230108 | Bacon and egg based sandwich on brown bread or roll                                            | 44 | Sandwiches                 | 1 |

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                  |    |                              |   |
|--------|------------------------------------------------------------------|----|------------------------------|---|
| 230109 | Bacon and egg based sandwich bread not specified                 | 44 | Sandwiches                   | 1 |
| 230110 | Fish based sandwich on white bread or roll                       | 44 | Sandwiches                   | 1 |
| 230111 | Fish based sandwich on brown bread or roll                       | 44 | Sandwiches                   | 1 |
| 230112 | Fish based sandwich bread not specified                          | 44 | Sandwiches                   | 1 |
| 230201 | Cheese based sandwich on white bread or roll                     | 44 | Sandwiches                   | 1 |
| 230202 | Cheese based sandwich on brown bread or roll                     | 44 | Sandwiches                   | 1 |
| 230203 | Cheese based sandwich bread not specified                        | 44 | Sandwiches                   | 1 |
| 230204 | Egg based sandwich on white bread or roll including Egg McMuffin | 44 | Sandwiches                   | 1 |
| 230205 | Egg based sandwich on brown bread or roll                        | 44 | Sandwiches                   | 1 |
| 230206 | Egg based sandwich bread not specified                           | 44 | Sandwiches                   | 1 |
| 230207 | Vegetarian based sandwich on white bread or roll                 | 44 | Sandwiches                   | 1 |
| 230208 | Vegetarian based sandwich on brown bread or roll                 | 44 | Sandwiches                   | 1 |
| 230209 | Vegetarian based sandwich bread not specified                    | 44 | Sandwiches                   | 1 |
| 230210 | Sweet-filled sandwich                                            | 44 | Sandwiches                   | 1 |
| 230211 | Unspecified sandwiches or rolls                                  | 44 | Sandwiches                   | 1 |
| 7901   | Sausages, uncooked - pork                                        | 45 | Sausages                     | 1 |
| 8001   | Sausages, uncooked - beef etc.                                   | 45 | Sausages                     | 1 |
| 9302   | Delicatessen type sausages                                       | 45 | Sausages                     | 1 |
| 9504   | Takeaway sausages and saveloys                                   | 45 | Sausages                     | 1 |
| 110402 | Plain sausages e.g. beef, pork                                   | 45 | Sausages                     | 1 |
| 110403 | Other sausages                                                   | 45 | Sausages                     | 1 |
| 110404 | Hot dogs and sausage sandwiches                                  | 45 | Sausages                     | 1 |
| 27101  | Crispbread                                                       | 46 | Savoury Biscuits             | 1 |
| 27403  | Cream crackers and other unsweetened biscuits                    | 46 | Savoury Biscuits             | 1 |
| 300104 | Savoury biscuits                                                 | 46 | Savoury Biscuits             | 1 |
| 32302  | Salad dressings                                                  | 47 | Savoury Sauces and Dressings | 1 |
| 32702  | Pickles                                                          | 47 | Savoury Sauces and Dressings | 1 |
| 32703  | Sauces                                                           | 47 | Savoury Sauces and Dressings | 1 |
| 32704  | Takeaway sauces and mayonnaise                                   | 47 | Savoury Sauces and Dressings | 1 |
| 240101 | Cheese or cream based sauce e.g. carbonara, cauliflower cheese   | 47 | Savoury Sauces and Dressings | 1 |
| 240102 | Meat-based sauce e.g. bolognese, chilli con carne                | 47 | Savoury Sauces and Dressings | 1 |
| 240103 | Fish or seafood based sauce                                      | 47 | Savoury Sauces and Dressings | 1 |
| 240104 | Tomato based sauce containing vegetables including ratatouille   | 47 | Savoury Sauces and Dressings | 1 |
| 240105 | Other savoury sauce or unspecified 'sauce'                       | 47 | Savoury Sauces and Dressings | 1 |
| 240108 | Other condiments or sauces                                       | 47 | Savoury Sauces and Dressings | 1 |
| 240201 | Salad dressings and dips                                         | 47 | Savoury Sauces and Dressings | 1 |
| 240202 | Mayonnaise                                                       | 47 | Savoury Sauces and Dressings | 1 |
| 240203 | Coleslaw                                                         | 47 | Savoury Sauces and Dressings | 1 |
| 1503   | Semi-skimmed milk                                                | 48 | Semi-skimmed Milk            | 1 |
| 1502   | Fully skimmed milk                                               | 49 | Skimmed Milk                 | 1 |
| 13801  | Soft margarine                                                   | 50 | Soft Margarine               | 1 |
| 31801  | Soups - canned or cartons                                        | 51 | Soup                         | 1 |
| 31901  | Soups - dehydrated or powdered                                   | 51 | Soup                         | 1 |
| 32001  | Soups - from takeaway                                            | 51 | Soup                         | 1 |
| 180101 | Meat & fish soups                                                | 51 | Soup                         | 1 |
| 180102 | Vegetable based soups                                            | 51 | Soup                         | 1 |
| 180103 | Chinese soups, consommé (meat, fish or veg)                      | 51 | Soup                         | 1 |
| 180104 | Other soups including unspecified 'soup'                         | 51 | Soup                         | 1 |

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                                                             |    |                              |      |
|--------|-------------------------------------------------------------------------------------------------------------|----|------------------------------|------|
| 13501  | Butter                                                                                                      | 52 | Total Spreading Fats         | 1    |
| 13801  | Soft margarine                                                                                              | 52 | Total Spreading Fats         | 1    |
| 14802  | Reduced fat spreads                                                                                         | 52 | Total Spreading Fats         | 1    |
| 14803  | Low fat spreads                                                                                             | 52 | Total Spreading Fats         | 1    |
| 240401 | Butter and margarine                                                                                        | 52 | Spreading Fats               | 1    |
| 15001  | Sugar                                                                                                       | 53 | Sugar                        | 1    |
| 240405 | Sugar (as an addition to tea, coffee etc.)                                                                  | 53 | Sugar                        | 1    |
| 35301  | Mints                                                                                                       | 54 | Sugar Confectionery          | 1    |
| 35302  | Boiled sweets                                                                                               | 54 | Sugar Confectionery          | 1    |
| 35401  | Fudges, toffees, caramels                                                                                   | 54 | Sugar Confectionery          | 1    |
| 35501  | Takeaway confectionery                                                                                      | 54 | Sugar Confectionery          | 1    |
| 280105 | Mints e.g. Polo, Extra Strong                                                                               | 54 | Sugar Confectionery          | 1    |
| 280106 | Boiled sweets, jellies and unspecified 'sweets' e.g. fruit gums                                             | 54 | Sugar Confectionery          | 1    |
| 280107 | Uncoated toffee or fudge, uncoated e.g. Toffos, chocolate eclairs, caramels                                 | 54 | Sugar Confectionery          | 1    |
| 280108 | Pick 'n' mix, nougat, liquorice and other sweets                                                            | 54 | Sugar Confectionery          | 1    |
| 34001  | Soft drinks, concentrated, not low calorie                                                                  | 55 | Sugar Containing Soft Drinks | 1    |
| 34101  | Soft drinks, not concentrated, not low calorie                                                              | 55 | Sugar Containing Soft Drinks | 1    |
| 38501  | Spirits with mixer                                                                                          | 55 | Sugar Containing Soft Drinks | 0.85 |
| 38901  | Alcopops                                                                                                    | 55 | Sugar Containing Soft Drinks | 0.85 |
| 260203 | Soft drink (incl carbonates & still) - not low calorie (including drinks where calorie content unspecified) | 55 | Sugar Containing Soft Drinks | 1    |
| 260206 | Soft drink where pure juice or juice drink not specified                                                    | 55 | Sugar Containing Soft Drinks | 1    |
| 270104 | Spirits or liqueurs with mixer e.g. gin & tonic, Bacardi & coke                                             | 55 | Sugar Containing Soft Drinks | 0.85 |
| 270206 | Alcoholic soft drinks (alcopops), and ready-mixed bottled drinks                                            | 55 | Sugar Containing Soft Drinks | 0.85 |
| 34301  | Soft drinks, concentrated, low calorie                                                                      | 56 | Sugar Free Soft Drinks       | 1    |
| 34401  | Soft drinks, not concentrated, low calorie                                                                  | 56 | Sugar Free Soft Drinks       | 1    |
| 260202 | Soft drink (incl carbonates and still) - low calorie                                                        | 56 | Sugar Free Soft Drinks       | 1    |
| 27402  | Sweet biscuits (not chocolate) and cereal bars                                                              | 57 | Sweet Biscuits               | 1    |
| 27702  | Chocolate biscuits                                                                                          | 57 | Sweet Biscuits               | 1    |
| 300101 | Fully-coated chocolate biscuits or wafers                                                                   | 57 | Sweet Biscuits               | 1    |
| 300102 | Sweet biscuits including half-coated chocolate biscuits                                                     | 57 | Sweet Biscuits               | 1    |
| 300103 | Cereal bars and cereal based cakes                                                                          | 57 | Sweet Biscuits               | 1    |
| 9505   | Takeaway meat based meals                                                                                   | 58 | Takeaway Main Meal Component | 1    |
| 12305  | Takeaway fish based meals                                                                                   | 58 | Takeaway Main Meal Component | 1    |
| 20604  | All vegetable takeaway products                                                                             | 58 | Takeaway Main Meal Component | 1    |
| 28101  | Oatmeal and oat products                                                                                    | 59 | Total Breakfast Cereal       | 1    |
| 28202  | Muesli                                                                                                      | 59 | Total Breakfast Cereal       | 1    |
| 28203  | High fibre breakfast cereals                                                                                | 59 | Total Breakfast Cereal       | 1    |
| 28204  | Sweetened breakfast cereals                                                                                 | 59 | Total Breakfast Cereal       | 1    |
| 28205  | Other breakfast cereals                                                                                     | 59 | Total Breakfast Cereal       | 1    |
| 190101 | Muesli and oat crunch cereals                                                                               | 59 | Total Breakfast Cereal       | 1    |
| 190102 | Other high fibre breakfast cereals e.g. Allbran, Weetabix                                                   | 59 | Total Breakfast Cereal       | 1    |
| 190103 | Sweetened breakfast cereals e.g. Frosties, Sugar Puffs                                                      | 59 | Total Breakfast Cereal       | 1    |
| 190104 | Hot breakfast cereals e.g. porridge, Ready Brek                                                             | 59 | Total Breakfast Cereal       | 1    |
| 190105 | Other breakfast cereals and unspecified 'cereal' e.g. Cornflakes, Rice Krispies, Special K                  | 59 | Total Breakfast Cereal       | 1    |
| 2201   | Hard cheese - Cheddar type                                                                                  | 60 | Total Cheese                 | 1    |



## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                   |    |                            |   |
|--------|-------------------------------------------------------------------|----|----------------------------|---|
| 2202   | Hard cheese - Other UK or foreign equivalent                      | 60 | Total Cheese               | 1 |
| 2203   | Hard cheese - Edam or other foreign                               | 60 | Total Cheese               | 1 |
| 2205   | Cottage cheese                                                    | 60 | Total Cheese               | 1 |
| 2206   | Soft natural cheese                                               | 60 | Total Cheese               | 1 |
| 2301   | Processed cheese                                                  | 60 | Total Cheese               | 1 |
| 130101 | Cottage cheese including with pineapple                           | 60 | Total Cheese               | 2 |
| 130105 | Other cheese dishes e.g. Welsh rarebit, cheese and biscuits       | 60 | Total Cheese               | 1 |
| 240303 | Cheese filling including cheddar cheese, cottage cheese           | 60 | Total Cheese               | 1 |
| 16201  | Fresh cabbages                                                    | 61 | Total Fruit and Vegetables | 1 |
| 16301  | Fresh Brussels sprouts                                            | 61 | Total Fruit and Vegetables | 1 |
| 16401  | Fresh cauliflower                                                 | 61 | Total Fruit and Vegetables | 1 |
| 16701  | Lettuce and leafy salads                                          | 61 | Total Fruit and Vegetables | 1 |
| 16702  | Prepared lettuce salads                                           | 61 | Total Fruit and Vegetables | 1 |
| 16801  | Fresh peas                                                        | 61 | Total Fruit and Vegetables | 1 |
| 16901  | Fresh beans                                                       | 61 | Total Fruit and Vegetables | 1 |
| 17101  | Other fresh green vegetables                                      | 61 | Total Fruit and Vegetables | 1 |
| 17201  | Fresh carrots                                                     | 61 | Total Fruit and Vegetables | 1 |
| 17301  | Fresh turnips and swede                                           | 61 | Total Fruit and Vegetables | 1 |
| 17401  | Other fresh root vegetables                                       | 61 | Total Fruit and Vegetables | 1 |
| 17501  | Fresh onions, leeks and shallots                                  | 61 | Total Fruit and Vegetables | 1 |
| 17601  | Fresh cucumbers                                                   | 61 | Total Fruit and Vegetables | 1 |
| 17701  | Fresh mushrooms                                                   | 61 | Total Fruit and Vegetables | 1 |
| 17801  | Fresh tomatoes                                                    | 61 | Total Fruit and Vegetables | 1 |
| 18301  | Fresh vegetable stewpack, stirfry pack etc.                       | 61 | Total Fruit and Vegetables | 1 |
| 18302  | Fresh stem vegetables                                             | 61 | Total Fruit and Vegetables | 1 |
| 18303  | Fresh marrow, courgettes, aubergine, pumpkin and other vegetables | 61 | Total Fruit and Vegetables | 1 |
| 18304  | Fresh herbs                                                       | 61 | Total Fruit and Vegetables | 1 |
| 18401  | Tomatoes, canned or bottled                                       | 61 | Total Fruit and Vegetables | 1 |
| 18501  | Peas, canned                                                      | 61 | Total Fruit and Vegetables | 1 |
| 18802  | Baked beans in sauce                                              | 61 | Total Fruit and Vegetables | 1 |
| 18803  | Other canned beans and pulses                                     | 61 | Total Fruit and Vegetables | 1 |
| 19101  | Other canned vegetables                                           | 61 | Total Fruit and Vegetables | 1 |
| 19201  | Dried pulses, other than air-dried                                | 61 | Total Fruit and Vegetables | 1 |
| 19501  | Air-dried vegetables                                              | 61 | Total Fruit and Vegetables | 1 |
| 19602  | Tomato puree and vegetable purees                                 | 61 | Total Fruit and Vegetables | 1 |
| 19603  | Vegetable juices e.g. tomato juice, carrot juice                  | 61 | Total Fruit and Vegetables | 1 |
| 20301  | Peas, frozen                                                      | 61 | Total Fruit and Vegetables | 1 |
| 20401  | Beans, frozen                                                     | 61 | Total Fruit and Vegetables | 1 |
| 20801  | Other frozen vegetables                                           | 61 | Total Fruit and Vegetables | 1 |
| 21001  | Fresh oranges                                                     | 61 | Total Fruit and Vegetables | 1 |
| 21401  | Other fresh citrus fruits                                         | 61 | Total Fruit and Vegetables | 1 |
| 21701  | Fresh apples                                                      | 61 | Total Fruit and Vegetables | 1 |
| 21801  | Fresh pears                                                       | 61 | Total Fruit and Vegetables | 1 |
| 22101  | Fresh stone fruit                                                 | 61 | Total Fruit and Vegetables | 1 |
| 22201  | Fresh grapes                                                      | 61 | Total Fruit and Vegetables | 1 |
| 22701  | Other fresh soft fruit                                            | 61 | Total Fruit and Vegetables | 1 |
| 22801  | Fresh bananas                                                     | 61 | Total Fruit and Vegetables | 1 |
| 22901  | Fresh melons                                                      | 61 | Total Fruit and Vegetables | 1 |

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                                           |    |                            |   |
|--------|-------------------------------------------------------------------------------------------|----|----------------------------|---|
| 23101  | Other fresh fruit                                                                         | 61 | Total Fruit and Vegetables | 1 |
| 23301  | Tinned peaches, pears and pineapples                                                      | 61 | Total Fruit and Vegetables | 1 |
| 23601  | All other tinned or bottled fruit                                                         | 61 | Total Fruit and Vegetables | 1 |
| 24001  | Dried fruit                                                                               | 61 | Total Fruit and Vegetables | 1 |
| 24101  | Frozen strawberries, apple slices, peach halves, oranges and other frozen fruits          | 61 | Total Fruit and Vegetables | 1 |
| 24801  | Pure fruit juices                                                                         | 61 | Total Fruit and Vegetables | 1 |
| 150101 | Lettuce and cress                                                                         | 61 | Total Fruit and Vegetables | 1 |
| 150102 | Other green vegetables e.g. spinach, cabbage, sprouts                                     | 61 | Total Fruit and Vegetables | 1 |
| 150201 | Peppers - raw or cooked                                                                   | 61 | Total Fruit and Vegetables | 1 |
| 150202 | Courgettes, marrow, aubergine, pumpkin, plantain, cucumbers                               | 61 | Total Fruit and Vegetables | 1 |
| 150203 | Peas and sweetcorn                                                                        | 61 | Total Fruit and Vegetables | 1 |
| 150204 | Baked beans and other beans (not green beans) and pulses                                  | 61 | Total Fruit and Vegetables | 1 |
| 150205 | Tomato - fresh or raw                                                                     | 61 | Total Fruit and Vegetables | 1 |
| 150206 | Tomato - cooked or processed                                                              | 61 | Total Fruit and Vegetables | 1 |
| 150301 | Carrots                                                                                   | 61 | Total Fruit and Vegetables | 1 |
| 150302 | Onions - raw, cooked or unspecified 'onions'                                              | 61 | Total Fruit and Vegetables | 1 |
| 150303 | Onions - fried                                                                            | 61 | Total Fruit and Vegetables | 1 |
| 150304 | Other root vegetables or tubers e.g. turnip, parsnip, radish, beetroot                    | 61 | Total Fruit and Vegetables | 1 |
| 150401 | Mushrooms - raw or cooked                                                                 | 61 | Total Fruit and Vegetables | 1 |
| 150501 | Mixed vegetables or unspecified 'vegetable'                                               | 61 | Total Fruit and Vegetables | 1 |
| 150502 | Other vegetables e.g. artichoke, asparagus                                                | 61 | Total Fruit and Vegetables | 1 |
| 160101 | Mixed salad, main course - without dressing                                               | 61 | Total Fruit and Vegetables | 1 |
| 160102 | Mixed salad, side dish - without dressing - including unspecified 'salad'                 | 61 | Total Fruit and Vegetables | 1 |
| 160103 | Green salad - without dressing                                                            | 61 | Total Fruit and Vegetables | 1 |
| 200101 | All citrus fruit, fresh e.g. orange, grapefruit                                           | 61 | Total Fruit and Vegetables | 1 |
| 200102 | Banana, fresh                                                                             | 61 | Total Fruit and Vegetables | 1 |
| 200103 | Apples, fresh                                                                             | 61 | Total Fruit and Vegetables | 1 |
| 200104 | Pears, fresh                                                                              | 61 | Total Fruit and Vegetables | 1 |
| 200105 | Stone fruit, fresh e.g. apricot, plum, peach, cherry, avocado                             | 61 | Total Fruit and Vegetables | 1 |
| 200106 | Grapes, fresh                                                                             | 61 | Total Fruit and Vegetables | 1 |
| 200107 | Soft fruit or berries, fresh e.g. strawberries, blackberries - without cream or ice cream | 61 | Total Fruit and Vegetables | 1 |
| 200108 | Melon, fresh                                                                              | 61 | Total Fruit and Vegetables | 1 |
| 200109 | Pineapple, fresh                                                                          | 61 | Total Fruit and Vegetables | 1 |
| 200110 | Fresh fruit salad - without cream or ice cream                                            | 61 | Total Fruit and Vegetables | 1 |
| 200111 | Other fresh fruit (kiwi, passion) and unspecified 'fruit'                                 | 61 | Total Fruit and Vegetables | 1 |
| 200112 | Free school fruit                                                                         | 61 | Total Fruit and Vegetables | 1 |
| 200201 | Dried fruit e.g. sultanas, raisins                                                        | 61 | Total Fruit and Vegetables | 1 |
| 200301 | Tinned, stewed, baked or processed fruit - without cream or ice cream                     | 61 | Total Fruit and Vegetables | 1 |
| 240301 | Fruit filling e.g. peaches for pancakes                                                   | 61 | Total Fruit and Vegetables | 1 |
| 240302 | Vegetable filling                                                                         | 61 | Total Fruit and Vegetables | 1 |
| 260204 | Pure fruit juices                                                                         | 61 | Total Fruit and Vegetables | 1 |
| 260205 | Vegetable juices e.g. tomato juice, carrot juice                                          | 61 | Total Fruit and Vegetables | 1 |
| 402    | UHT whole milk                                                                            | 62 | Total Milk                 | 1 |
| 403    | Sterilised whole milk                                                                     | 62 | Total Milk                 | 1 |
| 404    | Pasteurised or homogenised whole milk                                                     | 62 | Total Milk                 | 1 |
| 601    | Welfare milk                                                                              | 62 | Total Milk                 | 1 |
| 901    | Condensed or evaporated milk                                                              | 62 | Total Milk                 | 1 |

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                        |    |                          |   |
|--------|--------------------------------------------------------|----|--------------------------|---|
| 1102   | Infant or baby milks - ready to drink                  | 62 | Total Milk               | 1 |
| 1103   | Infant or baby milks - dried                           | 62 | Total Milk               | 1 |
| 1201   | Instant dried milk                                     | 62 | Total Milk               | 1 |
| 1502   | Fully skimmed milk                                     | 62 | Total Milk               | 1 |
| 1503   | Semi-skimmed milk                                      | 62 | Total Milk               | 1 |
| 1605   | Dried milk products                                    | 62 | Total Milk               | 1 |
| 1606   | Milk drinks & other milks (replaced 200405 onwards)    | 62 | Total Milk               | 1 |
| 1607   | Milk drinks & other milks                              | 62 | Total Milk               | 1 |
| 1608   | Non-dairy milk substitutes                             | 62 | Total Milk               | 1 |
| 260301 | Milk as a drink                                        | 62 | Total Milk               | 1 |
| 260302 | Milk on cereal                                         | 62 | Total Milk               | 1 |
| 260303 | Milkshake and flavoured milk                           | 62 | Total Milk               | 1 |
| 260304 | Free school milk                                       | 62 | Total Milk               | 1 |
| 5502   | Bacon and ham joints, uncooked                         | 63 | Total Processed Red Meat | 1 |
| 5505   | Bacon and ham rashers, uncooked                        | 63 | Total Processed Red Meat | 1 |
| 5801   | Ham and bacon                                          | 63 | Total Processed Red Meat | 1 |
| 6201   | Corned beef - canned or sliced                         | 63 | Total Processed Red Meat | 1 |
| 6601   | Other cooked meat                                      | 63 | Total Processed Red Meat | 1 |
| 7102   | Other canned meat and canned meat products             | 63 | Total Processed Red Meat | 1 |
| 7901   | Sausages, uncooked - pork                              | 63 | Total Processed Red Meat | 1 |
| 8001   | Sausages, uncooked - beef etc.                         | 63 | Total Processed Red Meat | 1 |
| 8302   | Meat pies - ready to eat                               | 63 | Total Processed Red Meat | 1 |
| 8303   | Sausage rolls - ready to eat                           | 63 | Total Processed Red Meat | 1 |
| 8401   | Meat pies, pasties and puddings - frozen or not frozen | 63 | Total Processed Red Meat | 1 |
| 8501   | Burgers - frozen or not frozen                         | 63 | Total Processed Red Meat | 1 |
| 8902   | Other convenience meat products - frozen or not frozen | 63 | Total Processed Red Meat | 1 |
| 9301   | Pate                                                   | 63 | Total Processed Red Meat | 1 |
| 9302   | Delicatessen type sausages                             | 63 | Total Processed Red Meat | 1 |
| 9403   | Meat pastes and spreads                                | 63 | Total Processed Red Meat | 1 |
| 9501   | Takeaway meat pies and pasties                         | 63 | Total Processed Red Meat | 1 |
| 9502   | Takeaway burger and bun                                | 63 | Total Processed Red Meat | 1 |
| 9503   | Takeaway kebabs                                        | 63 | Total Processed Red Meat | 1 |
| 9504   | Takeaway sausages and saveloys                         | 63 | Total Processed Red Meat | 1 |
| 9506   | Takeaway miscellaneous meats                           | 63 | Total Processed Red Meat | 1 |
| 110106 | Bacon                                                  | 63 | Total Processed Red Meat | 1 |
| 110107 | Gammon or ham                                          | 63 | Total Processed Red Meat | 1 |
| 110301 | Small or single burgers                                | 63 | Total Processed Red Meat | 1 |
| 110302 | Large or double burgers                                | 63 | Total Processed Red Meat | 1 |
| 110401 | Kebabs - all types including chicken                   | 63 | Total Processed Red Meat | 1 |
| 110402 | Plain sausages e.g. beef, pork                         | 63 | Total Processed Red Meat | 1 |
| 110403 | Other sausages                                         | 63 | Total Processed Red Meat | 1 |
| 110404 | Hot dogs and sausage sandwiches                        | 63 | Total Processed Red Meat | 1 |
| 110501 | Meat pies (pastry topped) and pasties                  | 63 | Total Processed Red Meat | 1 |
| 110503 | Sausage roll (pastry)                                  | 63 | Total Processed Red Meat | 1 |
| 110701 | All pates                                              | 63 | Total Processed Red Meat | 1 |
| 110801 | Other meat products or dishes                          | 63 | Total Processed Red Meat | 1 |
| 10201  | White fish, fresh or chilled                           | 64 | Unprocessed Fish         | 1 |
| 10202  | White fish, frozen                                     | 64 | Unprocessed Fish         | 1 |

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                               |    |                      |   |
|--------|-------------------------------------------------------------------------------|----|----------------------|---|
| 10601  | Herrings and other blue fish, fresh or chilled                                | 64 | Unprocessed Fish     | 1 |
| 10602  | Herrings and other blue fish, frozen                                          | 64 | Unprocessed Fish     | 1 |
| 10701  | Salmon, fresh or chilled                                                      | 64 | Unprocessed Fish     | 1 |
| 10702  | Salmon, frozen                                                                | 64 | Unprocessed Fish     | 1 |
| 10801  | Blue fish, dried or salted or smoked                                          | 64 | Unprocessed Fish     | 1 |
| 11401  | White fish, dried or salted or smoked                                         | 64 | Unprocessed Fish     | 1 |
| 11702  | Shellfish, fresh or chilled                                                   | 64 | Unprocessed Fish     | 1 |
| 11703  | Shellfish, frozen                                                             | 64 | Unprocessed Fish     | 1 |
| 11901  | Tinned salmon                                                                 | 64 | Unprocessed Fish     | 1 |
| 120101 | White fish - grilled, steamed, baked or boiled - without sauce                | 64 | Unprocessed Fish     | 1 |
| 120102 | White fish - fried (incl in batter/breadcrumbs) - without sauce               | 64 | Unprocessed Fish     | 1 |
| 120201 | Trout, tuna and salmon only - fresh - without sauce or dressing               | 64 | Unprocessed Fish     | 1 |
| 120202 | Other fatty fish - without sauce or dressing e.g. herring, mackerel, sardines | 64 | Unprocessed Fish     | 1 |
| 120301 | Shellfish - without sauce or dressing e.g. prawns, shrimps, oysters, crab     | 64 | Unprocessed Fish     | 1 |
| 120401 | Kippers and other smoked fish e.g. smoked salmon                              | 64 | Unprocessed Fish     | 1 |
| 120501 | Other fish products and unspecified 'fish' e.g. squid, sushi, crabsticks      | 64 | Unprocessed Fish     | 1 |
| 3102   | Beef joints - on the bone                                                     | 65 | Unprocessed Red Meat | 1 |
| 3103   | Beef joints - boned                                                           | 65 | Unprocessed Red Meat | 1 |
| 3104   | Beef steak - less expensive                                                   | 65 | Unprocessed Red Meat | 1 |
| 3105   | Beef steak - more expensive                                                   | 65 | Unprocessed Red Meat | 1 |
| 3106   | Minced beef                                                                   | 65 | Unprocessed Red Meat | 1 |
| 3107   | All other beef and veal                                                       | 65 | Unprocessed Red Meat | 1 |
| 3601   | Mutton                                                                        | 65 | Unprocessed Red Meat | 1 |
| 3602   | Lamb joints                                                                   | 65 | Unprocessed Red Meat | 1 |
| 3603   | Lamb chops                                                                    | 65 | Unprocessed Red Meat | 1 |
| 3604   | All other lamb                                                                | 65 | Unprocessed Red Meat | 1 |
| 4101   | Pork joints                                                                   | 65 | Unprocessed Red Meat | 1 |
| 4102   | Pork chops                                                                    | 65 | Unprocessed Red Meat | 1 |
| 4103   | Pork fillets and steaks                                                       | 65 | Unprocessed Red Meat | 1 |
| 4104   | All other pork                                                                | 65 | Unprocessed Red Meat | 1 |
| 4603   | Ox liver                                                                      | 65 | Unprocessed Red Meat | 1 |
| 4604   | Lambs liver                                                                   | 65 | Unprocessed Red Meat | 1 |
| 4605   | Pigs liver                                                                    | 65 | Unprocessed Red Meat | 1 |
| 4607   | All other liver                                                               | 65 | Unprocessed Red Meat | 1 |
| 5101   | All offal other than liver                                                    | 65 | Unprocessed Red Meat | 1 |
| 7801   | Other fresh, chilled or frozen meat                                           | 65 | Unprocessed Red Meat | 1 |
| 110101 | Steak - without sauce e.g. braised, sirloin                                   | 65 | Unprocessed Red Meat | 1 |
| 110102 | Roast meat with sauce or gravy                                                | 65 | Unprocessed Red Meat | 1 |
| 110103 | Pork chops with sauce or gravy                                                | 65 | Unprocessed Red Meat | 1 |
| 110104 | Lamb chops with sauce or gravy                                                | 65 | Unprocessed Red Meat | 1 |
| 110105 | Spare ribs                                                                    | 65 | Unprocessed Red Meat | 1 |
| 110108 | All offal including liver, kidney, tongue                                     | 65 | Unprocessed Red Meat | 1 |
| 110204 | Game with sauce or gravy                                                      | 65 | Unprocessed Red Meat | 1 |
| 16201  | Fresh cabbages                                                                | 66 | Vegetables           | 1 |
| 16301  | Fresh Brussels sprouts                                                        | 66 | Vegetables           | 1 |
| 16401  | Fresh cauliflower                                                             | 66 | Vegetables           | 1 |
| 16701  | Lettuce and leafy salads                                                      | 66 | Vegetables           | 1 |
| 16702  | Prepared lettuce salads                                                       | 66 | Vegetables           | 1 |

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                           |    |            |   |
|--------|---------------------------------------------------------------------------|----|------------|---|
| 16801  | Fresh peas                                                                | 66 | Vegetables | 1 |
| 16901  | Fresh beans                                                               | 66 | Vegetables | 1 |
| 17101  | Other fresh green vegetables                                              | 66 | Vegetables | 1 |
| 17201  | Fresh carrots                                                             | 66 | Vegetables | 1 |
| 17301  | Fresh turnips and swede                                                   | 66 | Vegetables | 1 |
| 17401  | Other fresh root vegetables                                               | 66 | Vegetables | 1 |
| 17501  | Fresh onions, leeks and shallots                                          | 66 | Vegetables | 1 |
| 17601  | Fresh cucumbers                                                           | 66 | Vegetables | 1 |
| 17701  | Fresh mushrooms                                                           | 66 | Vegetables | 1 |
| 17801  | Fresh tomatoes                                                            | 66 | Vegetables | 1 |
| 18301  | Fresh vegetable stewpack, stirfry pack etc.                               | 66 | Vegetables | 1 |
| 18302  | Fresh stem vegetables                                                     | 66 | Vegetables | 1 |
| 18303  | Fresh marrow, courgettes, aubergine, pumpkin and other vegetables         | 66 | Vegetables | 1 |
| 18304  | Fresh herbs                                                               | 66 | Vegetables | 1 |
| 18401  | Tomatoes, canned or bottled                                               | 66 | Vegetables | 1 |
| 18501  | Peas, canned                                                              | 66 | Vegetables | 1 |
| 18802  | Baked beans in sauce                                                      | 66 | Vegetables | 1 |
| 18803  | Other canned beans and pulses                                             | 66 | Vegetables | 1 |
| 19101  | Other canned vegetables                                                   | 66 | Vegetables | 1 |
| 19201  | Dried pulses, other than air-dried                                        | 66 | Vegetables | 1 |
| 19501  | Air-dried vegetables                                                      | 66 | Vegetables | 1 |
| 19602  | Tomato puree and vegetable purees                                         | 66 | Vegetables | 1 |
| 20301  | Peas, frozen                                                              | 66 | Vegetables | 1 |
| 20401  | Beans, frozen                                                             | 66 | Vegetables | 1 |
| 20801  | Other frozen vegetables                                                   | 66 | Vegetables | 1 |
| 150101 | Lettuce and cress                                                         | 66 | Vegetables | 1 |
| 150102 | Other green vegetables e.g. spinach, cabbage, sprouts                     | 66 | Vegetables | 1 |
| 150201 | Peppers - raw or cooked                                                   | 66 | Vegetables | 1 |
| 150202 | Courgettes, marrow, aubergine, pumpkin, plantain, cucumbers               | 66 | Vegetables | 1 |
| 150203 | Peas and sweetcorn                                                        | 66 | Vegetables | 1 |
| 150204 | Baked beans and other beans (not green beans) and pulses                  | 66 | Vegetables | 1 |
| 150205 | Tomato - fresh or raw                                                     | 66 | Vegetables | 1 |
| 150206 | Tomato - cooked or processed                                              | 66 | Vegetables | 1 |
| 150301 | Carrots                                                                   | 66 | Vegetables | 1 |
| 150302 | Onions - raw, cooked or unspecified 'onions'                              | 66 | Vegetables | 1 |
| 150303 | Onions - fried                                                            | 66 | Vegetables | 1 |
| 150304 | Other root vegetables or tubers e.g. turnip, parsnip, radish, beetroot    | 66 | Vegetables | 1 |
| 150401 | Mushrooms - raw or cooked                                                 | 66 | Vegetables | 1 |
| 150501 | Mixed vegetables or unspecified 'vegetable'                               | 66 | Vegetables | 1 |
| 150502 | Other vegetables e.g. artichoke, asparagus                                | 66 | Vegetables | 1 |
| 160101 | Mixed salad, main course - without dressing                               | 66 | Vegetables | 1 |
| 160102 | Mixed salad, side dish - without dressing - including unspecified 'salad' | 66 | Vegetables | 1 |
| 160103 | Green salad - without dressing                                            | 66 | Vegetables | 1 |
| 240302 | Vegetable filling                                                         | 66 | Vegetables | 1 |
| 402    | UHT whole milk                                                            | 67 | Whole Milk | 1 |
| 403    | Sterilised whole milk                                                     | 67 | Whole Milk | 1 |
| 404    | Pasteurised or homogenised whole milk                                     | 67 | Whole Milk | 1 |
| 601    | Welfare milk                                                              | 67 | Whole Milk | 1 |

## Appendix 8: Breakdown of Food Groupings by Food Code for Contributing Foods Analysis

|        |                                                                             |    |                                        |   |
|--------|-----------------------------------------------------------------------------|----|----------------------------------------|---|
| 28101  | Oatmeal and oat products                                                    | 68 | Wholegrain/ HF Breakfast Cereal        | 1 |
| 28202  | Muesli                                                                      | 68 | Wholegrain/ HF Breakfast Cereal        | 1 |
| 28203  | High fibre breakfast cereals                                                | 68 | Wholegrain/ HF Breakfast Cereal        | 1 |
| 190101 | Muesli and oat crunch cereals                                               | 68 | Wholegrain/ HF Breakfast Cereal        | 1 |
| 190102 | Other high fibre breakfast cereals e.g. Allbran, Weetabix                   | 68 | Wholegrain/ HF Breakfast Cereal        | 1 |
| 190104 | Hot breakfast cereals e.g. porridge, Ready Brek                             | 68 | Wholegrain/ HF Breakfast Cereal        | 1 |
| 1301   | Yoghurt                                                                     | 69 | Yoghurt and Fromage Frais              | 1 |
| 1302   | Fromage frais                                                               | 69 | Yoghurt and Fromage Frais              | 1 |
| 210101 | Yoghurt and fromage frais                                                   | 69 | Yoghurt and Fromage Frais              | 1 |
| 35001  | Chocolate bars - solid                                                      | 70 | Total Confectionery                    | 1 |
| 35101  | Chocolate bars - filled                                                     | 70 | Total Confectionery                    | 1 |
| 35301  | Mints                                                                       | 70 | Total Confectionery                    | 1 |
| 35302  | Boiled sweets                                                               | 70 | Total Confectionery                    | 1 |
| 35401  | Fudges, toffees, caramels                                                   | 70 | Total Confectionery                    | 1 |
| 35501  | Takeaway confectionery                                                      | 70 | Total Confectionery                    | 1 |
| 280101 | Solid, unfilled chocolate bars and sweets and unspecified 'chocolate'       | 70 | Total Confectionery                    | 1 |
| 280102 | Filled chocolate-coated bars and sweets e.g. Mars, Snickers, Minstrels      | 70 | Total Confectionery                    | 1 |
| 280103 | Single chocolate (after dinner)                                             | 70 | Total Confectionery                    | 1 |
| 280105 | Mints e.g. Polo, Extra Strong                                               | 70 | Total Confectionery                    | 1 |
| 280106 | Boiled sweets, jellies and unspecified 'sweets' e.g. fruit gums             | 70 | Total Confectionery                    | 1 |
| 280107 | Uncoated toffee or fudge, uncoated e.g. Toffos, chocolate éclairs, caramels | 70 | Total Confectionery                    | 1 |
| 280108 | Pick 'n' mix, nougat, liquorice and other sweets                            | 70 | Total Confectionery                    | 1 |
| 27402  | Sweet biscuits (not chocolate) and cereal bars                              | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 27702  | Chocolate biscuits                                                          | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 35001  | Chocolate bars - solid                                                      | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 35101  | Chocolate bars - filled                                                     | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 35301  | Mints                                                                       | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 35302  | Boiled sweets                                                               | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 35401  | Fudges, toffees, caramels                                                   | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 35501  | Takeaway confectionery                                                      | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 280101 | Solid, unfilled chocolate bars and sweets and unspecified 'chocolate'       | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 280102 | Filled chocolate-coated bars and sweets e.g. Mars, Snickers, Minstrels      | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 280103 | Single chocolate (after dinner)                                             | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 280105 | Mints e.g. Polo, Extra Strong                                               | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 280106 | Boiled sweets, jellies and unspecified 'sweets' e.g. fruit gums             | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 280107 | Uncoated toffee or fudge, uncoated e.g. Toffos, chocolate eclairs, caramels | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 280108 | Pick 'n' mix, nougat, liquorice and other sweets                            | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 300101 | Fully-coated chocolate biscuits or wafers                                   | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 300102 | Sweet biscuits including half-coated chocolate biscuits                     | 71 | Total Confectionery and Sweet Biscuits | 1 |
| 300103 | Cereal bars and cereal based cakes                                          | 71 | Total Confectionery and Sweet Biscuits | 1 |

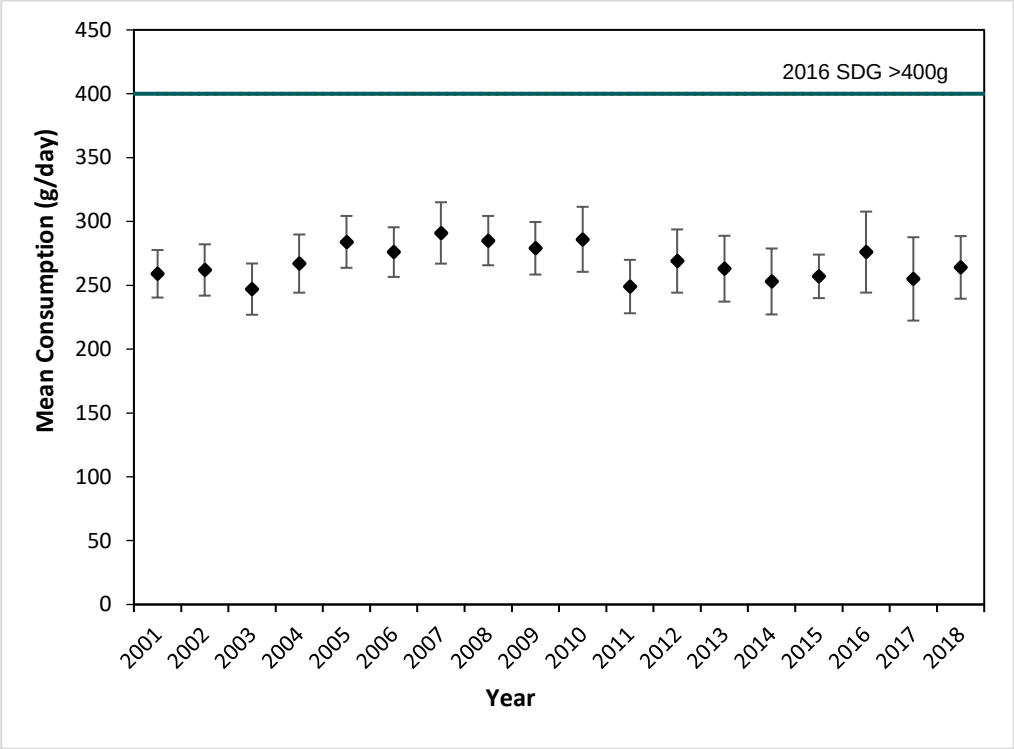
## Appendix 9: Mean Food Consumption and Nutrient Intake Results by Year

Table 14: Mean Consumption<sup>1</sup> of 2016 Scottish Dietary Goal Foods by Year, 2001 to 2018 - EFS / LCFS data (g/person/day with the exception of fish: g/person/week)

| Nutrient <sup>2</sup>               | 2016<br>Scottish<br>Dietary Goal | 2001<br>Mean<br>95% CI | 2010<br>Mean<br>95% CI | 2011<br>Mean<br>95% CI | 2012<br>Mean<br>95% CI | 2013<br>Mean<br>95% CI | 2014<br>Mean<br>95% CI | 2015<br>Mean<br>95% CI | 2016<br>Mean<br>95% CI | 2017<br>Mean<br>95% CI | 2018<br>Mean<br>95% CI | P-value for<br>Linear<br>Association | P-value for<br>Overall<br>Association |
|-------------------------------------|----------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------------------|---------------------------------------|
| Fruit and Vegetables <sup>3,4</sup> | >400g per day                    | 259<br>241, 278        | 286<br>260, 311        | 249<br>228, 270        | 269<br>244, 293        | 263<br>237, 289        | 253<br>228, 279        | 257<br>240, 274        | 276<br>244, 307        | 255<br>222, 288        | 264<br>239, 288        | 0.566                                | 0.090                                 |
| Fruit <sup>3</sup>                  |                                  | 133<br>119, 146        | 150<br>133, 166        | 132<br>118, 145        | 140<br>120, 159        | 134<br>116, 151        | 130<br>115, 145        | 124<br>112, 137        | 141<br>119, 163        | 132<br>113, 151        | 128<br>115, 142        | 0.094                                | 0.006                                 |
| Fruit (and vegetable) juice         |                                  | 44<br>37, 52           | 48<br>39, 56           | 40<br>34, 47           | 45<br>31, 59           | 43<br>33, 53           | 35<br>29, 41           | 32<br>27, 37           | 37<br>28, 46           | 38<br>26, 50           | 28<br>21, 34           | <0.001                               | <0.001                                |
| Vegetables <sup>4</sup>             |                                  | 126<br>118, 135        | 136<br>119, 153        | 117<br>108, 127        | 129<br>120, 139        | 129<br>116, 143        | 123<br>109, 137        | 133<br>126, 140        | 135<br>118, 151        | 123<br>104, 142        | 136<br>120, 151        | 0.299                                | 0.525                                 |
| Oil Rich Fish                       | 140g per week                    | 27<br>23, 31           | 26<br>22, 30           | 35<br>26, 43           | 28<br>23, 32           | 27<br>22, 31           | 28<br>21, 35           | 34<br>28, 39           | 33<br>19, 47           | 31<br>21, 40           | 36<br>25, 47           | 0.707                                | 0.136                                 |
| Red and Processed Meat <sup>5</sup> | ≤70g per day                     | 65<br>60, 69           | 60<br>55, 65           | 62<br>55, 69           | 61<br>57, 66           | 56<br>51, 61           | 55<br>50, 61           | 56<br>52, 61           | 56<br>50, 63           | 54<br>46, 61           | 56<br>50, 61           | <0.001                               | 0.002                                 |
| n Households                        |                                  | 619                    | 464                    | 495                    | 477                    | 410                    | 433                    | 423                    | 186                    | 162                    | 188                    |                                      |                                       |
| n People                            |                                  | 1414                   | 1030                   | 1088                   | 1063                   | 930                    | 974                    | 921                    | 414                    | 334                    | 383                    |                                      |                                       |
| n People Weighted <sup>6</sup>      |                                  | 5015                   | 5109                   | 5117                   | 5111                   | 5233                   | 5260                   | 5186                   | 5249                   | 4982                   | 5324                   |                                      |                                       |

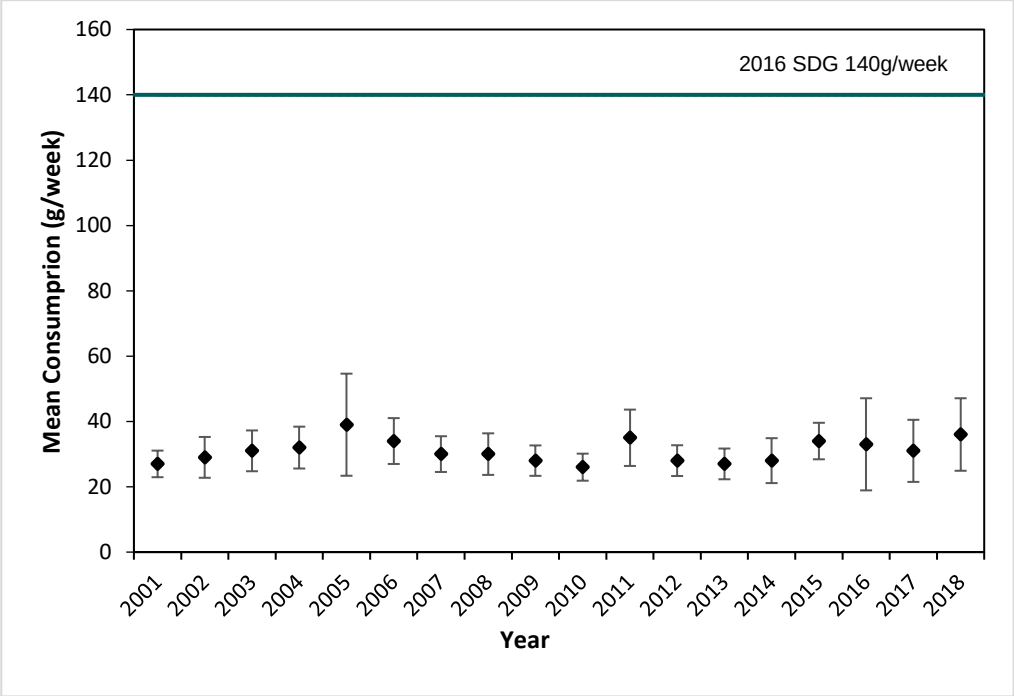
<sup>1</sup>Household and eating out consumption combined; <sup>2</sup>See appendices 1 & 3 for methodology; <sup>3</sup>Fruit includes fruit and vegetable juice; <sup>4</sup>Vegetables include beans and pulses; <sup>5</sup>Meat portion only (includes processed red meat products e.g. sausages, meat pies, burgers, and pate); <sup>6</sup>The results are weighted to the Scottish population - the number provided is approximately 1000<sup>th</sup> of the Scottish population

**Figure 11: Mean [95% CI] Fruit<sup>1</sup> and Vegetables<sup>2</sup> Consumption by Year 2001-2018 compared to the 2016 Scottish Dietary Goal (>400g/day)**



*P (linear association) = 0.566; P (overall association) = 0.090; <sup>1</sup>Fruit includes fruit and vegetable juice; <sup>2</sup>Vegetables includes beans and pulses*

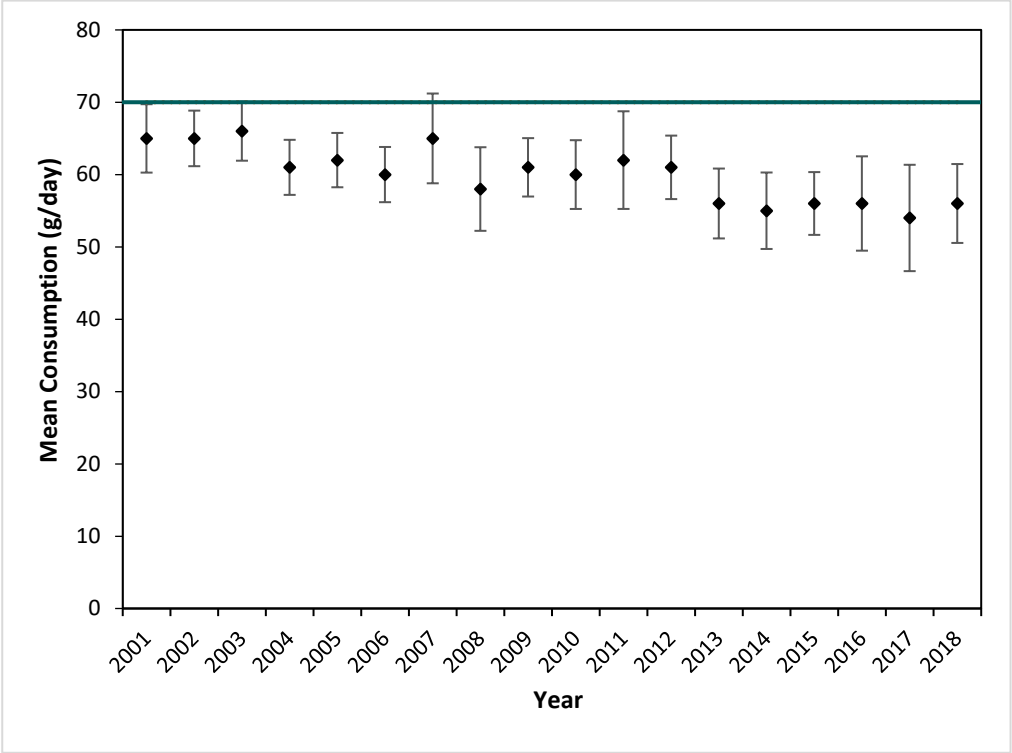
**Figure 12: Mean [95% CI] Oil Rich Fish Consumption by Year 2001-2018 compared to the 2016 Scottish Dietary Goal (140g/week)**



*P (linear association) = 0.707; P (overall association) = 0.136*



**Figure 13: Mean [95% CI] Red and Processed Meat\* Consumption by Year 2001-2018 compared to the 2016 Scottish Dietary Goal ( $\leq 70\text{g/day}$ )**



*P (linear association) <0.001; P (overall association) = 0.002; \*Meat portion only*

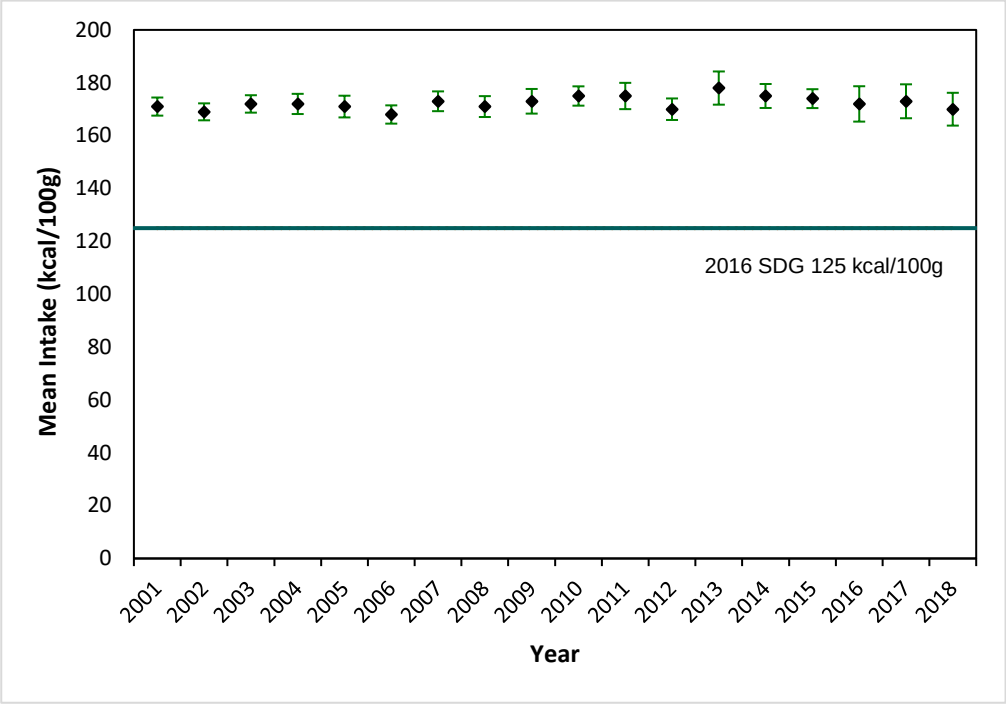
## Appendix 9: Mean Food Consumption and Nutrient Intake Results by Year

**Table 15: Mean Intake<sup>1</sup> of 2016 Scottish Dietary Goal Nutrients by Year, 2001 to 2018 - EFS / LCFS data (units/person/day)**

| Nutrient <sup>2</sup>                         | 2016<br>Scottish<br>Dietary Goal | 2001<br>Mean<br>95% CI | 2010<br>Mean<br>95% CI | 2011<br>Mean<br>95% CI | 2012<br>Mean<br>95% CI | 2013<br>Mean<br>95% CI | 2014<br>Mean<br>95% CI | 2015<br>Mean<br>95% CI | 2016<br>Mean<br>95% CI | 2017<br>Mean<br>95% CI | 2018<br>Mean<br>95% CI | P-value for<br>Linear<br>Association | P-value for<br>Overall<br>Association |
|-----------------------------------------------|----------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------------------|---------------------------------------|
| <b>Total Energy kcal</b>                      |                                  | 2143<br>2072, 2214     | 2129<br>2018, 2239     | 1921<br>1816, 2027     | 1983<br>1897, 2069     | 1978<br>1863, 2093     | 1926<br>1824, 2028     | 1951<br>1846, 2057     | 1914<br>1797, 2031     | 1820<br>1681, 1958     | 1939<br>1827, 2052     | <b>&lt;0.001</b>                     | <b>&lt;0.001</b>                      |
| <b>Total Energy MJ</b>                        |                                  | 9.0<br>8.7, 9.3        | 8.9<br>8.4, 9.4        | 8.0<br>7.6, 8.5        | 8.3<br>7.9, 8.7        | 8.3<br>7.8, 8.8        | 8.1<br>7.6, 8.5        | 8.2<br>7.7, 8.6        | 8.0<br>7.5, 8.5        | 7.6<br>7.0, 8.2        | 8.1<br>7.6, 8.6        | <b>&lt;0.001</b>                     | <b>&lt;0.001</b>                      |
| <b>Energy Density kcal/100g<sup>3</sup></b>   | 125kcal/100g                     | 171<br>168, 175        | 175<br>171, 178        | 175<br>170, 180        | 170<br>166, 174        | 178<br>171, 184        | 175<br>170, 179        | 174<br>170, 177        | 172<br>166, 179        | 173<br>167, 180        | 170<br>164, 177        | 0.148                                | 0.211                                 |
| <b>% Food Energy Fat</b>                      | ≤35%                             | 38.8<br>38.1, 39.6     | 38.7<br>37.8, 39.7     | 39<br>38.4, 39.7       | 39.4<br>38.5, 40.4     | 39.6<br>38.7, 40.4     | 39.5<br>38.5, 40.5     | 38.9<br>38.2, 39.7     | 39.4<br>38.4, 40.4     | 39.1<br>38.0, 40.2     | 40.5<br>39.5, 41.4     | <b>0.002</b>                         | 0.240                                 |
| <b>% Food Energy Saturated Fat</b>            | ≤11%                             | 15.5<br>15.2, 15.8     | 15.0<br>14.5, 15.5     | 15.0<br>14.7, 15.4     | 15.5<br>15.1, 15.9     | 15.4<br>14.9, 15.8     | 15.3<br>14.8, 15.8     | 15.1<br>14.7, 15.5     | 15.7<br>15.2, 16.1     | 14.8<br>14.3, 15.2     | 15.6<br>15.1, 16.1     | 0.103                                | <b>0.008</b>                          |
| <b>% Total Energy Free Sugars<sup>4</sup></b> | ≤5%                              | 14.9<br>14.3, 15.4     | 14.7<br>14.0, 15.3     | 13.5<br>12.7, 14.3     | 13.9<br>13.2, 14.7     | 14.0<br>13.1, 14.9     | 13.6<br>13.0, 14.3     | 13.8<br>12.8, 14.8     | 13.9<br>13.0, 14.9     | 13.9<br>12.9, 14.8     | 12.3<br>11.6, 13.0     | <b>&lt;0.001</b>                     | <b>&lt;0.001</b>                      |
| <b>Fibre<sup>5</sup></b>                      | 30g/day                          | 16.5<br>15.9, 17.1     | 17.2<br>16.1, 18.3     | 15.8<br>14.9, 16.6     | 15.7<br>15.0, 16.5     | 15.9<br>14.9, 16.9     | 15.5<br>14.4, 16.6     | 15.9<br>15.1, 16.7     | 15.7<br>14.3, 17.0     | 15.2<br>13.8, 16.5     | 15.8<br>14.7, 17.0     | <b>0.005</b>                         | 0.299                                 |
| <b>% Total Energy Carbohydrate</b>            |                                  | 45.1<br>44.3, 45.8     | 45.2<br>44.4, 46.0     | 44.8<br>44.1, 45.4     | 44.6<br>43.5, 45.7     | 45.1<br>44.2, 45.9     | 44.6<br>43.5, 45.7     | 44.9<br>43.9, 45.8     | 44.7<br>43.6, 45.7     | 45.1<br>43.8, 46.4     | 43.2<br>42.2, 44.2     | <b>0.007</b>                         | 0.190                                 |
| <b>Food Energy kcal</b>                       |                                  | 2066<br>1998, 2134     | 2056<br>1945, 2167     | 1856<br>1752, 1959     | 1913<br>1828, 1999     | 1919<br>1807, 2030     | 1859<br>1764, 1955     | 1890<br>1785, 1995     | 1850<br>1736, 1963     | 1757<br>1626, 1888     | 1876<br>1771, 1980     | <b>&lt;0.001</b>                     | <b>&lt;0.001</b>                      |
| <b>Food Energy MJ</b>                         |                                  | 8.7<br>8.4, 9.0        | 8.5<br>8.0, 8.9        | 7.8<br>7.4, 8.2        | 8.0<br>7.7, 8.4        | 8.0<br>7.6, 8.5        | 7.8<br>7.4, 8.2        | 7.9<br>7.5, 8.4        | 7.8<br>7.3, 8.2        | 7.4<br>6.8, 7.9        | 7.9<br>7.4, 8.3        | <b>&lt;0.001</b>                     | <b>&lt;0.001</b>                      |
| <i>n Households</i>                           |                                  | 619                    | 464                    | 495                    | 477                    | 410                    | 433                    | 423                    | 186                    | 162                    | 188                    |                                      |                                       |
| <i>n People</i>                               |                                  | 1414                   | 1030                   | 1088                   | 1063                   | 930                    | 974                    | 921                    | 414                    | 334                    | 383                    |                                      |                                       |
| <i>n People Weighted<sup>6</sup></i>          |                                  | 5015                   | 5109                   | 5117                   | 5111                   | 5233                   | 5260                   | 5186                   | 5249                   | 4982                   | 5324                   |                                      |                                       |

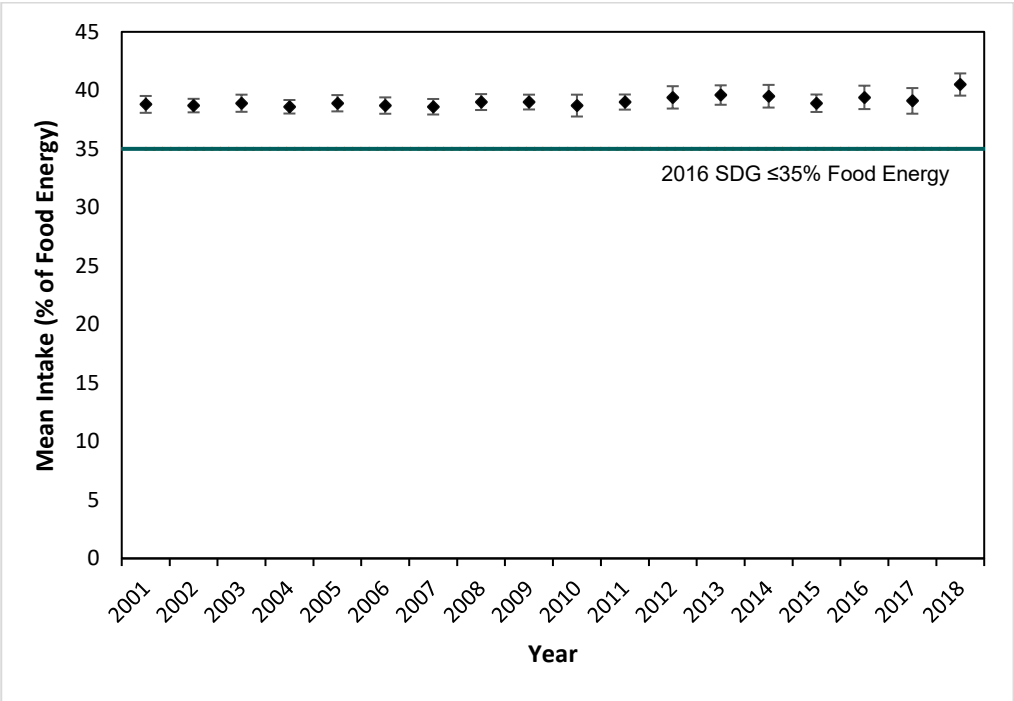
<sup>1</sup>Household and eating out intakes combined; <sup>2</sup>See appendices 1, 3 and 4 for methodology; <sup>3</sup>Calculated from food and milk; <sup>4</sup>Free sugars are sugars added to food or drink and those which are found naturally in honey, syrups, and fruit juices, NMES figures provided as a proxy for free sugars; <sup>5</sup>Fibre as measured by American Association of Analytical Chemists (AOAC) method, calculated from non-starch polysaccharide (NSP) as measured by Englyst method (AOAC fibre is estimated as NSP multiplied by 1.33); <sup>6</sup>The results are weighted to the Scottish population - the number provided is approximately 1000<sup>th</sup> of the Scottish population.

**Figure 14: Mean [95% CI] Energy Density (food and milk) by Year 2001 - 2018 compared to the 2016 Scottish Dietary Goal (125 kcal/100g)**



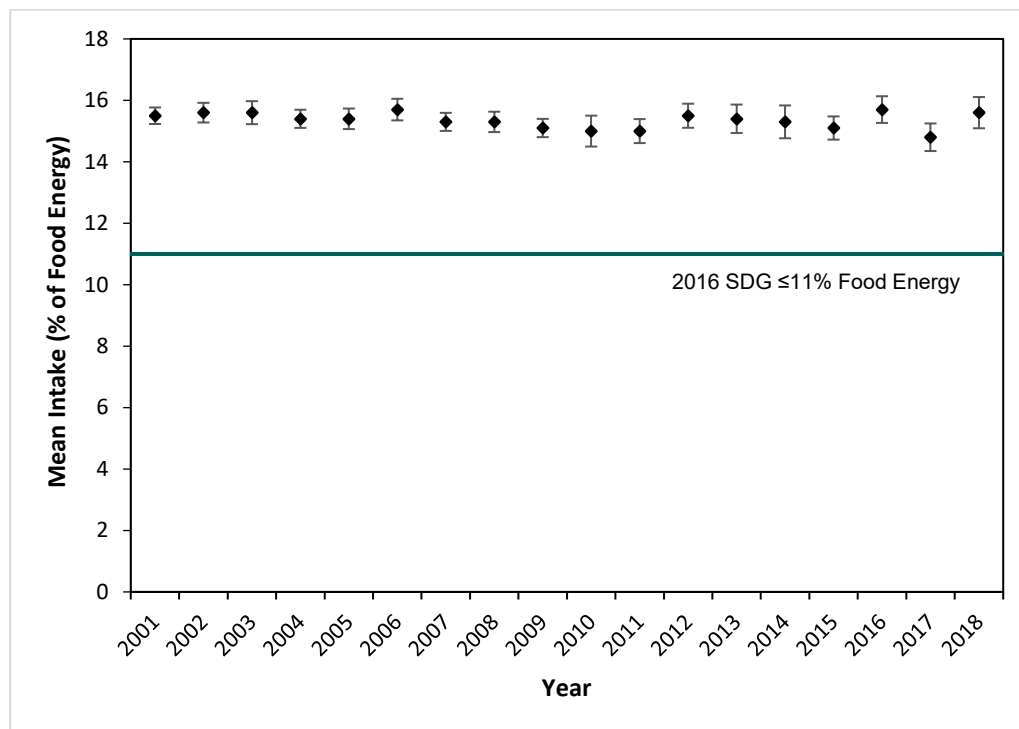
*P* (linear association) = 0.148; *P* (overall association) = 0.211

**Figure 15: Mean [95% CI] Fat Intake by Year 2001 - 2018 compared to the 2016 Scottish Dietary Goal ( $\leq 35\%$  food energy)**



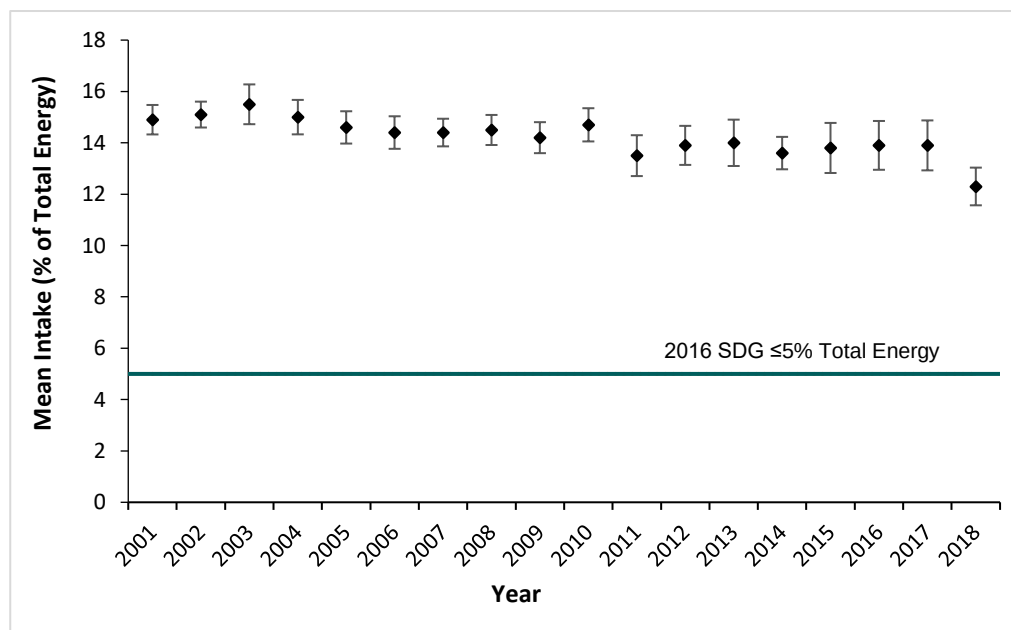
*P* (linear association) = 0.002; *P* (overall association) = 0.240

**Figure 16: Mean [95% CI] Saturated Fat Intake by Year 2001 - 2018 compared to the 2016 Scottish Dietary Goal ( $\leq 11\%$  food energy)**



$P$  (linear association) = 0.103;  $P$  (overall association) = 0.008

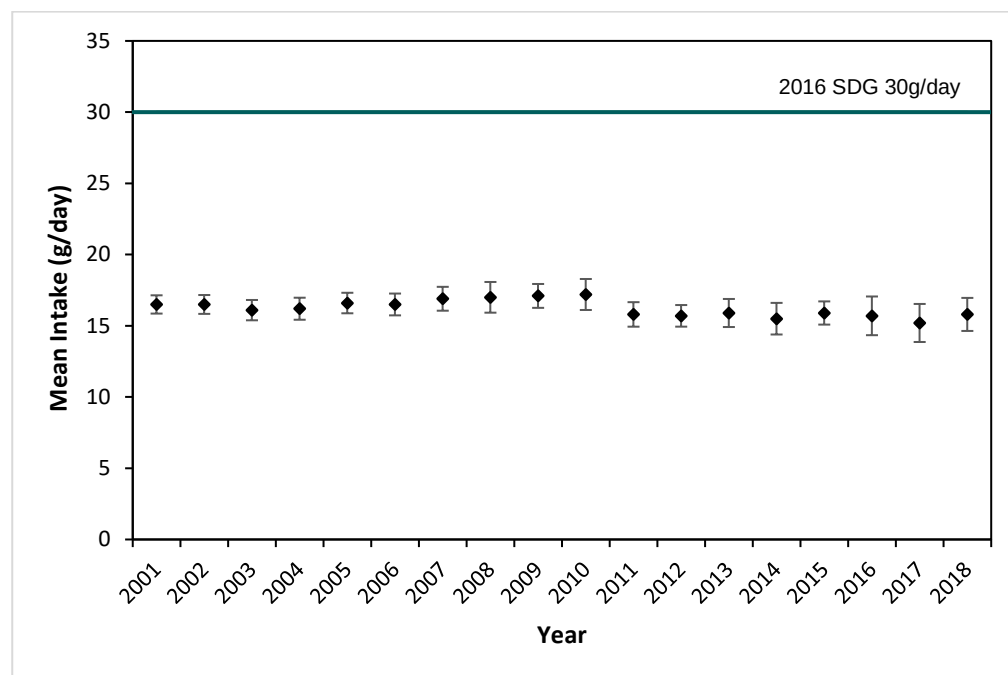
**Figure 17: Mean [95% CI] Free Sugars\* Intake by Year 2001 - 2018 compared to the 2016 Scottish Dietary Goal ( $\leq 5\%$  Total Energy)**



$P$  (linear association) < 0.001;  $P$  (overall association) < 0.001; \*NMES figures provided as a proxy for free sugars

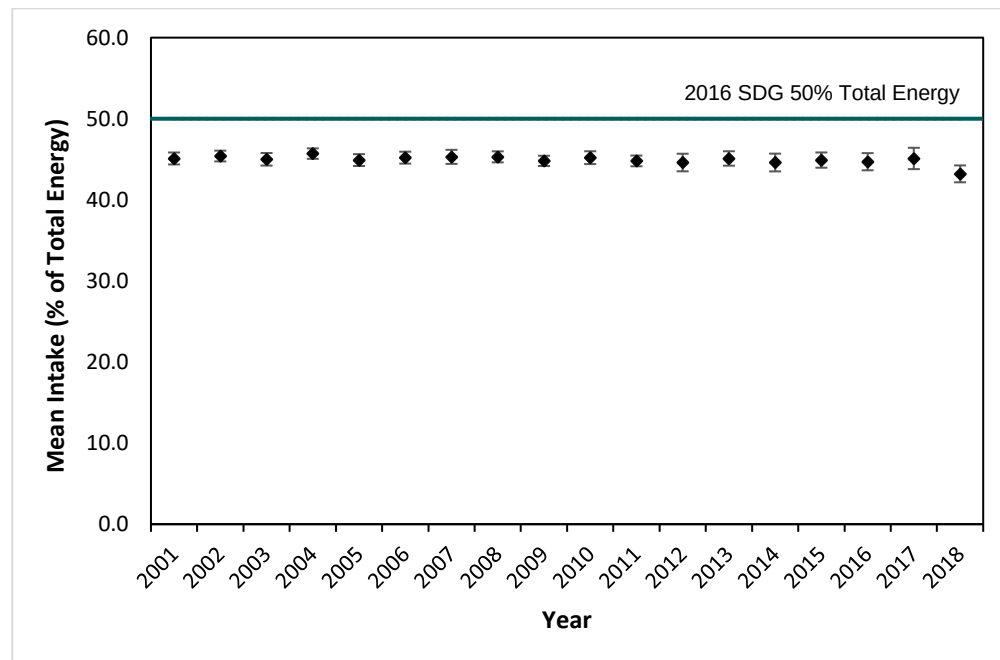
# Appendix 9: Mean Food Consumption and Nutrient Intake Results by Year

**Figure 18: Mean [95% CI] Fibre\* Intake by Year 2001 - 2018 compared to the 2016 Scottish Dietary Goal (30g/day)**



$P$  (linear association) = 0.005;  $P$  (overall association) = 0.299

**Figure 19: Mean [95% CI] Carbohydrates Intake by Year 2001 - 2018 compared to the 2016 Scottish Dietary Goal (50% Total Energy)**



$P$  (linear association) = 0.007;  $P$  (overall association) = 0.190

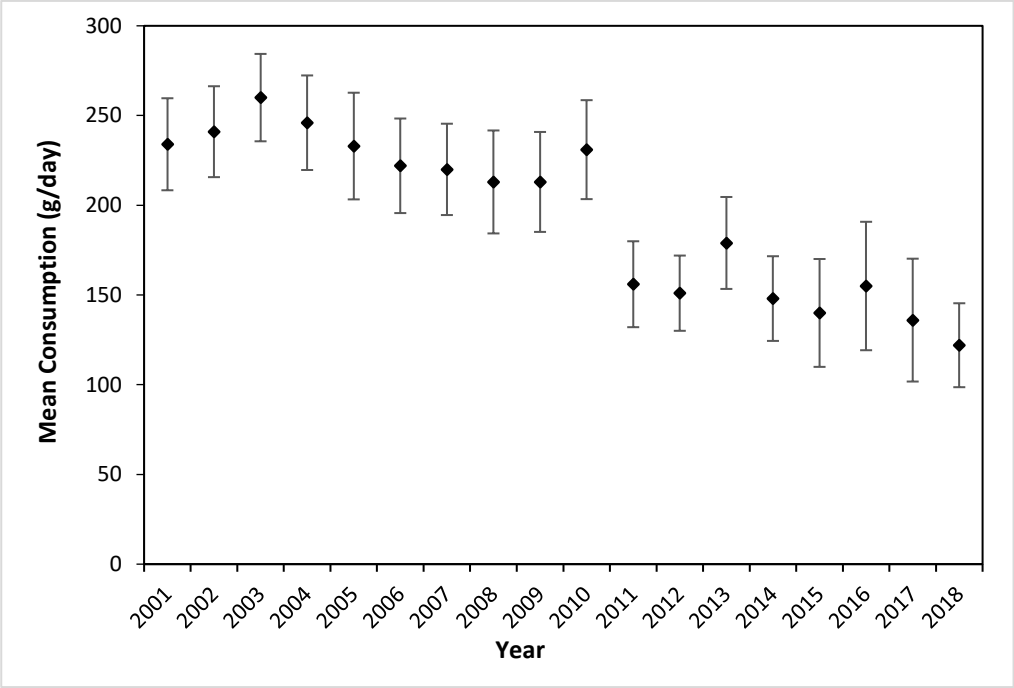
## Appendix 9: Mean Food Consumption and Nutrient Intake Results by Year

**Table 16a: Mean Consumption<sup>1</sup> of Additional Foods and Drinks Indicative of Diet Quality by Year, 2001 to 2018 - EFS / LCF data (g/person/day)**

| Food <sup>2</sup>                         | 2001<br>Mean<br>95% CI | 2010<br>Mean<br>95% CI | 2011<br>Mean<br>95% CI | 2012<br>Mean<br>95% CI | 2013<br>Mean<br>95% CI | 2014<br>Mean<br>95% CI | 2015<br>Mean<br>95% CI | 2016<br>Mean<br>95% CI | 2017<br>Mean<br>95% CI | 2018<br>Mean<br>95% CI | P-value for<br>Linear<br>Association | P-value for<br>Overall<br>Association |
|-------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------------------|---------------------------------------|
| <b>Brown/Wholemeal Bread</b>              | 18<br>16, 20           | 23<br>20, 26           | 23<br>19, 26           | 20<br>18, 21           | 21<br>18, 23           | 20<br>18, 22           | 15<br>13, 16           | 18<br>14, 22           | 16<br>13, 18           | 19<br>15, 23           | 0.024                                | <0.001                                |
| <b>Total Bread</b>                        | 111<br>106, 117        | 94<br>89, 99           | 86<br>80, 92           | 93<br>87, 99           | 90<br>84, 96           | 80<br>75, 85           | 80<br>75, 84           | 77<br>71, 84           | 77<br>69, 84           | 90<br>83, 97           | <0.001                               | <0.001                                |
| <b>High fibre Breakfast Cereal</b>        | 10<br>8, 12            | 12<br>10, 14           | 12<br>10, 15           | 11<br>9, 13            | 12<br>10, 14           | 11<br>9, 14            | 12<br>11, 13           | 13<br>9, 16            | 15<br>10, 21           | 10<br>7, 13            | 0.144                                | 0.353                                 |
| <b>Total Breakfast Cereal</b>             | 20<br>17, 22           | 22<br>19, 25           | 22<br>19, 24           | 20<br>17, 22           | 21<br>19, 23           | 20<br>18, 23           | 20<br>18, 22           | 20<br>16, 25           | 23<br>16, 30           | 16<br>12, 20           | 0.994                                | 0.479                                 |
| <b>Cakes and Pastries</b>                 | 18<br>16, 20           | 18<br>15, 20           | 15<br>14, 17           | 16<br>15, 18           | 17<br>15, 19           | 15<br>13, 18           | 17<br>15, 18           | 17<br>12, 21           | 17<br>12, 21           | 15<br>13, 17           | 0.093                                | 0.189                                 |
| <b>Sweet Biscuits</b>                     | 22<br>20, 23           | 22<br>19, 24           | 19<br>18, 21           | 21<br>18, 23           | 21<br>18, 24           | 23<br>20, 26           | 20<br>19, 22           | 22<br>19, 26           | 19<br>15, 23           | 20<br>16, 23           | 0.117                                | 0.079                                 |
| <b>Cakes, Sweet Biscuits and Pastries</b> | 40<br>37, 43           | 40<br>36, 43           | 35<br>32, 37           | 37<br>34, 40           | 38<br>35, 41           | 39<br>34, 44           | 37<br>35, 39           | 39<br>33, 45           | 36<br>30, 42           | 35<br>30, 40           | 0.042                                | 0.129                                 |
| <b>Ice Cream and Dairy Desserts</b>       | 31<br>27, 35           | 30<br>25, 35           | 29<br>24, 34           | 33<br>28, 37           | 33<br>26, 40           | 31<br>26, 36           | 35<br>29, 40           | 37<br>29, 45           | 33<br>24, 43           | 34<br>25, 43           | 0.507                                | 0.987                                 |
| <b>Sugar and Preserves</b>                | 19<br>17, 22           | 18<br>15, 21           | 16<br>13, 19           | 17<br>14, 21           | 16<br>14, 18           | 15<br>12, 18           | 16<br>13, 19           | 15<br>12, 19           | 13<br>10, 16           | 11<br>8.3, 13          | <0.001                               | 0.001                                 |
| <b>Chocolate Confectionery</b>            | 14<br>12, 16           | 14<br>12, 17           | 13<br>12, 15           | 14<br>12, 16           | 14<br>12, 16           | 14<br>12, 16           | 13<br>11, 14           | 16<br>13, 20           | 14<br>12, 17           | 14<br>12, 17           | 0.767                                | 0.744                                 |
| <b>Sugar Confectionery</b>                | 7.6<br>6.5, 8.7        | 7.1<br>6.1, 8.2        | 6.7<br>5.7, 7.7        | 7.0<br>6.0, 8.0        | 7.5<br>6.0, 9.1        | 7.7<br>6.6, 8.8        | 7.9<br>6.5, 9.3        | 6.5<br>5.0, 7.9        | 7.4<br>5.6, 9.3        | 8.0<br>5.5, 11.0       | 0.807                                | 0.643                                 |
| <b>Total Confectionery</b>                | 21<br>19, 24           | 21<br>18, 25           | 20<br>18, 22           | 21<br>19, 24           | 21<br>18, 24           | 22<br>20, 24           | 21<br>18, 23           | 23<br>19, 27           | 22<br>18, 26           | 22<br>18, 27           | 0.936                                | 0.933                                 |
| <b>Sugar-Containing Soft Drinks</b>       | 234<br>208, 260        | 231<br>203, 258        | 156<br>132, 180        | 151<br>130, 172        | 179<br>153, 205        | 148<br>124, 172        | 140<br>110, 170        | 155<br>119, 191        | 136<br>102, 170        | 122<br>99, 146         | <0.001                               | <0.001                                |
| <b>Sugar Free Soft Drinks</b>             | 98<br>83, 113          | 120<br>92, 149         | 98<br>78, 118          | 137<br>110, 163        | 143<br>117, 170        | 121<br>97, 146         | 134<br>112, 156        | 175<br>128, 222        | 157<br>103, 211        | 142<br>102, 181        | <0.001                               | <0.001                                |
| <b>Total Soft Drinks</b>                  | 332<br>305, 359        | 351<br>317, 386        | 254<br>221, 287        | 288<br>255, 320        | 322<br>280, 365        | 269<br>246, 293        | 274<br>242, 305        | 331<br>284, 378        | 293<br>237, 349        | 264<br>227, 301        | <0.001                               | <0.001                                |
| <i>n Households</i>                       | 619                    | 464                    | 495                    | 477                    | 410                    | 433                    | 423                    | 186                    | 162                    | 188                    |                                      |                                       |
| <i>n People</i>                           | 1414                   | 1030                   | 1088                   | 1063                   | 930                    | 974                    | 921                    | 414                    | 334                    | 383                    |                                      |                                       |
| <i>n People Weighted<sup>3</sup></i>      | 5015                   | 5109                   | 5117                   | 5111                   | 5233                   | 5260                   | 5186                   | 5249                   | 4982                   | 5324                   |                                      |                                       |

<sup>1</sup>Household and eating out consumption combined; <sup>2</sup>See appendices 1 & 3 for methodology; <sup>3</sup>The results are weighted to the Scottish population - the number provided is approximately 1000<sup>th</sup> of the Scottish population

Figure 20: Mean [95% CI] Sugar Containing Soft Drink Consumption by Year 2001 - 2018



*P (linear association) <0.001; P (overall association) <0.001*

## Appendix 9: Mean Food Consumption and Nutrient Intake Results by Year

**Table 16b: Mean Consumption<sup>1</sup> of Additional Foods and Drinks Indicative of Diet Quality by Year, 2001 to 2018 - EFS/ LCF data (g/person/day)**

| Food <sup>2</sup>                                   | 2001<br>Mean<br>95% CI | 2010<br>Mean<br>95% CI | 2011<br>Mean<br>95% CI | 2012<br>Mean<br>95% CI | 2013<br>Mean<br>95% CI | 2014<br>Mean<br>95% CI | 2015<br>Mean<br>95% CI | 2016<br>Mean<br>95% CI | 2017<br>Mean<br>95% CI | 2018<br>Mean<br>95% CI | P-value for<br>Linear<br>Association | P-value for<br>Overall<br>Association |
|-----------------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------------------|---------------------------------------|
| Bacon and Ham                                       | 12<br>11, 14           | 12<br>11, 13           | 13<br>12, 15           | 12<br>11, 14           | 12<br>10, 14           | 11<br>9, 12            | 10<br>9, 12            | 11<br>9, 13            | 10<br>8, 12            | 10<br>8, 12            | 0.006                                | 0.092                                 |
| Other Processed Red Meat<br>Products <sup>3,4</sup> | 29<br>26, 32           | 27<br>24, 29           | 25<br>23, 27           | 28<br>25, 30           | 26<br>24, 29           | 25<br>23, 28           | 26<br>23, 28           | 26<br>22, 30           | 25<br>22, 29           | 26<br>23, 29           | 0.003                                | 0.027                                 |
| Savoury Meat Pies                                   | 11.0<br>9.4, 12.0      | 10.0<br>8.3, 11.0      | 9.3<br>7.8, 11.0       | 10.0<br>8.8, 12.0      | 8.7<br>7.3, 10.0       | 8.5<br>7.0, 10.0       | 9.0<br>7.8, 10.0       | 8.8<br>7.4, 10.0       | 8.7<br>6.7, 11.0       | 8.8<br>6.7, 11.0       | 0.001                                | 0.093                                 |
| Butter                                              | 6.1<br>5.2, 7.1        | 7.3<br>6.4, 8.2        | 7.0<br>5.4, 8.7        | 7.4<br>6.1, 8.7        | 8.6<br>6.9, 10.3       | 7.0<br>5.5, 8.4        | 7.4<br>6.4, 8.5        | 6.2<br>4.9, 7.5        | 3.9<br>2.6, 5.2        | 3.8<br>2.1, 5.6        | 0.341                                | <0.001                                |
| Soft Margarine                                      | 1.2<br>0.7, 1.6        | 2.4<br>1.6, 3.2        | 1.5<br>0.8, 2.2        | 2.4<br>1.6, 3.1        | 2.3<br>1.6, 3.1        | 1.6<br>1.0, 2.3        | 1.2<br>0.6, 1.9        | 3.5<br>2.2, 4.9        | 4.3<br>2.5, 6.1        | 6.7<br>5.0, 8.5        | <0.001                               | <0.001                                |
| Low Fat Spread                                      | 10.0<br>8.4, 11        | 6.0<br>4.7, 7.3        | 6.2<br>5.2, 7.2        | 6.3<br>4.5, 8.1        | 5.9<br>4.9, 7.0        | 4.8<br>3.7, 5.9        | 4.4<br>3.4, 5.3        | 4.2<br>2.3, 6.1        | 3.8<br>2.3, 5.2        | 3.9<br>2.9, 4.9        | <0.001                               | <0.001                                |
| Total Spreading Fats                                | 17<br>16, 18           | 16<br>14, 18           | 15<br>13, 16           | 16<br>14, 18           | 17<br>15, 19           | 13<br>12, 15           | 13<br>12, 14           | 13<br>11, 17           | 14<br>10, 14           | 12<br>12, 17           | <0.001                               | <0.001                                |
| Cooking Oil                                         | 6.0<br>4.4, 7.5        | 6.6<br>4.6, 8.6        | 5.9<br>4.6, 7.3        | 6.4<br>4.2, 8.6        | 6.2<br>4.4, 8.0        | 6.2<br>4.5, 7.8        | 6.4<br>4.4, 8.3        | 2.6<br>1.5, 3.7        | 3.1<br>1.5, 4.8        | 4.2<br>2.5, 5.9        | 0.010                                | <0.001                                |
| Cream                                               | 2.3<br>1.9, 2.8        | 3.3<br>2.5, 4.1        | 3.3<br>2.6, 4.1        | 3.4<br>2.6, 4.1        | 3.1<br>2.3, 3.9        | 4.0<br>3.1, 5.0        | 3.6<br>2.8, 4.4        | 2.5<br>1.7, 3.4        | 3.4<br>2.2, 4.6        | 3.1<br>2.1, 4.1        | 0.018                                | 0.066                                 |
| Cheese                                              | 14<br>13, 16           | 16<br>15, 18           | 14<br>13, 16           | 14<br>12, 15           | 15<br>13, 17           | 13<br>12, 15           | 15<br>14, 17           | 17<br>14, 19           | 16<br>13, 19           | 17<br>14, 19           | 0.036                                | 0.053                                 |
| Whole Milk                                          | 92<br>76, 107          | 45<br>37, 53           | 45<br>31, 59           | 45<br>37, 54           | 44<br>33, 56           | 37<br>29, 46           | 32<br>26, 37           | 50<br>35, 66           | 27<br>13, 41           | 64<br>43, 85           | <0.001                               | <0.001                                |
| Semi-skimmed Milk                                   | 126<br>111, 140        | 139<br>124, 153        | 123<br>104, 141        | 143<br>127, 159        | 127<br>112, 142        | 136<br>121, 151        | 132<br>119, 146        | 111<br>93, 130         | 106<br>86, 127         | 124<br>105, 144        | 0.352                                | 0.196                                 |
| Skimmed Milk                                        | 15<br>9, 21            | 14<br>8, 19            | 19<br>9, 29            | 12<br>8, 17            | 15<br>7, 23            | 9<br>5, 12             | 12<br>9, 14            | 13<br>4, 22            | 25<br>11, 39           | 13<br>6, 20            | 0.444                                | 0.052                                 |
| Total Milk                                          | 250<br>235, 266        | 218<br>201, 235        | 205<br>185, 226        | 217<br>200, 233        | 202<br>179, 226        | 193<br>178, 209        | 196<br>181, 211        | 194<br>177, 211        | 173<br>150, 195        | 220<br>197, 243        | <0.001                               | <0.001                                |
| White Fish                                          | 94<br>85, 104          | 91<br>76, 106          | 82<br>64, 101          | 70<br>62, 79           | 75<br>65, 86           | 71<br>60, 82           | 79<br>71, 86           | 69<br>56, 83           | 63<br>49, 77           | 71<br>57, 85           | <0.001                               | <0.001                                |
| Fresh Potatoes                                      | 66<br>58, 74           | 49<br>43, 56           | 43<br>37, 48           | 47<br>41, 52           | 39<br>34, 44           | 39<br>34, 45           | 42<br>37, 46           | 36<br>31, 40           | 38<br>31, 45           | 40<br>33, 48           | <0.001                               | <0.001                                |
| Processed Potatoes                                  | 33<br>30, 36           | 29<br>25, 32           | 27<br>24, 30           | 32<br>27, 37           | 29<br>26, 33           | 28<br>26, 31           | 30<br>27, 33           | 30<br>25, 35           | 29<br>22, 35           | 28<br>23, 34           | 0.243                                | 0.122                                 |
| Nuts                                                | 2.2<br>1.4, 2.9        | 3.1<br>2.0, 4.2        | 2.6<br>2.0, 3.3        | 3.1<br>2.4, 3.8        | 4.1<br>3.1, 5.1        | 3.6<br>2.7, 4.5        | 4.3<br>3.6, 4.9        | 3.7<br>2.6, 4.8        | 4.9<br>2.9, 6.8        | 3.1<br>2.1, 4.0        | <0.001                               | <0.001                                |
| Savoury Snacks                                      | 15<br>13, 16           | 14<br>12, 15           | 11<br>10, 13           | 12<br>11, 13           | 14<br>12, 16           | 14<br>12, 15           | 13<br>11, 14           | 11<br>10, 13           | 14<br>12, 16           | 13<br>11, 15           | 0.101                                | 0.001                                 |
| n Households                                        | 619                    | 464                    | 495                    | 477                    | 410                    | 433                    | 423                    | 186                    | 162                    | 188                    |                                      |                                       |
| n People                                            | 1414                   | 1030                   | 1088                   | 1063                   | 930                    | 974                    | 921                    | 414                    | 334                    | 383                    |                                      |                                       |
| n People Weighted <sup>5</sup>                      | 5015                   | 5109                   | 5117                   | 5111                   | 5233                   | 5260                   | 5186                   | 5249                   | 4982                   | 5324                   |                                      |                                       |

<sup>1</sup>Household and eating out consumption combined; <sup>2</sup>See appendices 1 & 3 for methodology; <sup>3</sup>Meat portion only; <sup>4</sup>Other processed red meat products includes the meat portion of sausages, meat pies, corned beef, burgers, and pate and is a component of red and processed meat; <sup>5</sup>The results are weighted to the Scottish population - the number provided is approximately 1000<sup>th</sup> of the Scottish population