

# Radiological Habits Survey: Derby, 2021

Cefas contract C7325

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# 1. Key Points

- An alternative survey approach was used in 2021 to comply with COVID-19 guidance and protocols. This included reducing the number of days undertaking face-to-face interviews on fieldwork, only undertaking interviews outdoors, and undertaking desk-based interviews.
- The consumption of food from the aquatic survey area was not identified in 2021 or in the previous survey in 2009. In both surveys there were unconfirmed reports that coarse fish were being caught for consumption. In 2021, there were also reports of signal crayfish being trapped for consumption.
- In 2021, the activities undertaken throughout the aquatic survey area were angling and riverbank maintenance.
- Discharges from the Derby site were released to the River Derwent via a sewage treatment works. In 2021, there was a decrease in the occupancy rates of employees in close proximity to liquid sewage sludge and dried sewage sludge compared to the 2009 survey.
- In 2021, there was a significant increase in the consumption of green vegetables, cattle meat and honey. Conversely, the consumption rates significantly decreased for milk and potato. The consumption of pig meat was not identified in 2021.
- A new residential estate in Wilmorton, with approximately 420 houses was built to the south-west of the Rolls-Royce Submarines Ltd. nuclear site. A number of these houses are the nearest residential properties to the Derby licensed site boundary.
- There have been multiple commercial developments within the direct radiation survey area since 2009 including the construction of the Derby Arena and the development of a new business park on unused land adjacent to the Rolls-Royce Submarines Ltd. nuclear site.
- The occupancy rates in the direct radiation survey area were similar in 2009 and 2021.

## 2. Summary

This report presents the results of a survey conducted in 2021 to determine the habits and consumption patterns of people living, working and pursuing recreational activities in the vicinity of the Rolls-Royce Submarines Ltd. (RRSL) site in Derby. The RRSL site is located at Raynesway in Derby, approximately 3 km south-east of Derby city centre. There are two separate nuclear licensed sites located within the RRSL site boundary which are approximately 300 metres apart. The sites discharge gaseous wastes via stacks to the atmosphere, liquid wastes via a sewage treatment works to the River Derwent, and contain sources of direct radiation. Areas likely to be most affected by the discharges and sources of radiation were defined as the aquatic survey area for liquid discharges, the terrestrial survey area for the deposition from gaseous discharges, and the direct radiation survey area for ionising radiation emanating directly from the site. The occupancy data collected from the direct radiation survey area are also applicable to inhalation and external exposure arising from gaseous releases from the site.

The following potential exposure pathways were investigated:

- The consumption of food from the aquatic survey area
- Activities and occupancy over river washed substrates
- The handling of fishing gear and sediment
- Activities and occupancy in and on water
- Occupancy in close proximity to liquid sewage sludge and dried sewage sludge
- The consumption of food from the terrestrial survey area
- The use and destination of produce originating from the survey areas
- The consumption and use of groundwater and surface water in the terrestrial survey area
- The transfer of contamination off-site by wildlife
- Activities and occupancy within the direct radiation survey area
- Any new or unusual exposure pathways

Information was collected from members of the public by means of interviews and the data obtained for 464 individuals are presented and discussed. High rates of consumption, occupancy over river washed substrates and handling are identified using established methods comprising (a) a 'cut off' to define the high-rate group and (b) 97.5<sup>th</sup> percentiles. The rates identified can be used in dose assessments. Additionally, profiles of integrated habits data are presented specifically for use in 'total dose' assessments.

## **The aquatic survey area**

The aquatic survey area (Figure 4) covered the River Derwent and its banks from the Raynesway Bridge (A5111) downriver to the Station Road Bridge (B5010). The River Derwent has several secondary channels in the survey area. The southern bank of the River Derwent was accessible via a National Cycle Route and National Trail, whereas the northern bank was mostly inaccessible due to private land and overgrown shrubbery.

Viable commercial fish species were not identified in the survey area, therefore no commercial or hobby fishing was taking place. Angling was popular throughout the survey area. No interviewees were consuming foods from the aquatic survey area. However, there were unconfirmed reports that coarse fish (such as pike) and signal crayfish from the aquatic survey area were being caught and consumed. Therefore, it is suggested that consumption rates of 1 kg y<sup>-1</sup> for coarse fish and 1 kg y<sup>-1</sup> for signal crayfish are considered for radiological dose assessment purposes (Annex 4).

Activities were mainly undertaken on the southern riverbank and sections of the northern riverbank. These locations were maintained by two local angling clubs and were popular with anglers. Activities undertaken in and on the water were not identified taking place at the time of the survey. The activities undertaken by adults in the high-rate groups for occupancy over river washed substrates included angling and riverbank maintenance.

## **The terrestrial survey area**

The terrestrial survey area (Figure 5) covered the land within 5 km from an approximate site centre between the two RRSL nuclear licensed sites. The land within the terrestrial survey area is mainly commercial and residential with small areas of farmland. Interviews were conducted at eight working farms with land in the terrestrial survey area, where beef, milk, lamb, barley, beans and wheat were produced for human consumption. Barley, corn, grass (for silage and haylage) and wheat were grown for animal feed.

A total of 25 allotment sites were identified within the terrestrial survey area. Interviews were conducted with allotment holders at 11 allotment sites. A wide variety of fruit and vegetables were grown on the allotments and a small number of private gardens were identified growing small quantities of produce. Four beekeepers were interviewed who kept hives in the survey area and the consumption of honey was recorded. Game shooting was identified taking place on farmland with pheasant and rabbit being consumed by the farming families. Wild foods including blackberries, elderberries, elderflowers, garlic, hawthorn berries, mushroom, rosehips, and sloes were collected and consumed.

Foods from the terrestrial survey area were consumed from the following 14 food groups: green vegetables; other vegetables; root vegetables; potato; domestic fruit; milk; cattle meat; sheep meat; poultry; eggs; wild/free foods; rabbits/hares; honey; wild fungi. The mean consumption rates for the adult high-rate groups were above the national adult mean consumption rates that are used for comparison in habits surveys for the following

nine food groups: green vegetables; other vegetables; root vegetables; potato; domestic fruit; milk; cattle meat; eggs; honey.

The human consumption of groundwater was not identified. Livestock were consuming mains water for drinking water.

The potential transfer of contamination off-site by wildlife was investigated, since radionuclides could enter the food chain or contaminate the environment through this pathway. Routine wildlife control was undertaken on the site. This included managing the pigeon populations on-site by discouraging nesting with a bird scarer and limited culling of pigeons and rabbits. The sites did not undertake any other routine controls, since the buildings are enclosed, and it is highly unlikely that wildlife could enter controlled areas.

### **The direct radiation survey area**

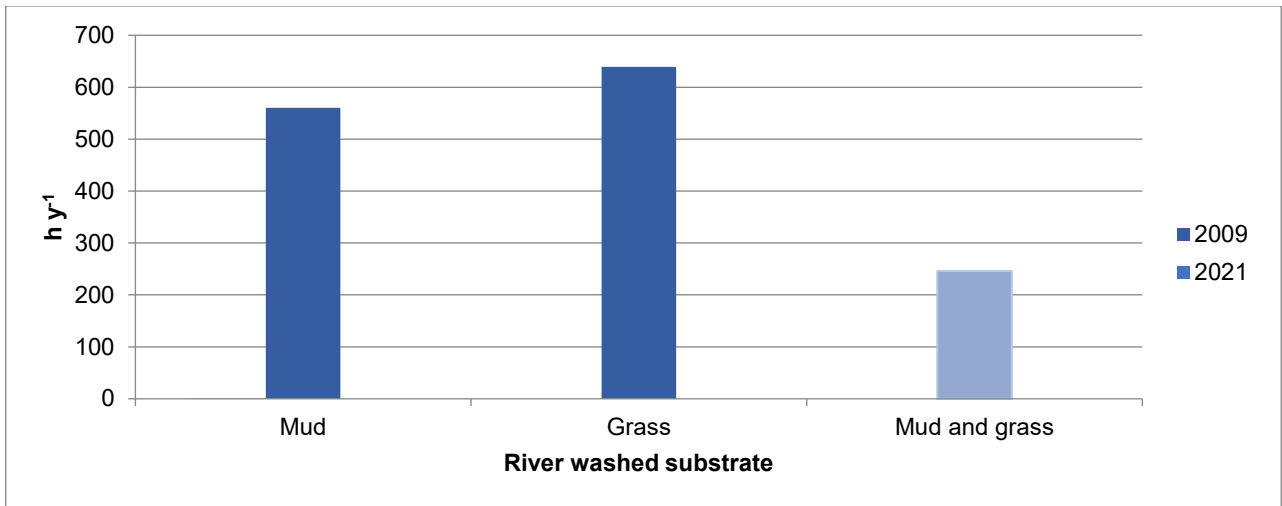
The direct radiation survey area (Figure 6) covered the land within 1 km of the two nuclear licensed site boundaries. The two separate nuclear licensed sites are located within the RRSL site boundary, and are approximately 300 metres apart. The occupancy data collected from the direct radiation survey area are also applicable to inhalation and external exposure pathways arising from gaseous releases from the site.

The occupancy rates were analysed in zones according to the distance from the nuclear licensed site boundaries. The zones were 0 – 0.25 km, >0.25 – 0.5 km and >0.5 – 1.0 km. In the 0 – 0.25 km zone, the highest indoor occupancy rates were for employees and the highest outdoor and total occupancy rates were for an angler. The highest indoor, outdoor and total occupancy rates were for residents in the >0.25 – 0.5 km and >0.5 – 1.0 km zones.

Gamma dose rates were only measured outdoors throughout the Derby direct radiation survey area due to interviews not being conducted at residences. Background readings were taken over grass at distances beyond 5 km from the RRSL site centre. Three measurements taken outdoors within the direct radiation survey area were lower than the maximum background measurements, and three were higher. Since gamma dose rate measurements are influenced by the nature of building materials, the substrate over which they are taken, and many other factors, the measurements taken in residential areas are expected to be higher than those taken in rural areas.

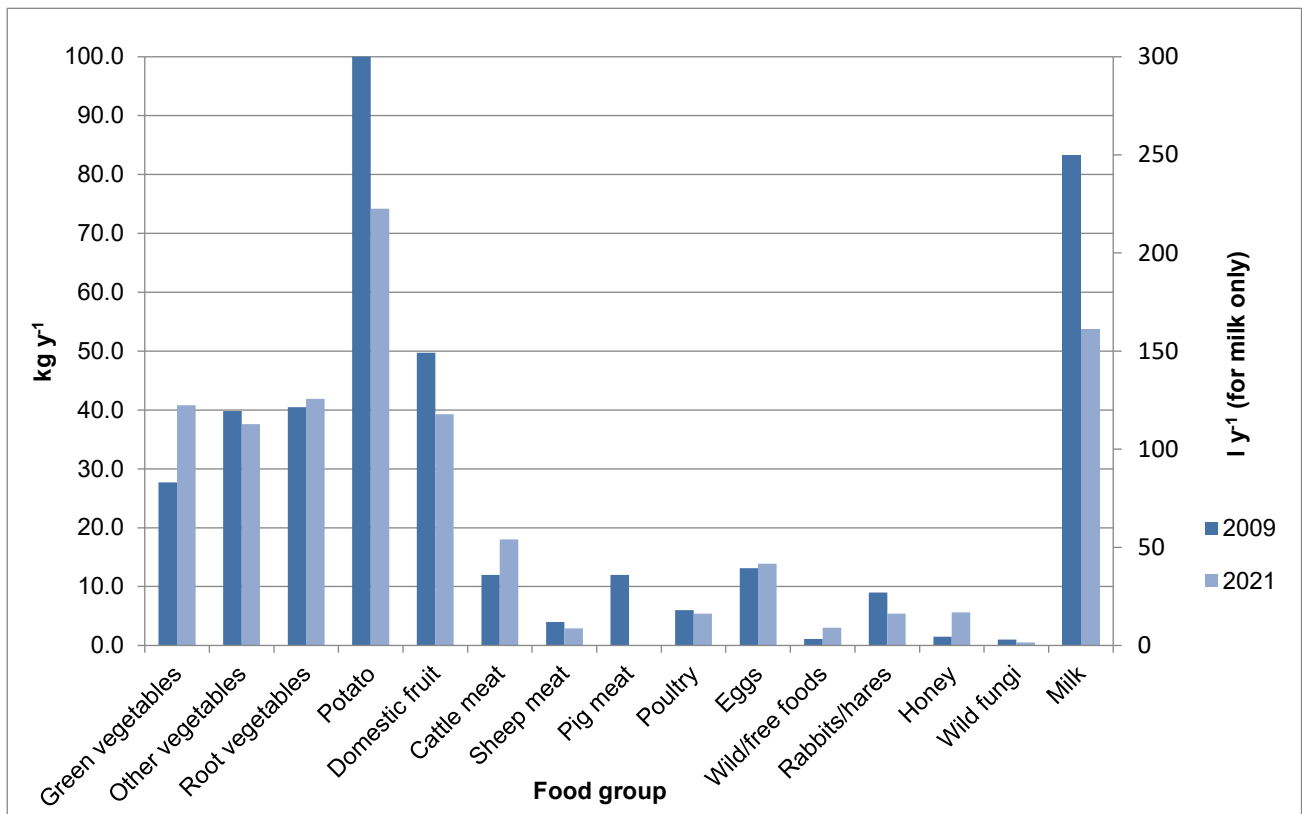
### **Comparisons with the previous survey**

Comparisons were made with the results from the previous Derby habits survey in 2009, which were for adults only. Reasons for changes in the consumption and occupancy rates were identified for certain pathways and these are presented in Section 10 of the report. The consumption of foods from the aquatic survey area was not identified in both 2009 and 2021.



**Figure 1. Comparison between 2009 and 2021 mean rates for the high-rate groups for occupancy over river washed substrates**

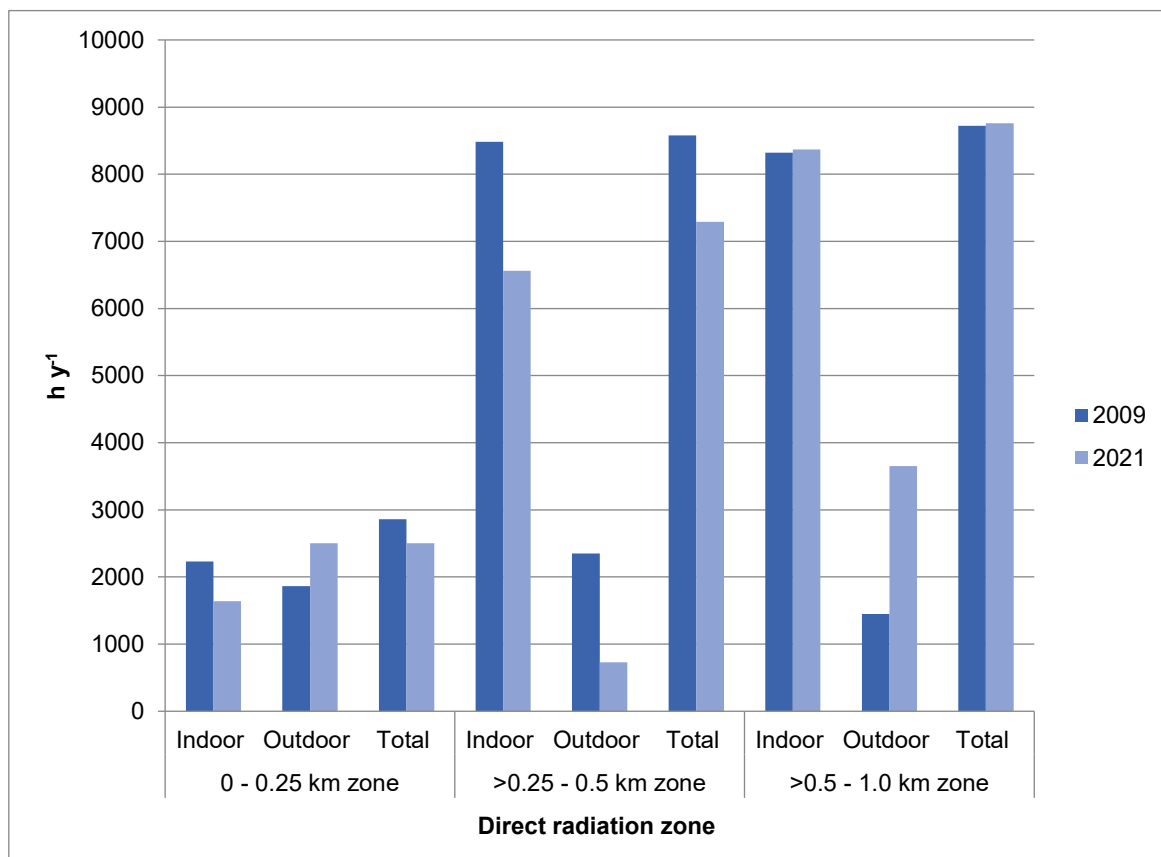
The occupancy over river washed substrates decreased in 2021. In 2009, activities were undertaken over mud and over grass, but in 2021 the activities were undertaken over mud and grass throughout the aquatic survey area (Figure 1).



**Figure 2. Comparison between 2009 and 2021 mean consumption rates for the high-rate groups for terrestrial foods**

The most notable changes in the terrestrial foods in 2021 was the increased consumption rate of green vegetables and honey, and the decrease in the consumption rate of potato

and milk, compared with 2009 (Figure 2). The consumption of pig meat was not identified in 2021.



**Figure 3. Comparison between 2009 and 2021 maximum direct radiation occupancy rates**

The maximum occupancy rates in the direct radiation survey area in 2021 were broadly similar to those in 2009 (Figure 3). In 2021, the increase in the maximum outdoor occupancy rates in the >0.5 – 1.0 km zone was for a resident who spent time at an allotment located in the direct radiation survey area. There was a decrease in the maximum indoor, outdoor and total occupancy rate in the >0.25 – 0.5 km zone. The highest indoor, outdoor and total occupancy rates across the three zones were for residents, employees and anglers.

**Habits survey information for consideration when selecting samples and measurements for Environment Agency and Food Standards Agency monitoring programmes**

The foods and river washed locations identified in the 2021 Derby habits survey could be used to assist in the selection of samples and measurements for future monitoring programmes. The foods that were either consumed in the largest quantities in their food groups, or were the only food in their food group, are presented in Section 11.2 for considering sample selection for the Food Standards Agency monitoring programme. The current environmental monitoring programme carried out for the Environment Agency adequately covers the Derby area and no changes are suggested.

## 3. Introduction

Members of the public might be exposed to radiation as a result of the operations of the RRSL nuclear licensed sites, either through the permitted discharges of liquid or gaseous radioactive wastes into the local environment, or from radiation emanating directly from the sites. This report provides information on activities carried out by members of the public in the vicinity of the RRSL nuclear licensed sites, which may influence their radiation exposure. The study has been funded by the Environment Agency (EA), the Food Standards Agency (FSA) and the Office for Nuclear Regulation (ONR) in order to support their respective roles in protecting the public from exposure to radiation.

UK policy on the control of radiation exposure has long been based on the recommendations of the International Commission on Radiological Protection (ICRP), which embody the principles of justification of practices, optimisation of protection and dose limitation. Radiological protection of the public is based on the concept of a 'representative person'. ICRP (2007) recommendations use the term 'representative person' for assessing doses to members of the public. It is defined as 'an individual receiving a dose that is representative of the more highly exposed individuals in the population'. The 'representative person' concept is considered equivalent to the previously used 'critical group'.

### 3.1. Regulatory framework

In England, the EA regulates the discharges of radioactive waste under Environmental Permitting (England and Wales) Regulations 2016 (UK Parliament, 2016). These regulations transpose parts of the revised EU Basic Safety Standards (BSS) Directive 2013/59/Euratom (EC, 2014) which embody the recommendations of the ICRP, particularly ICRP 103 (ICRP, 2007). The revised BSS Directive was adopted in 2013 to consolidate and update existing Euratom provisions for protection against the harmful effects of ionising radiation by replacing five existing Directives and a Commission Recommendation into one Directive covering occupational, medical and public exposure (EC, 2014). Installation and operation of certain prescribed activities can only occur on sites if they are licensed under the Nuclear Installations Act 1965 (as amended) (NIA 65) (UK Parliament, 1965). The ONR has implemented this legislation and is also responsible for regulating, under the Ionising Radiations (Environmental and Public Protection) (Miscellaneous Amendments) (EU Exit) Regulations 2019 (IRR 19) (UK Parliament, 2019), the exposure of the public to direct radiation from the operations occurring on these sites.

Appropriate discharge limits are set by the EA, after wide-ranging consultations that include the FSA. The FSA is responsible for ensuring that any radioactivity present in food does not compromise food safety and that permitted discharges of radioactivity do not result in unacceptable doses to consumers via the food chain. The FSA also ensures that public radiation exposure via the food chain is within acceptable limits.

## 3.2. Radiological protection framework

Dose standards for the public are embodied in the national policy (UK Parliament, 2009; BEIS, 2018), in guidance from the International Atomic Energy Agency (IAEA), in the Basic Safety Standards for Radiation Protection (IAEA, 1996) and in European Community legislation in the EU BSS Directive 2013/59/Euratom (EC, 2014). The public dose standards were incorporated into UK law under IRR 19. The requirement to observe the conditions laid down in the Basic Safety Standards (BSS) in England and Wales is incorporated in Environmental Permitting (England and Wales) Regulations 2016 (UK Parliament, 2016). These require that the environment agencies ensure, wherever applicable, that:

- All public radiation exposures from radioactive waste disposals are kept As Low As Reasonably Achievable (ALARA), with social and economic factors being taken into account
- The sum of all exposures does not exceed the dose limit of 1 mSv a year
- The dose received from any new source does not exceed 0.3 mSv a year
- The dose received from any single site does not exceed 0.5 mSv a year

The dose limit of 1 mSv per year to the public from all anthropogenic sources other than medical applications is also the recommendation made by the ICRP (ICRP, 2007).

The environment agencies are also required to ensure that the dose estimates are as realistic as possible for the population as a whole and for reference groups of the population. They are required to take all necessary steps to identify the reference groups of the population, considering the effective pathways of transmission of radioactive substances. Guidance on the principles underlying prospective radiological assessments (for assessments of potential future doses) were provided by the National Dose Assessment Working Group (NDAWG), which consisted of representatives of UK Government Bodies and other organisations with responsibilities for dose assessments (EA, SEPA, DoENI, NRPB and FSA, 2002). NDAWG also published principles underlying retrospective radiological assessment (for assessments of doses already received from past discharges) (Allott, 2005) and possible methods of carrying out these assessments using the data from combined habits surveys (Camplin and others, 2005). NDAWG agreed that the optimal method for performing retrospective dose assessments would be to use habits profiles (profiling method) as described in Camplin and others. (2005). This approach was adopted in Radioactivity in Food and the Environment (RIFE) publications, (for example: EA, FSA, FSS, NRW, NIEA and SEPA, 2021). NDAWG published reports on the collection and use of habits survey data in retrospective and prospective dose assessments (NDAWG, 2005; NDAWG 2009); the principles described in these reports are consistent with those used here. The UK environment agencies, UK Health Security Agency (formerly, Public Health England) and the FSA jointly produced an update of the 2002 interim guidance and principles for assessing prospective doses (EA, SEPA, NIEA, HPA and FSA, 2012).



## 4. The survey

### 4.1. Site activity

The Rolls-Royce Submarine Ltd. (RRSL) site is located at Raynesway in Derby, approximately 3 km south-east of Derby city centre. There are two separate nuclear licensed sites located within the RRSL site boundary which are approximately 300 metres apart.

The RRSL site supports new submarine manufacturing and existing programmes across their full lifecycle in the UK. The larger of the two nuclear licensed sites, the Nuclear Fuel Production Plant (NFPP) site, produces the core element of the Nuclear Steam Raising Plants (NSRP). Whereas the smaller nuclear licensed site, the Neptune/Radioactive Components Facility site, accommodates the core design, development, testing and examination of radioactive components. It was reported that at the time of the survey the Neptune site was not operational due to refurbishment, but this would not result in any changes to discharges.

RRSL owns and operates the Derby nuclear sites and holds the nuclear site licence on behalf of the Ministry of Defence. Under the radioactive substances provisions of Environmental Permitting (England and Wales) Regulations 2016 (UK Parliament, 2016), RRSL are permitted to undertake radioactive substances activities at the nuclear sites. This includes permission to discharge gaseous radioactive wastes via stacks to the atmosphere and liquid radioactive wastes via a sewage treatment works to the River Derwent. The RRSL site is licensed for the purposes of operating certain activities prescribed under the Nuclear Installations Act, 1965. The site contains sources of direct radiation. Details of the amounts of gaseous and liquid radioactive waste discharged are published in the RIFE reports (for example: EA, FSA, FSS, NRW, NIEA and SEPA, 2021).

### 4.2. Survey objectives

The Centre for Environment, Fisheries & Aquaculture Science (Cefas) undertook the Derby habits survey in 2021 on behalf of the EA, the FSA, and the ONR. The aim of the survey was to obtain comprehensive information on the habits of the public that might lead to their exposure to radiation via gaseous discharges, liquid discharges and direct radiation from the RRSL nuclear site.

Specifically, investigations were conducted into the following:

- The consumption of food from the aquatic survey area
- Activities and occupancy over river washed substrates
- The handling of fishing gear and sediment
- Activities and occupancy in and on water

- Occupancy in close proximity to liquid sewage sludge and dried sewage sludge
- The consumption of food from the terrestrial survey area
- The use and destination of produce originating from the survey areas
- The consumption and use of groundwater and surface water in the terrestrial survey area
- The transfer of contamination off-site by wildlife
- Activities and occupancy within the direct radiation survey area
- Any new or unusual exposure pathways

No other additional site-specific investigations were requested for this survey.

### 4.3. Survey areas

The geographic extents of potential effects from liquid discharges, deposition from gaseous releases, and direct radiation are different. Therefore, different survey areas were defined to cover each of these three main possible sources of exposure. These were an aquatic survey area relating to liquid discharges, a terrestrial survey area relating to deposition from gaseous discharges, and a direct radiation survey area relating to ionising radiation emanating directly from the RRSL nuclear licensed sites.

The aquatic survey area (Figure 4) covered the River Derwent and its banks from the Raynesway Bridge (A5111) downriver to the Station Road Bridge (B5010). The aquatic survey area includes approximately 1 km of river upstream of the discharge outfall to allow for any potential mixing. This provided an aquatic survey area of 9.4 km of waterways, including secondary channels. This area was taken to represent the predominant area of mixing of radionuclides discharged into the river.

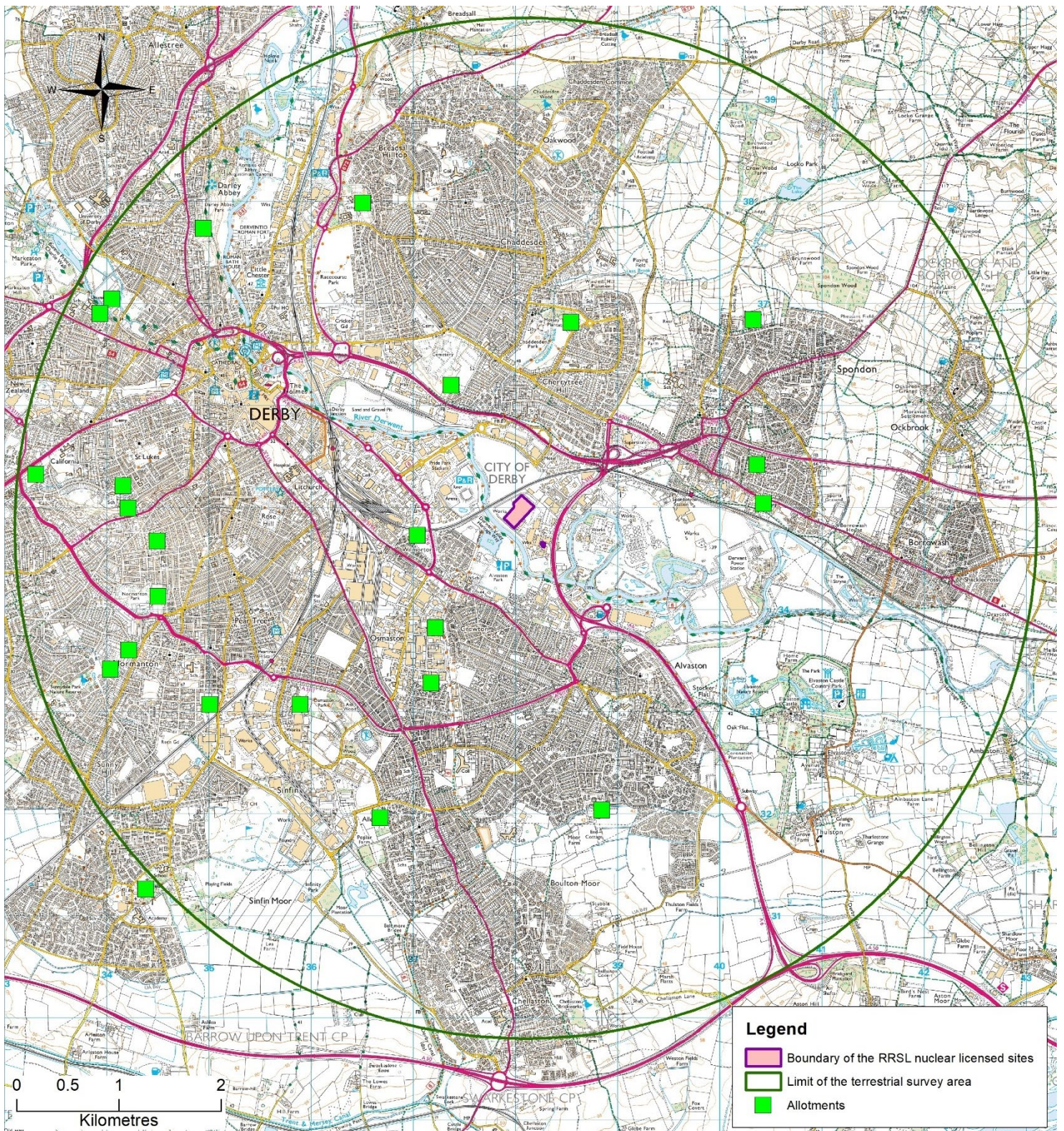
The terrestrial survey area (Figure 5) covered the land and waterways within 5 km from an approximate site centre between the two nuclear licensed sites (National Grid Reference: SK 381 348), to encompass the main areas of potential deposition from gaseous discharges.

The direct radiation survey area (Figure 6) covered the land and waterways within 1 km of the two RRSL nuclear licensed site boundaries. The occupancy data collected from the direct radiation survey area is also applicable to inhalation and external exposure pathways arising from gaseous releases from the site.

Identical aquatic and terrestrial survey areas were used in the previous habits survey conducted by Cefas in the Derby area, in 2009 (Elliott and others, 2010). Due to more detailed mapping data available in 2021, the direct radiation area covered the land and waterways within 1 km of the two nuclear licensed site boundaries. Whereas in 2009, the direct radiation area covered the land and waterways within 1 km of the RRSL site boundary. This was a slight change which did not impact the direct radiation results.



Figure 4. The Derby aquatic survey area



**Figure 5. The Derby terrestrial survey area**

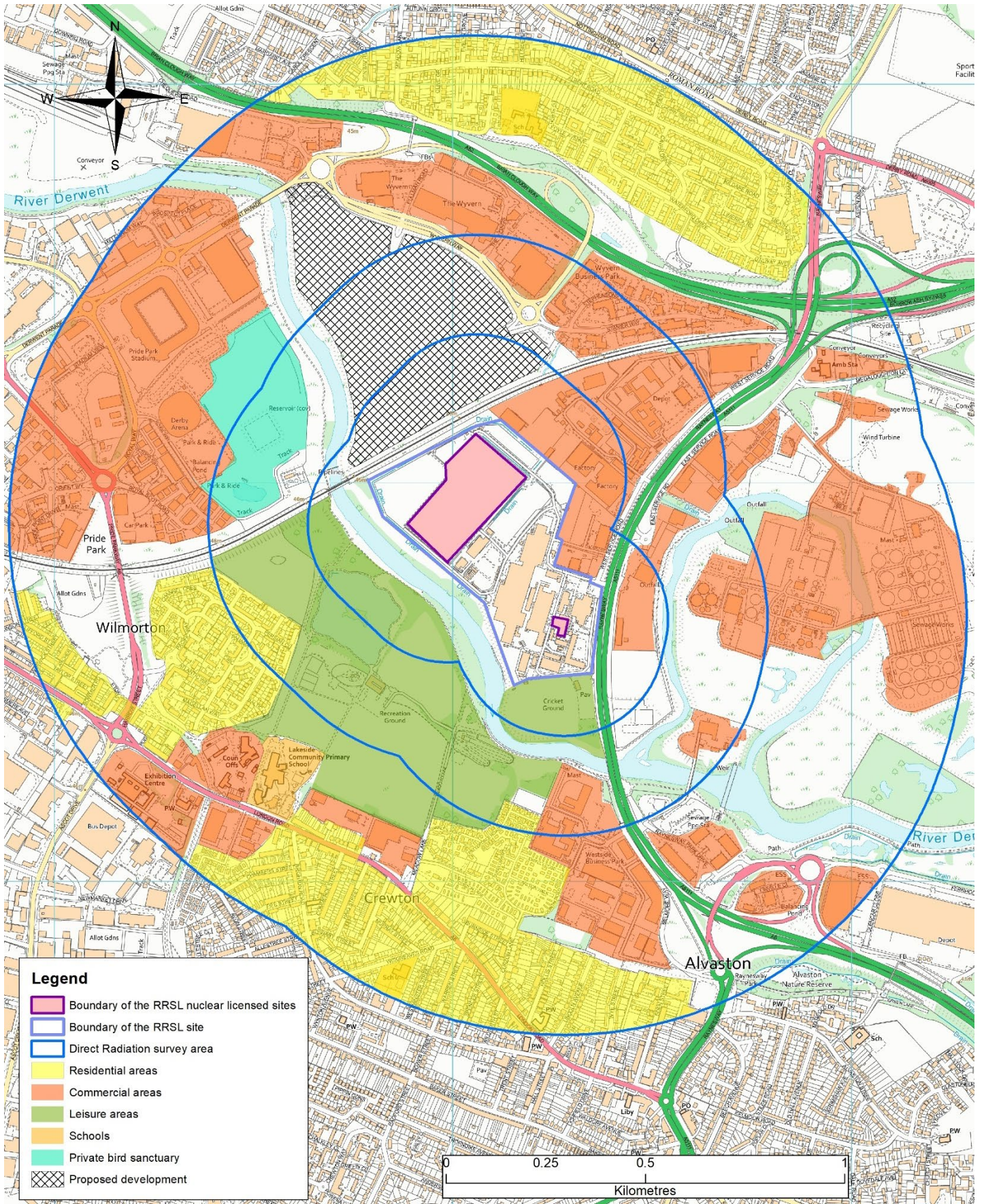


Figure 6. The Derby direct radiation survey area

## 4.4. Conduct of the survey

As part of the pre-survey preparation, the EA, the FSA and the ONR were contacted to identify any additional site-specific requirements. Information relating to the activities of people in the aquatic and terrestrial survey areas was obtained from Internet searches, Ordnance Survey maps and from previous habits surveys undertaken around the Derby nuclear licensed sites. People with local knowledge of the survey area were contacted for information relevant to the various exposure pathways. These included Derby City Parks who provided information on activities at Alvaston Park and local allotments, and the local angling association who provided information on angling permits and regulations along the River Derwent.

Due to the COVID-19 pandemic, an alternative survey approach was used to comply with government, Defra and Cefas COVID-19 guidance and protocols. This approach included reducing the number of days on fieldwork undertaking face-to-face interviews, only undertaking interviews outdoors, and undertaking desk-based interviews, to ensure the safety of interviewees and fieldwork staff during the collection of habits survey data. A proposed programme for fieldwork was distributed to the EA, the FSA, and the ONR before the fieldwork commenced, for their comment.

The fieldwork was carried out from the 11<sup>th</sup> August to the 18<sup>th</sup> August using survey techniques consistent with the previous Derby habits survey report (Elliott and others, 2010). Prior to commencing the fieldwork, a meeting was held between members of the survey team and representatives from RRSL. The discussions provided details about current site activities, local information, potential exposure pathways and activities in the area, and the potential for transfer of contamination off-site by wildlife.

The following information was obtained during the meetings:

- The Neptune/Radioactive Components Facility was undergoing refurbishment at the time of the survey and was not operational. The site is expected to be operational in 2023.
- No changes had been made to the RRSL nuclear licensed site boundaries, outfalls or locations of sources of direct radiation since 2009.
- Control measures to limit the possibility of contamination being transferred off-site by wildlife at RRSL included using a bird scarer to discourage the nesting of pigeons on the site and limited culling of pigeons and rabbits on-site. No additional control measures were necessary because wildlife could not access restricted areas.
- Information about potential exposure pathways and activities in the area included popular angling locations and activities in the direct radiation survey area.

- Changes to the area around the site included:
  - A new housing estate has been constructed near Alvaston Park.
  - New leisure facilities have been developed north-west of the RRSL site, including the Derby Arena.
  - New industrial estates located across the direct radiation survey area, including a new business park development adjacent to the north of the RRSL nuclear site boundary.
  - A chemical plant to the east of the RRSL site has been demolished with a new food production facility in development.

Interviews were conducted with individuals who were identified in the pre-survey preparation and others that were identified during the fieldwork. These included, for example, anglers, people spending time on river washed substrates, farmers, allotment holders, beekeepers and people spending time within the direct radiation survey area. Interviews were used to establish individuals' consumption, occupancy and handling rates relevant to the aquatic, terrestrial and direct radiation survey areas. Any other information of possible use to the survey was also obtained. Gamma dose rate measurements were taken over river washed substrates in the aquatic area. Interviews were not undertaken at individual residences due to safety precautions put in place to mitigate any COVID-19 risks. Instead, people were initially questioned about their habits relating to the survey area that their first identified activity occurred in and, where possible, they were also asked about their habits relating to the direct radiation survey area. Representative gamma dose rate measurements were taken outdoors across the direct radiation survey area at residential estates or where it was reported to be popular with activity. Background gamma dose rates were taken at a distance beyond 5 km from the site centre. All gamma dose rate measurements were taken using multiple Thermo RadEye GX Survey Meters, each connected to a compensated Geiger-Müller tube.

For practical and resource reasons, the survey did not involve the whole population in the vicinity of the RRSL nuclear licensed sites, but targeted subsets or groups, chosen in order to identify those individuals potentially most exposed to radiation pathways. However, it is possible that even within a subset or group there may have been people not interviewed during the survey. Therefore, to aid interpretation, the number of people for whom data were obtained in each group has been calculated as a percentage of the estimated complete coverage for that group (where it was possible to make such an estimate). The results are summarised in Table 15. These 'groups' are described and quantified, and the numbers of people for whom data were obtained are given as percentages of the totals. For certain groups, such as anglers, it can be virtually impossible to calculate the total number of people who undertake the activity in the survey area because it is difficult to quantify visitors from outside the area or occasional visitors during the year. Based on UK Office of National Statistics residential data for electoral wards ([www.ons.gov.uk](http://www.ons.gov.uk)) there were approximately 189,000 people living in the terrestrial survey area, although information was obtained from a significantly smaller number of residents. The survey did

not include employees or contractors at the nuclear licensed sites while they were at work. This is because dose criteria applicable to these people whilst at work and the dose assessment methods are different from those for members of the public. However, data were collected for employees and contractors while outside work if these people were encountered during the survey.

People were initially questioned about their habits relating to the survey area that their first identified activity occurred in and, where possible, they were also asked about their habits relating to the other two survey areas. For example, people in the terrestrial survey were initially questioned because it was known that they grew or produced significant quantities of terrestrial foodstuffs. However, they were also asked about habits that might lead to exposure to liquid discharges or direct radiation. During interviews with representatives from organisations such as local businesses it was not possible to collect data for all pathways (for example consumption of local foods) for each person. In these cases, the data were limited to those relating to the primary reason for the interview. For example, in the case of a business within the direct radiation survey area, the occupancy rates for the employees.

## 5. Methods for data analysis

### 5.1. Data recording and presentation

Data collected during the fieldwork were recorded in logbooks. On return to the laboratory, the data were examined, and any notably high rates were double-checked, where possible, by way of a follow-up phone call. In cases where follow-up phone calls were not possible (for example: interviewees who wished to remain anonymous), the data were accepted at face value. The raw data were entered into a data capture application and then uploaded to a habits survey database where each individual for whom information was obtained was given a unique identifier (the Person ID number) to assist in maintaining data quality and traceability.

Where generalised data for groups of people were collected, such as occupancy rates in the direct radiation survey area for employees at businesses, only a limited number of representative individuals were included in the data entered into the database.

The results of the individuals' consumption, occupancy and handling rates collected during the survey were grouped and presented in tables with the high-rate group members indicated in bold and with the calculated mean rates for the high-rate group and 97.5<sup>th</sup> percentile rates. The consumption rates, occupancy rates and handling rates for all groups are presented in Annex 1 for adults, Annex 2 for children and Annex 3 for infants, with the high-rate group members indicated in bold.

If accurate, quantifiable data cannot be obtained from interviews, but pathways are known to exist, it is sometimes necessary to provide estimated habits data for use in dose



assessments. In this series of habits survey reports, such data is presented in Annex 4. In 2021, there were unconfirmed reports that coarse fish (such as pike) and signal crayfish from the aquatic survey area were being caught and consumed. Therefore, it is suggested that consumption rates of 1 kg y<sup>-1</sup> for coarse fish and 1 kg y<sup>-1</sup> for signal crayfish are considered for radiological dose assessment purposes (Annex 4).

## 5.2. Data conversion

During the interviews, people could not always provide consumption rates in kilograms per year for food or litres per year for milk. In these circumstances, interviewees were asked to provide the information in a different format. For example, some estimated the size and number of items (for example: eggs) consumed per year, whereas others gave the number of plants in a crop or the length and number of rows in which the crop was grown per year. The habits survey database converted these data into consumption rates (kg y<sup>-1</sup> for food and l y<sup>-1</sup> for milk) using a variety of conversion factors. These factors included produce weights (Hessayon, 1990 and 1997; Good Housekeeping, 1994), edible fraction data researched by Cefas, and information supplied by the Meat and Livestock Commission.

## 5.3. Rounding and grouping of data

The consumption and occupancy data in the text of this report are rounded to two significant figures, except for values less than 1.0, which are rounded to one decimal place. This method of presentation reflects the authors' judgement on the accuracy of the methods used. In the tables and annexes, the consumption rate data are presented to one decimal place. Occasionally, this rounding process causes the computed values (row totals, mean rates and 97.5<sup>th</sup> percentiles), which are based on un-rounded data, to appear slightly erroneous. Consumption rates less than 0.05 kg y<sup>-1</sup> are presented to two decimal places in order to avoid the value of 0.0 kg y<sup>-1</sup>. External exposure data are quoted as integer numbers of hours per year.

For the purpose of data analysis, foodstuffs were aggregated into food groups as identified in Table 16. Specific food types relevant to this survey are presented in the subsequent tables. The data are structured into groups when it is reasonable to assume that consistent concentrations or dose rates would apply within the group. For example, when considering terrestrial food consumption, all types of root vegetables are grouped together in a food group called root vegetables. For external exposure over river washed sediments, occupancies over the same substrate (for example: mud and grass) are grouped together.

Data were structured into age groups because different dose coefficients (in other words, the factors which convert intakes of radioactivity into dose) can apply to different ages. The ICRP revised its recommendations for the age groupings to be used in radiological assessments and these recommendations were adopted in the 2010 habits survey reports and thereafter. Consequently, the age ranges used in the habits survey reports prior to

2010 differ from those used currently. The age ranges used in this report and the names used for the age groups, based on the recommendations in ICRP 103 (ICRP, 2007), are shown in Table 1, together with those used in reports prior to 2010, for comparison.

**Table 1. Names of age groups and range of ages within each age group**

Name of age group used from 2010 onwards <sup>a</sup>	Age range in group used from 2010 onwards	Name of age group used prior to 2010	Age range in group used prior to 2010
<b>Infant</b>	0 to 5-year-old	3-month-old	Under 1-year-old
		1-year-old	1-year-old
		5-year-old	2-year-old to 6-year-old
<b>Child</b>	6-year-old to 15-year-old	10-year-old	7-year-old to 11-year-old
		15-year-old	12-year-old to 16-year-old
<b>Adult</b>	16-year-old and over	Adult	17-year-old and over

<sup>a</sup>In the 2010 reports only, the infant age group was called the 1-year-old age group and the child age group was called the 10-year-old age group.

Since there are fewer age groups for children in the current regime, there should, in general, be more observations in each group, resulting in greater robustness in the data. However, data since 2010 will not be directly comparable with data prior to 2010, since the age ranges in the age groups will be different.

For direct radiation pathways, the data were grouped into distance zones from the nuclear site boundary as a coarse indication of the potential dose rate distribution due to this source of exposure. The bands used in this report were: 0 - 0.25 km; >0.25 - 0.5 km; >0.5 - 1.0 km. These distance bands are also useful when assessing exposure to gaseous discharges.

## 5.4. Approaches for the identification of high rates

The habits data have been analysed to identify high rates of consumption, occupancy and handling, which can be used in radiological assessments. Two approaches have been used:

Firstly, the 'cut-off' method described by Hunt and others (1982) was used. With the 'cut-off' method, the appropriate high rate was calculated by taking the arithmetic mean of the values between the maximum observed rate and one third of the maximum observed rate. In this report, the term 'high-rate group' is used to represent the individuals derived by the 'cut-off' method. The mean of the high-rate group was calculated for each food group, river washed substrate and handling pathway identified in the survey. Secondly, the 97.5<sup>th</sup> percentile rate was calculated for each group. The use of percentiles accords with

precedents used in risk assessments of the safety of food consumption. It should be noted that the interviewees in this study are often selected and, therefore, the calculated percentiles are not based on random data.

Mean and 97.5<sup>th</sup> percentile consumption rates for adults, based on national statistics, are provided as a baseline for comparison with the observed rates. The rates based on national statistics are referred to as generic rates in this report and have been taken from Byrom and others, 1995.

The mean rates for the high-rate groups for children and infants for consumption, occupancy over river washed substrates and handling pathways, have been calculated. However, in cases where few child or infant observations were identified, an alternative approach that may be used for assessments is to estimate the mean rates for the high-rate groups for children and infants by applying scaling ratios to the mean rates for the high-rate groups for adults. Ratios for this purpose for the consumption and occupancy of river washed substrates pathways, based on generic 97.5<sup>th</sup> percentile rates, are provided in Annex 5. The age ranges within the age groups in Annex 5 do not correspond exactly with the age ranges within the age groups used throughout the rest of this report, but these ratios are the best available data for estimating child rates and infant rates from adult rates. Adult to child and adult to infant ratios are not available for handling pathways.

For use in assessments of prenatal dose, consumption and occupancy rates are provided in Annex 6 for women of childbearing age. The age range used in this report for women of childbearing age is 15 – 44 years old, which is based on the classification used by the Office of National Statistics ([www.ons.gov.uk](http://www.ons.gov.uk)).

For the direct radiation pathway, mean occupancy rates and 97.5<sup>th</sup> percentile rates have not been calculated. Such an analysis is of limited value without a detailed knowledge of the spatial extent of dose rates due to direct radiation.

## **5.5. Profiles of habits survey data for use in ‘total dose’ assessments**

The survey data have been analysed to produce profiles of consumption and occupancy rates according to the method described by Camplin and others, 2005. The profiles for adults are used to assess total dose integrated across all pathways of exposure in the RIFE reports (for example: EA, FSA, FSS, NRW, NIEA, and SEPA, 2021).

Matrices of profiles for adults, children, infants and women of childbearing age are presented in Annex 7, Annex 8, Annex 9 and Annex 10. Within each matrix the means for the high-rate groups, as determined by the ‘cut-off’ method, are presented on the diagonal. Except for the direct radiation pathway, the figures across the rows are the means of the consumption and occupancy rates for the other pathways for the individuals within that

profile. For the direct radiation pathway, the figure denotes the proportion of the individuals within that profile who spend time within the direct radiation survey area.

## 5.6. Data quality

To ensure the quality of the data collected during the survey fieldwork and presented in the report, the following procedures have been employed:

- Experienced scientific staff were used for the fieldwork and data analysis. They had been trained in the techniques of interviewing and obtaining data for all pathways that were relevant to the survey being conducted. Where individuals offered information during interview that was considered unusual, they were questioned further in order to double-check the validity of their claims.
- Where possible, interviewees were contacted again to confirm the results of the initial interview if, when final consumption or occupancy rates were calculated, observations were found to be high in relation to our experience of other surveys. Local factors were considered in these cases.
- Data were processed in a purpose-built habits survey database using a consistent set of conversion factors.
- Data were stored in a database in order to minimise transcription and other errors.
- Draft reports were reviewed by the EA, the FSA and the ONR.
- Final reports were only issued when the EA, the FSA and the ONR were entirely satisfied with the format and content of the draft reports.

# 6. Aquatic radiation pathways

## 6.1. Aquatic survey area

The aquatic survey area (shown in Figure 4) covered the River Derwent and its banks from the Raynesway Bridge (A5111) downriver to the Station Road Bridge (B5010). The same aquatic survey area was used in the previous survey in 2009.

The River Derwent and its secondary channels meander downstream from west to east through the aquatic survey area. Based on historic map data (nls.uk) the course of the River Derwent was straightened in the first half of the 20<sup>th</sup> century, resulting in multiple large islands being located along the river. The southern bank was accessible via a National Cycle Route and National Trail, whereas the northern bank was mostly inaccessible due to private land and overgrown shrubbery.

The aquatic survey area is described in detail below from west to east.

### ***Raynesway Bridge to the Derwent Flood Barrier***



**Figure 7. Raynesway Bridge to the Derwent Flood Barrier**

The River Derwent flows east of the Raynesway Bridge and splits off into a secondary channel around an island where the Waste Transfer Station is located. Activities were not identified on the island as it was privately owned and a fence restricted public access. A public footpath running along the northern bank of the river was accessed from the west of the Raynesway Bridge. The footpath followed the river under the bridge and along the secondary channel to the Waste Transfer Station boundary fence for approximately 0.9 km. The channel continued around the island until it rejoined the main river after the Derwent Flood Barrier. A private road with a locked gate, managed by a local angling association, provided access to the northern part of the channel. It was reported that the angling association owned the fishing rights to this stretch of the secondary channel and maintained the angling locations along riverbanks (Figure 8). Angling was not observed along this stretch of the channel at the time of the survey. The public footpath was not included in the aquatic survey area as it was at the top of a high bank and was not river washed.



**Figure 8. An angling location opposite the Waste Transfer Station island**

East of the Raynesway Bridge, a National Cycling route follows the River Derwent on the southern bank. The cycling path allowed for easy access along the whole southern bank of the aquatic survey area and was used for multiple activities including cycling, walking, dog walking and horse riding. However, only activities undertaken on river washed areas were included in the survey data. Angling was not observed on the stretch of the River Derwent between the Raynesway Bridge and the Derwent Flood Barrier.

### ***Pebble Beach to the electro-mechanical barrage***



**Figure 9. Pebble Beach to the electro-mechanical barrage**

A small shingle beach area (Pebble Beach) was located directly east of the Derwent Flood Barrier (Figure 10) and was easily accessed from the National Cycle route. Warning signs deterring swimming in the river were displayed in this area and it was reported that swimming is strongly discouraged due to historic fatalities. Families were observed playing on the pebble area for brief periods of time. The local angling association owned the rights to fish along the whole stretch of the River Derwent's southern bank in the aquatic survey area, and displayed signage throughout the area. No angling was observed at Pebble Beach, but the signage evidenced that it could be undertaken. Angling locations maintained by the local angling association were located on the riverbank at regular intervals along the length of the cycle path towards the electro-mechanical barrage. Anglers spent their time on mud or grass which was river washed.

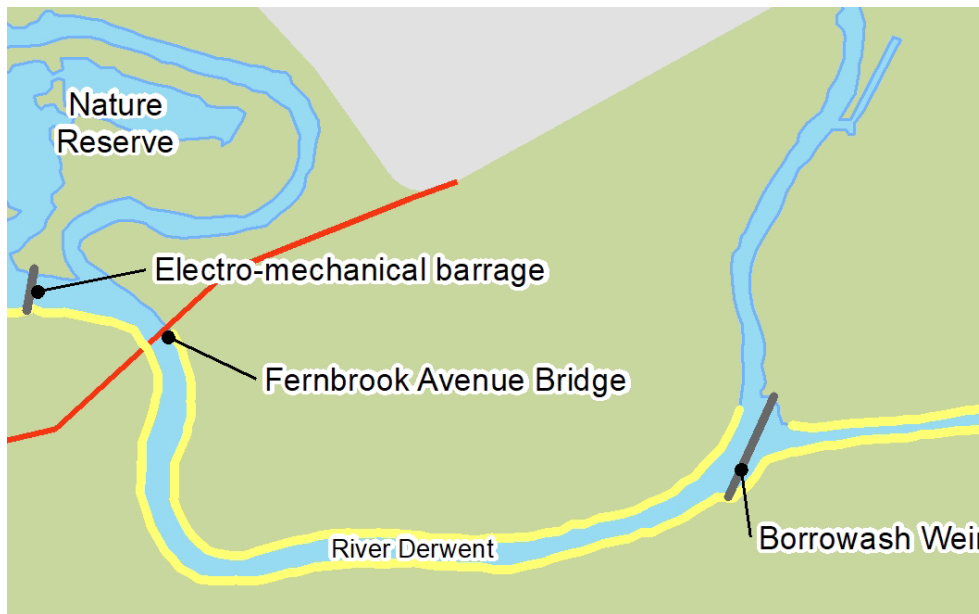


**Figure 10. Pebble Beach**

The northern bank of this stretch of river was private land and was not accessible to the public or any angling associations. The River Derwent splits into a secondary channel at the electro-mechanical barrage creating a loop around a private nature reserve. The

discharge outfall from the sewage treatment works (which the RRSL site discharges to) is located in the north-western area of this loop. This location is surrounded by privately owned land, and it is unlikely members of the public would be able to access this area. The secondary channel continued to be inaccessible past the outfall.

### ***Electro-mechanical barrage to the Borrowash Weir***



**Figure 11. Electro-mechanical barrage to the Borrowash Weir**

The secondary channel around the nature reserve rejoins the River Derwent directly east of the electro-mechanical barrage. The northern bank was inaccessible for approximately 300 metres from this point. A private road, used by a local angling club, ran along the river from the Fernbrook Avenue Bridge to the Borrowash Weir. The road was lined with multiple angling jetties which were used and maintained by members of the local angling club. The land running adjacent to the private road, previously owned by the chemical works, was being developed into commercial units, with one under construction at the time of the survey.





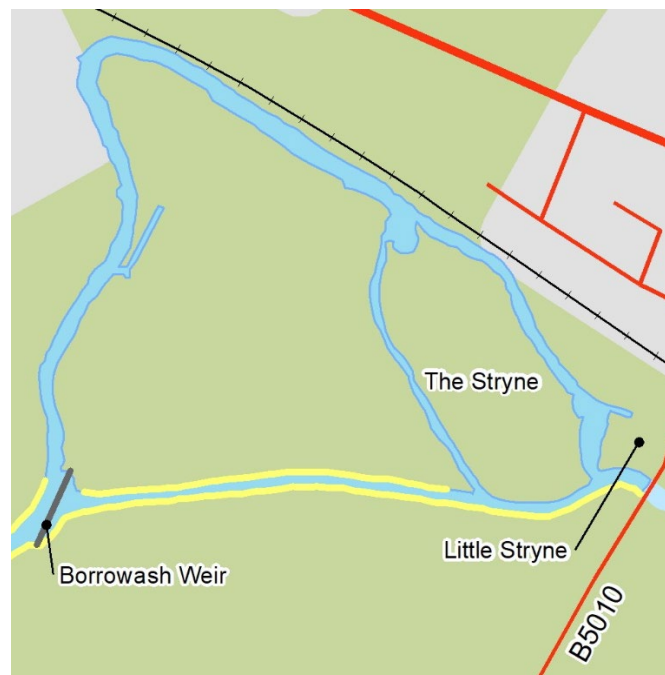
**Figure 12. Electro-mechanical barrage**

The southern bank of the river was fenced off for a short distance after the electro-mechanical barrage for safety reasons (Figure 12). Many angling spots were located along the southern bank of the River Derwent from the Fernhook Avenue Bridge to the Borrowwash Weir. A private car park for the local angling association members was located a short distance from the cycling path. This stretch of river had the most angling locations within the aquatic survey area (Figure 13).



**Figure 13. Angling location along the River Derwent between Fernhook Avenue Bridge and Borrowwash Weir**

## ***Borrowwash Weir to the B5010 Bridge***



**Figure 14. Borrowwash Weir to the B5010 Bridge**

The River Derwent splits into a secondary channel prior to the Borrowwash Weir (Figure 15). The secondary channel flows around a series of three islands, divided by smaller waterways. Most of the islands' riverbanks were not accessible to the public due to farmland on one bank and a railway line on the other. The largest island was used as farmland and was accessed via a private road across a bridge. The local angling association were allowed to use this private road to access the large island's southern bank along the main stretch of the River Derwent. The two smaller islands were known locally as the Stryne and Little Stryne. The Stryne was accessed via a small footbridge from Little Stryne. A private camp site was located on Little Stryne, limiting public access to the riverbanks along the channels (Figure 16). However, the camp site permitted members of the public to access the riverbank for angling at a daily charge.

The southern bank continued to be accessible to the public with angling locations situated along the River Derwent. The number of angling locations reduced as the cycle path neared the B5010.



**Figure 15. Borrowash Weir**



**Figure 16. The River Derwent from the B5010 Bridge**

## 6.2. Commercial fisheries

No commercial fisheries were identified in the survey area. It was reported that there were signal crayfish in the River Derwent. However, no licences had been granted by the EA for their removal.

## 6.3. Angling

Angling was popular throughout the survey area and was mainly undertaken on the south bank of the River Derwent. An angling association and an angling club had fishing rights within the survey area.

The angling association had approximately 1000 members, but the association's fishing rights covered waterways across Derby City, and only 40% of the members were estimated to routinely undertake angling in the aquatic survey area. Their rights covered the south bank of the River Derwent for the length of the aquatic survey area and two sections of the north bank. Access to the south bank was good throughout the survey area due to the close proximity to the National Cycle Route and National Trail. The large island was only accessible for season ticket holders and was accessed via private road with a locked gate. The angling association is a well established angling club with bailiffs routinely patrolling the river to prevent non-members from angling and deter any poaching. The angling association holds multiple large scale competitions which attracts anglers from across a large area. Three private car parks used by the local angling association members were located close to the River Derwent for ease of access to the angling locations.

The angling club had approximately 50 members at the time of the survey. The club owned the rights to fish along the northern bank of the River Derwent from the electro-mechanical barrage to Borrowash Weir. The angling club accessed this stretch of the riverbank via a private road with a locked gate. The riverbank was maintained by the club and was lined with multiple wooden jetties. The club also held regular competitions for members only.

The association and the club operated a strict catch and release policy, so consumption of fish from the River Derwent was not identified. The River Derwent is subject to a closed season lasting from 15<sup>th</sup> March to 15<sup>th</sup> June each year, during this time angling for coarse fish is not permitted.

## 6.4. Sewage treatment works

Activities at the sewage treatment works were investigated because liquid waste from the RRSL site is discharged via the sewer pipes to the sewage treatment works. Discharges from the site enter the sewerage system where it is combined with other sources before entering the sewage treatment works.

During the sewage treatment process, solid matter settles out to form sludge. Further treatment using a gravity belt and centrifuge is undertaken on the sludge to remove water, which produces sewage cake (dried sewage sludge). Following treatment, the liquid component is discharged via outfalls to the River Derwent and the dried sludge is stored or disposed to landfill. Additionally, the dried sewage sludge is distributed by contractors as fertiliser to local farmland in Derbyshire and Leicestershire. However, no farms in the terrestrial survey area were identified to be using dried sewage sludge on their land.

Employees at the sewage treatment works spent time in close proximity (<10 metres) to the liquid sewage sludge and dried sewage sludge. Activities undertaken in close proximity to the sewage sludge included servicing pumps, cleaning grit traps, centrifuging and relocation of dried sewage sludge. Occupancy rates for these employees are presented in Section 6.9 and Table 19.

## 6.5. Food consumption data

The consumption of aquatic foods from the River Derwent was not identified at the time of the survey. However, it was reported that members of various communities were fishing for and consuming coarse fish from the River Derwent within the aquatic survey area. Additionally, multiple anglers reported the increased presence of signal crayfish in the River Derwent and homemade traps being regularly retrieved from the river. As in 2009, there were unconfirmed reports that coarse fish were being caught for consumption, therefore, it is suggested that a consumption rate of 1 kg y<sup>-1</sup> for coarse fish be considered for use in radiological dose assessments. In 2021, there were additional reports of signal crayfish consumption and it is suggested that 1 kg y<sup>-1</sup> for signal crayfish is considered for use in dose assessments (Annex 4).

## 6.6. Occupancy over river washed substrates

Occupancy rates over river washed areas for adults are presented in Table 7. Occupancy rates over river washed substrates for children and infants were not identified. It should be noted that there is often more than one substrate at one named location and that substrates at a given location are prone to change over time. Activities were assigned to the predominant substrate over which they were taking place.

### **Adults' occupancy rates over river washed substrates**

Table 2 presents a summary of the adults' occupancy rates over river washed substrates in the aquatic survey area. The table includes the mean occupancy rates for the high-rate groups and the observed 97.5<sup>th</sup> percentile rates.

**Table 2. Summary of adult's occupancy rates over river washed substrates**

River washed substrate	Number of observations	Number of people in the high-rate group	Maximum of the high-rate group (h y <sup>-1</sup> )	Mean of the high-rate group (h y <sup>-1</sup> )	Observed 97.5 <sup>th</sup> percentile (h y <sup>-1</sup> )
Mud and grass	31	6	350	246	350

The activity undertaken by people in the adult high-rate group for occupancy over mud and grass was angling at various locations along the River Derwent.

## 6.7. Gamma dose rate measurements

Gamma dose rate measurements were taken over two river washed substrates. All measurements were taken at a height of 1 metre above the substrate. The results are presented in Table 18 and are summarised in Table 3.

**Table 3. Summary of gamma dose rate measurements taken over river washed substrates**

Substrate	Number of measurements taken	Minimum gamma dose rate at 1 metre <sup>a</sup> (μGy h <sup>-1</sup> )	Maximum gamma dose rate at 1 metre <sup>a</sup> (μGy h <sup>-1</sup> )
Mud	8	0.067	0.077
Mud and grass	1	0.074	0.074

Notes

<sup>a</sup> These measurements have not been adjusted for background dose rates.

For comparison, natural background rates across the UK have been estimated at 0.05 μGy h<sup>-1</sup> over sandy substrates, 0.07 μGy h<sup>-1</sup> over mud and over salt marsh, and 0.06 μGy h<sup>-1</sup> over other substrates (EA, FSA, FSS, NRW, NIEA and SEPA, 2021).

## 6.8. Handling of fishing gear and sediment

Handling fishing gear that has become entrained with fine sediment particles, or handling sediment while undertaking activities such as bait digging or mollusc collecting, can potentially give rise to skin exposure from beta radiation. Doses to the skin are considered within the dose limitation system (ICRP, 1992).

Fishing gear can also be a source of gamma exposure due to occupancy in the vicinity of the gear. However, this pathway is minor compared with the exposure received during occupancy over river washed areas and it has therefore been omitted from the report. Handling of angling equipment was not considered to be a significant pathway. Therefore, as in previous surveys, data were not collected for this pathway.

## **6.9. Exposure to liquid sewage and dried sewage sludge**

Activities at the sewage treatment works were investigated because liquid waste from the RRSL site is discharged via the sewer pipes to this sewage treatment works. The occupancy rates for employees in close proximity (< 10 meters) to liquid sewage sludge and dried sewage sludge are presented in Table 19.

Ten employees undertaking the same activities had occupancy rates of 47 h y<sup>-1</sup> in close proximity (<10 meters) to liquid sewage sludge. The duties included servicing pumps and cleaning grit rag traps. Three employees were responsible for undertaking the process to remove liquid from the sewage sludge. These employees had occupancy rates of 297 h y<sup>-1</sup> in close proximity (<10 meters) to liquid sewage sludge and 70 h y<sup>-1</sup> in close proximity (<10 meters) to dried sewage sludge.

## **6.10. Water based activities**

Activities taking place in or on water can lead to ingestion of water and/or inhalation of spray. These pathways are generally considered to be of minor radiological importance in comparison with other exposure pathways such as the consumption of foods produced in the vicinity of a nuclear site. However, relevant data have been collected for consideration in dose assessments.

Activities involving a high likelihood of an individual's face submerging under water have been classified as activities 'in water', as they are more likely to lead to ingestion of water. All other water-based activities have been classified as activities 'on water'.

It was reported that children had been seen paddling in the River Derwent near Pebble Beach and swimming in the river near the B5010 Bridge. Sub-aqua diving and kayaking were identified taking place along the River Derwent just outside of the aquatic survey area to the west. However, these activities were included in the direct radiation survey area. No activities taking place in or on water were identified taking place in the aquatic survey area at the time of the survey. Signage to discourage swimming is displayed in multiple locations throughout the aquatic survey area.

# 7. Terrestrial radiation pathways

## 7.1. Terrestrial survey area

The terrestrial survey area (Figure 5) covered the land and watercourses within 5 km of the RRSL site centre (National Grid Reference: SK 381 348).

The city of Derby occupied a large proportion of the terrestrial survey area to the north, south and west. Multiple city wards were located within the terrestrial survey area including Chaddesden and Oakwood in the north, Spondon in the east, Alvaston, Osmaston and Sinfin in the south and Normanton, Derby City Centre and Littleover in the west. These wards were comprised of residential, industrial and commercial areas. The villages of Ockbrook and Borrowash were also within the terrestrial survey area. The land in the western sector of the survey area was predominantly agricultural. Consumption of foods from the River Derwent and its waterways within the terrestrial survey area were also covered by the terrestrial survey.

Interviews were conducted at eight working farms in the Derby terrestrial survey area. These farms produced the following:

- Arable crops
- Cows' milk
- Beef cattle
- Lambs

The production of barley, beans and wheat for human consumption was identified in the survey area. Grass (for silage and haylage), wheat, corn, barley and linseed were grown for animal feed. Farmers and their families were consuming beef, lamb and milk produced commercially on their own farms. No smallholdings were identified in the survey area.

A total of 25 allotment sites were located within the terrestrial survey area. Interviews were conducted with allotment holders at 11 allotment sites comprising a total of approximately 850 plots. A wide variety of fruit and vegetables were grown on the allotments and small quantities of produce were grown on a small number of private gardens.

Four beekeepers were identified with a total of 24 hives in the survey area. Twenty-two hives were located on farmland within the survey area and two hives were located to the north-west of the site. The average production of honey per hive on the allotment site was 45 kg y<sup>-1</sup>. The honey was consumed by the beekeepers, their families and friends.

Wild foods that were collected from within the survey area and consumed included blackberries, elderberries, elderflowers, garlic, hawthorn berries, mushroom, rosehips, and sloes. Game shooting was identified taking place on farmland within the 5 km terrestrial survey area. Pheasant and rabbit were shot and consumed. The consumption of



freshwater fish was not identified in the terrestrial survey area. Consumption of groundwater by humans and livestock was not identified.

## **7.2. Destination of food originating from the terrestrial survey area**

The destination of foods produced in the survey area included the following:

- Beef cattle were sold at livestock markets in Bakewell and Sheffield, and to local butchers outside the terrestrial survey area.
- Lambs were sold at livestock market at Melton Mowbray.
- Milk was sold to a national dairy distributor and through a local home delivery service in Derby and Nottingham. Additionally, ice cream produced from this milk was sold to 200 businesses located in the East Midlands.
- Wheat was milled for national distribution.
- Barley was milled and was exported internationally to over 60 countries.
- Beans were exported to the Lebanon.
- Animal feed including barley, corn, grass (for silage and haylage), linseed and wheat, were used for the farm's own livestock or sold to farms outside the survey area.

## **7.3. The potential transfer of contamination off-site by wildlife**

The potential transfer of contamination off-site by wildlife was investigated, since radionuclides could enter the food chain or contaminate the environment through this pathway. Routine wildlife control was undertaken on the site. This included managing the pigeon populations on-site by discouraging nesting with a bird scarer and limited culling of pigeons and rabbits on-site. The sites did not undertake any other routine controls, since the buildings are enclosed, and it is highly unlikely that wildlife could enter controlled areas.

## **7.4. Food consumption data**

Consumption data for locally produced foodstuffs potentially affected by deposition of gaseous discharges are presented from Table 20 to Table 33 for adults and Table 34 to Table 48 for children and infants. The mean consumption rates for the high-rate groups and the observed 97.5<sup>th</sup> percentile rates, calculated as described in Section 5.4 are given at the foot of each table.

In order to provide information relevant to monitoring and assessments studies, the consumption rate data collected during the survey were analysed to indicate the percentage that each food type contributed to each food group. The data are summarised in Table 49.

### Adults' consumption rates

Consumption of locally produced foods was identified in the following 14 food groups: green vegetables; other vegetables; root vegetables; potato; domestic fruit; milk; cattle meat; sheep meat; poultry; eggs; wild/free foods; rabbits/hares; honey; wild fungi. No consumption was identified in the following food groups: pig meat; venison; freshwater fish; freshwater plants.

Table 4 presents a summary of the adults' consumption rates for the foods consumed from the terrestrial survey area. The table includes the mean consumption rates for the high-rate groups and the observed 97.5<sup>th</sup> percentile rates. For comparison, the table also includes mean consumption rates and 97.5<sup>th</sup> percentile consumption rates based on national data, which are referred to as 'generic' data in this report.

**Table 4. Summary of adults' consumption rates of foods from the terrestrial survey area**

Food group	Number of observations	Number of high-rate consumers	Observed maximum for the high-rate group (Kg y <sup>-1</sup> or l y <sup>-1</sup> )	Observed minimum for the high-rate group (Kg y <sup>-1</sup> or l y <sup>-1</sup> )	Observed mean for the high-rate group (Kg y <sup>-1</sup> or l y <sup>-1</sup> )	Observed 97.5 <sup>th</sup> percentile (Kg y <sup>-1</sup> or l y <sup>-1</sup> )	Generic mean* (Kg y <sup>-1</sup> or l y <sup>-1</sup> )	Generic 97.5 <sup>th</sup> percentile* (Kg y <sup>-1</sup> or l y <sup>-1</sup> )
<b>Green vegetables</b>	202	27	81.4	27.7	40.8	47.6	15.0	45.0
<b>Other vegetables</b>	209	47	72.6	24.8	37.6	45.9	20.0	50.0
<b>Root vegetables</b>	201	17	72.6	24.8	41.9	54.2	10.0	40.0
<b>Potato</b>	161	21	127.0	44.0	74.2	75.0	50.0	120.0
<b>Domestic fruit</b>	171	11	53.1	19.4	39.3	43.9	20.0	75.0
<b>Milk</b>	14	8	182.5	132.1	161.3	182.5	95.0	240.0
<b>Cattle meat</b>	14	14	37.8	12.6	18.0	37.8	15.0	45.0
<b>Sheep meat</b>	5	5	2.9	2.9	2.9	2.9	8.0	25.0
<b>Poultry</b>	5	1	5.4	5.4	5.4	4.9	10.0	30.0
<b>Eggs</b>	19	12	17.8	8.9	13.9	17.8	8.5	25.0
<b>Wild/free foods</b>	46	5	5.5	2.3	3.0	2.5	7.0	25.0
<b>Rabbits/hares</b>	5	1	5.4	5.4	5.4	4.9	6.0	15.0
<b>Honey</b>	14	3	6.8	4.5	5.6	6.4	2.5	9.5
<b>Wild fungi</b>	4	4	0.5	0.5	0.5	0.5	3.0	10.0

\*Generic rates based on data from Byrom and others, 1995.

The observed mean consumption rate for the high-rate group was greater than the generic 97.5<sup>th</sup> percentile consumption rate for root vegetables. Nine of the mean consumption

rates for the high-rate groups exceeded the generic mean consumption rates. These were for green vegetables, other vegetables, root vegetables, potato, domestic fruit, milk, cattle meat, eggs and honey. Two of the observed 97.5<sup>th</sup> percentile consumption rates exceeded the generic 97.5<sup>th</sup> percentile consumption rates, which were for green vegetables and root vegetables.

### Children’s and infants’ consumption rates

Twenty-four individuals in the child age group and eight individuals in the infant age group were identified consuming foods from the terrestrial survey area.

Table 5 presents a summary of children’s consumption rates and Table 6 presents a summary of infants’ consumption rates. The tables include the mean consumption rates for the high-rate groups and the observed 97.5<sup>th</sup> percentile rates. No generic data have been determined for the child and infant group. In the child age group, no consumption of foods from the following food groups was identified: milk; pig meat; poultry; rabbits/hares; honey; wild fungi; venison; freshwater fish; freshwater plants. In the infant age group, no consumption of foods from the following food groups was identified: milk; pig meat; sheep meat; poultry; eggs; rabbits/hares; honey; wild fungi; wild/free foods; venison; freshwater fish; freshwater plants.

**Table 5. Summary of children’s consumption rates of foods from the terrestrial survey area (Age range: 6-year-old to 15-year-old)**

Food group	Number of observations	Number of high-rate consumers	Observed maximum for the high-rate group (Kg y <sup>-1</sup> )	Observed minimum for the high-rate group (Kg y <sup>-1</sup> )	Observed mean for the high-rate group (Kg y <sup>-1</sup> )	Observed 97.5 <sup>th</sup> percentile (Kg y <sup>-1</sup> )
<b>Green vegetables</b>	17	15	13.6	5.0	8.2	13.6
<b>Other vegetables</b>	17	10	23.2	9.8	15.5	23.2
<b>Root vegetables</b>	17	11	10.4	3.8	5.6	10.4
<b>Potato</b>	17	10	19.2	6.7	14.4	19.2
<b>Domestic fruit</b>	15	1	5.6	5.6	5.6	4.3
<b>Cattle meat</b>	4	4	12.6	9.5	11.0	12.6
<b>Sheep meat</b>	3	3	2.9	2.2	2.7	2.9
<b>Eggs</b>	3	3	3.5	2.6	3.2	3.5
<b>Wild/free foods</b>	5	3	0.9	0.7	0.9	0.9

**Table 6. Summary of infants' consumption rates of foods from the terrestrial survey area (Age range: 0 – 5-year-old)**

Food group	Number of observations	Number of high-rate consumers	Observed maximum for the high-rate group (Kg y <sup>-1</sup> )	Observed minimum for the high-rate group (Kg y <sup>-1</sup> )	Observed mean for the high-rate group (Kg y <sup>-1</sup> )	Observed 97.5 <sup>th</sup> percentile (Kg y <sup>-1</sup> )
<b>Green vegetables</b>	7	2	12.6	8.5	10.5	12.0
<b>Other vegetables</b>	7	2	10.6	9.8	10.2	10.5
<b>Root vegetables</b>	7	3	5.8	3.5	5.0	5.8
<b>Potato</b>	5	5	10.5	4.8	6.7	10.0
<b>Domestic fruit</b>	7	2	1.2	0.5	0.8	1.1
<b>Cattle meat</b>	1	1	6.3	6.3	6.3	Not applicable

## 8. Direct radiation pathways

### 8.1. Direct radiation survey area

The direct radiation survey area (Figure 6) covered the land and watercourses within 1 km of the two RRSL nuclear licensed site boundaries. The survey area was split into three zones, which were 0 – 0.25 km, >0.25 – 0.5 km and >0.5 – 1.0 km from the RRSL nuclear licensed site boundaries. The occupancy data collected from the direct radiation survey area are also applicable to inhalation and external exposure pathways arising from gaseous releases from the site.

The land within the direct radiation survey is predominantly commercial and residential. The residential areas are located in the outer zone of the survey area to the north and south, with a small proportion of residential properties overlapping into the >0.25 – 0.5 km zone of the survey area. A new residential estate in Wilmorton, with approximately 420 houses, has been developed south-west of the RRSL nuclear site with a number of these residences identified as being the closest to the site. Previously, in 2009, a number of prefabricated homes located near Alvaston Park were identified as being closest to the RRSL boundary. Three schools were located in residential estates across the survey area.

A range of commercial properties were located along Raynesway (A511) and within the Pride Park area located north-west of the nuclear site. The land to the east of the RRSL nuclear site is predominantly occupied by waste facilities, including a sewage treatment works and a waste treatment facility. A new business park is being developed on 70 acres of unused land adjacent to the north side of the RRSL nuclear site. Alvaston Park located to the south of the RRSL nuclear site was the main hub for leisure activities within the

survey area, other areas included a cricket club, football stadium and the Derby Arena. The Wilmorton allotment site, with approximately 22 plots, was located within the >0.5 – 1.0 km zone to the south-west of the RRSL site.

## **8.2. Residential activities**

Residential properties were mainly located in the Cherrytree Hill area to the north, the Crewton area to the south and the new housing development in Wilmorton to the south-west. Interviews were not undertaken at individual residences due to COVID-19 mitigations. Instead, people were interviewed while undertaking other activities (such as dog walking or tending an allotment plot) and were asked about time spent in the direct radiation survey area. Interviews were conducted with members of the public from 16 residences, two of which had children. All 16 residences were located in the two outer zones. One of which was located on the new Wilmorton residential estate within the >0.25 – 0.5 km zone and 15 were located in the >0.5 – 1 km zone. The majority of residents interviewed lived in the >0.5 – 1 km zone to the south of the RRSL nuclear site, however, a residential care home with over 30 residents was located to the north of the nuclear site.

## **8.3. Leisure activities**

A large number of leisure activities were undertaken in the direct radiation survey area. The activities were predominantly undertaken at Alvaston Park which was located on the south bank of the River Derwent. The park was popular due to its range of amenities including: a children's play area, basketball courts, playing fields, a skate park, a BMX trail, a lake, a café and a leisure centre. Many people were walking, dog walking, playing, cycling and angling. The BMX track was used for regular training sessions and races throughout the year by one of the largest BMX clubs in England. The lake in Alvaston Park was stocked with carp and was maintained by members of an angling club. It was a popular angling location. Additionally, some of the club members spent time angling along the banks of the River Derwent to the west of the Raynesway Bridge (which was not in the aquatic survey area).

A cricket club ground was located adjacent to the southern boundary fence of the RRSL site, with approximately 100 members who regularly spend time on the grounds. The Pride Park area located to the north-west of the RRSL nuclear site had multiple leisure facilities. The Pride Park Stadium is home to the Derby County Football Club and has hosted concerts and other large events with its 33,000 seat capacity. The Derby Arena was developed in 2015 with multiple sports leisure facilities available for public use including a velodrome, a gym and sports courts. The arena also has the capacity to host theatre productions and shows. A fenced nature sanctuary is located adjacent to the sports facilities and was not accessible to the public.

## 8.4. Commercial activities

The direct radiation survey area is heavily commercialised to the west, north-west and east of the RRS� nuclear site. The land to the west and north-west of the site is comprised of large retail outlets, restaurants, automotive dealerships, a children’s nursery, offices and small areas of commercial units. The sewage treatment works, which processes liquid discharges from the RRS� site, and the Waste Treatment Facility utilise most of the land to the east of the RRS� nuclear site. A number of commercial properties are located adjacent to the RRS� site including manufacturing companies, construction companies and car auctions. Derby Parks Council are responsible for Alvaston Park located in the direct radiation survey area. Derby Parks managed the café, leisure facilities and ground maintenance of the park and employed staff in these areas.

Interviews were conducted at four businesses and the Derby Parks Council, one was located in the 0 – 0.25 km zone, one was located in the >0.25 – 0.5 km zone and three were located in the >0.5 – 1.0 km zone. The number of employees at these businesses ranged from 11 to 85.

## 8.5. Occupancy rates

Table 50 presents indoor, outdoor and total occupancy data for adults, children and infants. An analysis of the data by distance zones and occupancy rates is shown in Table 51. A summary of occupancy rates in the direct radiation survey area is presented in Table 7. Where generic data for groups of people were collected, for example employees of businesses, only representative examples have been included in the presented data.

**Table 7. Summary of direct radiation occupancy rates**

Zone	Number of observations	Highest indoor occupancy (h y <sup>-1</sup> )	Highest outdoor occupancy (h y <sup>-1</sup> )	Highest total occupancy (h y <sup>-1</sup> )
0 - 0.25 km	67	1831	2503	2503
>0.25 - 0.5 km	39	6560	731	7291
>0.5 - 1.0 km	92	8386	3650	8760

### 0 - 0.25 km from the nuclear licensed site boundary

Occupancy data for 67 individuals in the 0 - 0.25 km zone were included in the analysis. The observations were for 11 employees, 10 anglers, two bailiffs, five individuals undertaking maintenance, 26 cricket club members, five dog walkers, two sub-aqua diving and kayaking, one birdwatching, walking and cycling, two individuals going to the gym and four individuals visiting Alvaston Park. The highest indoor occupancy rates were for employees and the highest outdoor and total occupancy rates were for an angler.

### >0.25 - 0.5 km from the nuclear licensed site boundary

Occupancy data for 39 individuals in the >0.25 - 0.5 km zone were included in the analysis. The observations were for two residents, 12 employees, 12 individuals playing, nine dog walkers, two anglers, one skateboarder, one walker. The highest indoor, outdoor and total occupancy rate was for a resident who works from home.

### >0.5 - 1.0 km from the nuclear licensed site boundary

Occupancy data for 92 people in the >0.5 - 1.0 km zone were included in the analysis. The observations were for 36 residents, 45 employees, 10 children attending nursery and one individual playing football. The highest indoor and total occupancy rates were for care home residents and the highest outdoor occupancy was for a resident with an allotment plot in the >0.5 - 1.0 km zone.

## 8.6. Gamma dose rate measurements

Gamma dose rates were only measured outdoors throughout the Derby direct radiation survey area due to interviews not being conducted at residences. Where possible, outdoor measurements were taken approximately 5 to 10 metres from the nearest building and over grass. Gamma dose rate measurements over grass were taken at locations further than 5 km from the site centre to obtain background dose rates. All measurements were taken at a height of 1 metre above the substrate using multiple Thermo RadEye GX Survey Meters, each connected to a compensated Geiger-Müller tube. The outdoor measurements have not been adjusted for background dose rates. The results are presented in Table 52 and are summarised in Table 8.

**Table 8. Summary of gamma dose rate measurements taken outdoors in the direct radiation survey area**

Substrate	Number of measurements taken	Minimum gamma dose rate at 1 metre ( $\mu\text{Gy h}^{-1}$ )	Maximum gamma dose rate at 1 metre ( $\mu\text{Gy h}^{-1}$ )
<b>Outdoor measurements<sup>a</sup></b>			
Concrete	2	0.075	0.113
Grass	3	0.076	0.084
Mud and stones	2	0.075	0.086
<b>Background</b>			
Grass	4	0.073	0.080

### Notes

<sup>a</sup> These measurements have not been adjusted for background dose rates.

Of the seven measurements taken outdoors at locations within the direct radiation survey area, four readings were higher than the maximum background reading. Since gamma dose rate measurements are influenced by the nature of building materials, the substrate

over which they are taken, and many other factors, the measurements taken in residential areas are expected to be higher than those taken in rural areas.

The gamma dose rates can be compared with readings taken by the RIMNET programme, which continuously monitors radiation levels at a network of 92 fixed monitors and 100 mobile monitors distributed throughout the UK ([www.gov.uk](http://www.gov.uk)). The nearest RIMNET station to Derby was at Nottingham, which was approximately 20 km away. The ambient (background) gamma dose rates at Nottingham from July to September, which is the most recent data at the time of reporting, ranged from 0.09  $\mu\text{Gy h}^{-1}$  to 0.14  $\mu\text{Gy h}^{-1}$ . All the outdoor readings taken during the Derby habits survey were within or below this range.

## 9. Uses of habits data for dose assessments

### 9.1. Combined pathways

In determining habits data for the purposes of assessing radiological doses to the public, it may be necessary to consider a combination of pathways. Data are provided in Annex 1, Annex 2 and Annex 3 so that the full effect of combining pathways can be assessed for individual observations, given the concentrations and dose rates for a particular assessment. The rates for individuals in the high-rate groups are emboldened. In some circumstances, it will be possible to make simplifying assumptions and define the consumption and external exposure rates appropriate to a series of potential high-rate groups.

The most extensive combinations of pathways for adult dose assessment are shown in Table 54. Each of the 13 combinations shown in Table 54 represents an actual individual (or individuals) from Annex 1 who has positive data (irrespective of the magnitude), for each pathway marked with a cross. Other individuals from Annex 1 have combinations that are not listed in Table 54 because they have fewer pathways and a dose assessment for them would be adequately covered by one of the 13 listed combinations.

### 9.2. Prenatal dose assessment

Dose assessment of prenatal children was introduced routinely for the first time in the Radioactivity in Food and the Environment report for 2005 (EA, EHS, FSA and SEPA, 2006), following the publication of recommendations by the Radiation Protection Division of the UKHSA (formerly, Health Protection Agency) (National Radiological Protection Board, 2005). The adopted approach is to use the consumption and occupancy data for women of childbearing age in order to calculate the potential dose to prenatal children. Therefore, consumption and occupancy data collected during the Derby habits survey for females of childbearing age are presented in Annex 6. The Office of National Statistics classifies women to be of childbearing age if they are between 15 and 44 years old ([www.ons.gov.uk](http://www.ons.gov.uk)); this age range has been used in Annex 6. It was not possible to collect



ages for all female observations during the habits survey. However, these females with unknown ages have been included in Annex 6 as they might be women of childbearing age.

### **9.3. 'Total dose' assessment**

The UK environment agencies and the FSA have considered ways of using habits data to estimate total dose retrospectively. The adopted approach is to use the adult consumption and occupancy data collected in each habits survey to create a matrix with a series of habits profiles for each site. The National Dose Assessment Working Group (NDAWG) considered this approach to assessing retrospective total doses (Camplin and others, 2005) and agreed that using habits profiles is an appropriate approach. The method used to estimate total dose integrated across pathways is provided in the RIFE reports (for example: EA, FSA, FSS, NRW, NIEA and SEPA, 2021).

The relevant matrix for the adults' profiled habits data is shown in Annex 7. Additionally, profiles have been created for the child and infant age groups, and for women of childbearing age. These are shown in Annex 8, Annex 9 and Annex 10 respectively. Most of the groups used for the pathways in the matrices are exactly analogous to the groups used throughout this habits survey report, although the names used are slightly different, for example 'Fruit – Domestic' rather than 'Domestic fruit'. However, in order to increase the robustness of the 'total dose' assessments, some of the groups that are used throughout the rest of this report have been amalgamated together for use in the matrices. These are indicated in the notes at the foot of each matrix, where applicable. The 'Plume pathways' are related to inhalation and external exposure arising from gaseous discharges and use the total of the individuals' indoor and outdoor occupancy rates for each of the direct radiation zones. The 'Direct' pathway is expressed as the proportion of the profile members who are exposed to direct radiation.

## **10. Comparisons with the previous survey**

The results from this 2021 survey are compared below with results from the last combined habits survey undertaken at Derby in 2009. The aquatic, terrestrial and direct radiation survey areas in the 2021 survey were the same as those in the 2009 survey. The comparison of occupancy rates in the direct radiation area is for all age groups combined. All other comparisons are for adults only.

The change in method to reducing the number of fieldwork days and increasing desk-based interviews resulted in a reduction in the total number of people interviewed, however the results were comparable with the 2009 survey results. The main reduction in interviewees was for a number of businesses in the direct radiation area.

## 10.1. Aquatic survey area

Activities identified in the aquatic survey area in 2021 were similar to those identified in 2009. In both years, no commercial or hobby fisheries were identified on the River Derwent since the removal of fish and shellfish is not permitted. There were unconfirmed reports in both years that anglers (believed to be from specific communities) have caught fish for consumption, and that homemade traps for signal crayfish were routinely found along the aquatic survey area. The number of signal crayfish along the river has reportedly increased significantly since 2009.

No interviewees were consuming foods from the aquatic survey area in 2009 and 2021. As in 2009, there were unconfirmed reports that coarse fish were being caught for consumption, therefore, it is suggested that a consumption rate of 1 kg y<sup>-1</sup> for coarse fish be considered for use in radiological dose assessments. In 2021, there were additional reports of signal crayfish consumption and it is suggested that 1 kg y<sup>-1</sup> for signal crayfish is considered for use in dose assessments (Annex 4). In 2009 and 2021, no activities involving handling fishing gear or sediment were identified.

In 2009, occupancy over river washed substrates for adults was recorded over mud and grass. In 2021, activities were recorded over the same substrates, but have been grouped together as a singular substrate.

The following activities were undertaken by the individuals in the adult high-rate groups for occupancy over river washed substrates:

- In 2009: angling.
- In 2021: angling and riverbank maintenance.

A comparison between the 2009 and 2021 data for adult occupancy over river washed substrates is shown in Table 9.

**Table 9. Comparison between 2009 and 2021 occupancy rates over river washed substrates for adults**

River washed substrate	2009			2021		
	Number in high-rate group	Maximum occupancy rate (h y <sup>-1</sup> )	Mean occupancy rate for the high-rate group (h y <sup>-1</sup> )	Number in high-rate group	Maximum occupancy rate (h y <sup>-1</sup> )	Mean occupancy for the high-rate group (h y <sup>-1</sup> )
Mud	1	560	560	Not recorded		
Grass	2	936	639	Not recorded		
<b>Mud and Grass</b>	Not recorded			6	350	246

In 2009 and 2021, activities were undertaken throughout the aquatic survey area and were undertaken over both mud and grass. In 2021, compared to 2009, the mean occupancy rate over river washed substrates for the adult high-rate group decreased significantly. The

highest observed maximum occupancy rate in 2009 was 936 h y<sup>-1</sup> over grass and the highest observed maximum occupancy rate was 350 h y<sup>-1</sup> in 2021. In 2009, angling was the only activity identified to be taking place over the mud and grass substrates on the riverbank of the River Derwent, whereas river maintenance undertaken by angling clubs was identified in addition to angling in 2021. There was no specific reason for the decrease in occupancy rates over river washed substrates.

Occupancy rates in close proximity to liquid sewage sludge and dried sewage sludge were obtained in 2009 and 2021. The occupancy rates decreased in 2021.

Activities undertaken in and on water were not identified within the aquatic survey area in both 2009 and 2021. Handling rates for sediment and fishing gear were not identified in both 2009 and 2021.

## 10.2. Terrestrial survey area

Activities in the terrestrial survey area in 2021 were broadly similar to those in 2009. Eight farms were identified in 2021 and the principal types of farm produce within the area continued to be cow's milk, beef cattle, sheep meat and arable crops. The production of pork was identified in 2009, but this had ceased by 2021. The growing of fruit and vegetables in gardens and on an allotment site, beekeeping and the collection of wild/free foods were identified in both surveys. Organised game shooting on farmland was identified in 2009 and 2021. The consumption of pheasant and rabbit was identified in both years, but the consumption of pigeon was only identified in 2009.

The mean consumption rates for the adult high-rate groups for terrestrial food groups from the 2009 and 2021 surveys are shown in Table 10.

**Table 10. Comparison between 2009 and 2021 mean consumption rates (kg y<sup>-1</sup> or l y<sup>-1</sup>) for the adult high-rate groups for terrestrial food groups**

Food group	2009	2021
<b>Green vegetables</b>	27.7	40.8
<b>Other vegetables</b>	39.8	37.6
<b>Root vegetables</b>	40.5	41.9
<b>Potato</b>	113.0	74.2
<b>Domestic fruit</b>	49.7	39.3
<b>Milk</b>	250.0	151.3
<b>Cattle meat</b>	12.0	18.0
<b>Sheep meat</b>	4.0	2.9
<b>Pig meat</b>	12.0	Not identified
<b>Poultry</b>	6.0	5.4
<b>Eggs</b>	13.1	13.9
<b>Wild/free foods</b>	1.1	3.0
<b>Rabbits/hares</b>	9.0	5.4
<b>Honey</b>	1.5	5.6
<b>Wild fungi</b>	1.0	0.5

In 2021, compared to 2009, the mean consumption rates for the adult high-rate group increased in the following food groups: green vegetables; root vegetables; cattle meat; eggs; wild/free foods; honey. In 2021 the mean consumption rates for the adult high-rate groups decreased in the following food groups: other vegetables; potato; domestic fruit; milk; sheep meat; poultry; rabbits/hares; wild fungi. The consumption of pig meat was identified in 2009 but not in 2021. The most significant increases in the consumption rates were for green vegetables, cattle meat and honey, whilst the most significant decreases were for potato and milk.

In 2009, one beekeeper was identified in the terrestrial survey area. The consumption of honey increased in 2021 due the identification of four beekeepers who gave honey to their family and friends. No specific reasons were identified for the other changes in consumption rates.

In both 2009 and 2021, no human consumption of groundwater was identified. In 2009, livestock were identified drinking from a brook at one farm and one smallholding, however, in 2021 all livestock were supplied with mains water and did not have access to groundwater.

### 10.3. Direct radiation survey area

Activities identified in the direct radiation survey area in 2009 and 2021 were similar and included people residing, working and undertaking recreational activities. A comparison between the 2009 and 2021 direct radiation occupancy rates for all age groups combined, by zone, is presented in Table 11.

**Table 11. Comparison between 2009 and 2021 direct radiation occupancy rates (h y<sup>-1</sup>) for all age groups combined**

	2009	2021
<b>0 - 0.25 km</b>		
Highest indoor occupancy	2230	1641
Highest outdoor occupancy	1836	2503
Highest total occupancy	2860	2503
<b>&gt;0.25 - 0.5 km</b>		
Highest indoor occupancy	8482	6560
Highest outdoor occupancy	2350	731
Highest total occupancy	8578	7291
<b>&gt;0.5 - 1.0 km</b>		
Highest indoor occupancy	8320	8386
Highest outdoor occupancy	1449	3650
Highest total occupancy	8720	8760

The occupancy rates in the direct radiation survey area were similar in 2009 and 2021. In 2009, the highest indoor, outdoor and total occupancy rates in the 0 – 0.25 km zone were for employees. However, the highest indoor occupancy rates were for employees and the highest outdoor and total occupancy rates were for an individual undertaking angling on

the River Derwent in 2021. In 2009, the highest indoor and total occupancy was for a resident, and the highest outdoor occupancy was for an employee in the >0.25 – 0.5 km zone. In 2021, the highest indoor, outdoor and total occupancy rates in the in 2021 was for a resident. In both 2009 and 2021, the highest indoor, outdoor and total occupancy rates in the >0.5 – 1.0 km zone were for residents.

## 11. Main findings

The survey investigated three potential sources of public radiation exposure from the RRSLS site, which were:

- Discharges of liquid radioactive waste via a sewage treatment works into the River Derwent
- Discharges of gaseous radioactive waste to the atmosphere
- Emissions of direct radiation

Information was obtained by conducting interviews with members of the public including, for example, anglers, people spending time on river washed substrates, farmers, allotment holders, beekeepers and people spending time within the direct radiation survey area. These people were targeted because their diet and habits may cause them to be exposed to radioactivity from the site. However, it should be noted that the most exposed people can only be defined with the outcome of a dose assessment. Data for 464 individuals are presented in this report. All consumption rates recorded are only for foods produced, collected or caught from within the aquatic and terrestrial survey areas as defined in Section 4.3. The consumption and occupancy rates in this section are presented to two significant figures.

Due to the COVID-19 pandemic, an alternative survey approach was used to comply with government, Defra and Cefas COVID-19 guidance and protocols. This approach included reducing the number of days on fieldwork undertaking face-to-face interviews, only undertaking interviews outdoors, and undertaking desk-based interviews, to ensure the safety of interviewees and fieldwork staff during the collection of habits survey data. The new method was successful and interviewees were happy to take part in the survey. The change in method to reducing the number of fieldwork days and increasing desk-based interviews resulted in a reduction in the total number of people interviewed, however the results were comparable with the 2009 survey results. The main reduction in interviewees was for a number of businesses in the direct radiation area.

### 11.1. Aquatic survey area

The consumption of foods from the aquatic survey area was not identified in 2021. However, since there were unconfirmed reports that coarse fish and signal crayfish were

being caught and consumed, it was suggested that a consumption rate of 1 kg y<sup>-1</sup> for each was considered for use in radiological dose assessments.

The mean occupancy rate for the adult high-rate group over the river washed substrate was:

- 250 h y<sup>-1</sup> for mud and grass

The consumption of aquatic foods from the survey area was not identified.

## **11.2. Terrestrial survey area**

The mean consumption rates for the adult high-rate groups for the separate consumption pathways for foods potentially affected by gaseous discharges were:

- 41 kg y<sup>-1</sup> for green vegetables
- 38 kg y<sup>-1</sup> for other vegetables
- 52 kg y<sup>-1</sup> for root vegetables
- 74 kg y<sup>-1</sup> for potato
- 39 kg y<sup>-1</sup> for domestic fruit
- 160 l y<sup>-1</sup> for milk
- 18 kg y<sup>-1</sup> for cattle meat
- 2.9 kg y<sup>-1</sup> for sheep meat
- 5.4 kg y<sup>-1</sup> for poultry
- 14 kg y<sup>-1</sup> for eggs
- 3.0 kg y<sup>-1</sup> for wild/free foods
- 5.4 kg y<sup>-1</sup> for rabbits/hares
- 5.6 kg y<sup>-1</sup> for honey
- 0.5 kg y<sup>-1</sup> for wild fungi

The consumption of terrestrial foodstuffs was also recorded for individuals in the child and infant age groups.

The human consumption of groundwater was not identified in the 2021 survey. Farms in the survey area supplied their livestock with mains water for drinking water.

### **11.3. Direct radiation survey area**

The highest indoor, outdoor and total occupancy rates recorded for each zone were:

#### **0 - 0.25 km zone**

- 1600 h y<sup>-1</sup> for the indoor occupancy rate
- 2500 h y<sup>-1</sup> for the outdoor occupancy rate
- 2500 h y<sup>-1</sup> for the total occupancy rate

#### **>0.25 - 0.5 km zone**

- 6600 h y<sup>-1</sup> for the indoor occupancy rate
- 730 h y<sup>-1</sup> for the outdoor occupancy rate
- 7300 h y<sup>-1</sup> for the total occupancy rate

#### **>0.5 - 1.0 km zone**

- 8400 h y<sup>-1</sup> for the indoor occupancy rate
- 3700 h y<sup>-1</sup> for the outdoor occupancy rate
- 8760 h y<sup>-1</sup> for the total occupancy rate

In the 0-0.25 km zone, the highest indoor occupancy rates were for employees and the highest outdoor and total occupancy rates was for an angler. The highest indoor, outdoor and total occupancy rates were for residents in the >0.25 – 0.5 km and >0.5 – 1.0 km zones.

## **12. Habits survey information for consideration in the selection of samples and measurements for monitoring programmes**

Habits surveys provide site-specific information on the consumption of locally produced foods and the location and types of activities which may affect the public's exposure to radiation. This information can be used to help in the selection of samples and measurements for the monitoring programmes by identifying foods that are consumed at high rates and the locations where people spend significant amounts of time.

In England and Wales, the monitoring programme for radioactivity in food is undertaken by the FSA, and the monitoring programme for radioactivity in the environment is conducted by the EA. The results of these programmes are published annually in the RIFE reports (for example - EA, FSA, FSS, NRW, NIEA and SEPA, 2021).

In 2013 the FSA completed a public consultation to review the way that they monitor radioactivity in food (FSA, 2012 and 2013). The outcome of the consultation was to implement a revised monitoring programme in 2014, with reductions in sampling and analysis of some foods that were considered to represent a very low radiological risk.

## 12.1. Summary of the monitoring programmes for Derby

The 2021 monitoring programmes relevant to the Derby area included the samples and measurements listed in Table 12 and Table 13. The location names, foods and substrate classifications are taken directly from RIFE 26 (EA, FSA, FSS, NRW, NIEA and SEPA, 2021). Some of the samples and measurements taken for the monitoring programmes may be from outside the survey areas used for the 2021 Derby habits survey.

**Table 12. Aquatic food and environmental samples used in the RIFE 26 monitoring programme**

Sample	Location
Sediment	River Derwent, upstream
Sediment	Fritchley Brook
Sediment	River Derwent, downstream
Water	River Derwent, upstream
Water	Fritchley Brook
Water	River Derwent, downstream

**Table 13. Terrestrial samples used in the RIFE 26 monitoring programme**

Food group or Environmental sample
Potatoes
Barley

## 12.2. Information from the 2021 Derby habits survey for use in the selection of samples and measurements for monitoring programmes

### Food Standards Agency monitoring

The following foods presented in Table 14 were either consumed in the largest quantities in their food groups or were the only food in their food group and could be considered for potentially selecting samples for the FSA monitoring programme.



**Table 14. Foods considered for potentially selecting samples for the FSA monitoring programme**

<b>Food</b>	<b>Food Group</b>
<b>Cabbage</b>	Green vegetables
<b>Tomato</b>	Other vegetables
<b>Onion</b>	Root vegetables
<b>Potato</b>	Potato
<b>Apple</b>	Domestic fruit
<b>Lamb</b>	Sheep meat
<b>Cow's milk</b>	Milk
<b>Beef</b>	Cattle meat
<b>Lamb</b>	Sheep meat
<b>Pheasant</b>	Poultry
<b>Chicken egg</b>	Egg
<b>Blackberry</b>	Wild/free foods
<b>Rabbit</b>	Rabbits/hares
<b>Honey</b>	Honey
<b>Mushroom</b>	Wild fungi

### **Environment Agency monitoring**

The current environmental monitoring programme adequately covers the Derby area and no changes are suggested.

## **13. Acknowledgements**

Gratitude is expressed to representatives of Rolls-Royce Submarines Ltd., local authorities and associations including Derby Council, and members of the public who offered helpful advice and information during the survey. This survey was undertaken on behalf of the Environment Agency, the Food Standards Agency and the Office for Nuclear Regulation. The project officers for these organisations provided considerable help during the planning of the survey and the drafting of the report.

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**Table 15. Survey coverage**

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
<b>Summary of all pathways</b>					
All potential interviewees in the Derby aquatic, terrestrial and direct radiation survey areas.	Number of people resident in the terrestrial survey area (excluding those resident in the direct radiation survey area) (See (B) Terrestrial pathways)	189000 <sup>a</sup>	256 <sup>b</sup>	0.14%	The survey targeted individuals who were potentially the most exposed, mostly producers of local foods such as farmers and allotment holders.
	Number of people resident in the direct radiation survey area (See (C) Direct radiation pathways)	8900	38 <sup>b</sup>	0.43%	Interviews were conducted with members of the public from 16 residences out of an estimated total of 2900 permanent residences. This included residents at the nursing home.
	Number of people working, visiting and undertaking recreational activities in the direct radiation survey area (See (C) Direct radiation pathways)	U	142 <sup>b</sup>	U	Excluding employees and contractors at the nuclear licensed site. Where generalised data for groups of people were obtained, for example employees at some businesses, only a limited number of representative individuals have been included.
	Number of people affected by liquid discharges (excluding those assigned to other categories above) (See (A) Aquatic pathways)	U	28 <sup>b</sup>	U	Where generalised data for groups of people were obtained, for example members of angling clubs, only a limited number of representative individuals have been included.
	Total for aquatic, terrestrial and direct radiation survey areas	U	464 <sup>b</sup>	U	

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
<b>(A) Aquatic pathways</b>					
People using the river washed areas (e.g. dog walkers, people playing, etc.)	Number of people undertaking activities on the brook bank in the aquatic survey area	U	31	U	
People undertaking activities in or on water (e.g. swimming, rowing and kayaking etc.)	Number of people undertaking activities in or on water in the aquatic survey area	U	0	U	Where generalised data for groups of people were obtained, for example members of angling clubs, only a limited number of representative individuals have been included.
Fish and shellfish consumers (from waters subject to liquid discharges)	Number of people consuming fish and/or crustaceans from the aquatic survey area	U	0	U	There were unconfirmed reports that coarse fish and signal crayfish from the aquatic survey area were being caught and consumed. A suggested consumption rate of 1 kg y <sup>-1</sup> for both are presented in Annex 4.
<b>(B) Terrestrial pathways</b>					
Farmers	Number of farmers, smallholders and their family members consuming food from the terrestrial survey area	U	35	39%	Interviews were conducted at eight farms out of an estimated 12 farms in the terrestrial survey area. Two of the farms interviewed were not consuming any food from the terrestrial survey area.
Allotment holders and gardeners	Number of allotment holders, gardeners and their family members consuming food from the terrestrial survey area	U	231	U	

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
<b>(A) Terrestrial pathways</b>					
Honey consumers	Number of people consuming honey produced in the survey area	U	14	U	Four beekeepers were identified who kept hives in the survey area.
<b>(B) Direct radiation pathways</b>					
Residents	Number of residents in the survey area	8900	38	0.42%	Interviews were conducted with members of the public from 16 residences out of an estimated total of 2900 permanent residences.
Employees	Number of people working in the survey area	U	68	U	Excluding people who were living in the direct radiation survey area and employees and contractors at the nuclear licensed site. Where generalised data for groups of people were obtained, for example employees at some businesses, only a limited number of representative individuals have been included.
Visitors (people undertaking recreational activities or visiting relatives)	Number of people visiting the survey area	U	92	U	

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
<b>Breakdown of age groups for people resident in the 5 km terrestrial survey area</b>					
Adult	16-year-old and over	155709 <sup>a</sup>	399	0.0026%	
Child	6-year-old to 15-year-old	27024 <sup>a</sup>	45	0.0017%	
Infant	0 to 5-year-old	15375 <sup>a</sup>	20	0.0013%	

### **Notes**

<sup>a</sup> Estimate of the number of people resident in the 5 km terrestrial survey area based on data from [www.ons.gov.uk](http://www.ons.gov.uk).

<sup>b</sup> The number of people for whom positive data was obtained for pathways (A) and (B) and (C) will usually not equal the relevant totals in the summary of all pathways. This is because in sections (A), (B) and (C) some individuals may be counted two or more times, for example someone who goes angling and consumes foods from the terrestrial area.

U – Unknown

**Table 16. Typical food groups used in habits surveys**

<b>Food group</b>	<b>Examples of foods within the group</b>
<b>Green vegetables</b>	Asparagus, broccoli, Brussels sprouts, cabbage, calabrese, cauliflower, chard, courgette, cucumber, gherkin, globe artichoke, herbs, kale, leaf beet, lettuce, marrow, spinach
<b>Other vegetables</b>	Aubergine, broad bean, chili pepper, French bean, kohlrabi, mangetout, pea, pepper, pumpkin, runner bean, sweetcorn, tomato
<b>Root vegetables</b>	Beetroot, carrot, celeriac, celery, chicory, fennel, garlic, Jerusalem artichoke, leek, onion, parsnip, radish, shallot, spring onion, swede, turnip
<b>Potato</b>	Potato
<b>Domestic fruit</b>	Apple, apricot, blackberry, blackcurrant, boysenberry, cherry, damson, fig, gooseberry, grape, greengage, huckleberry, loganberry, melon, nectarine, peach, pear, plum, raspberry, redcurrant, rhubarb, rowanberry, strawberry, tayberry, whitecurrant
<b>Milk</b>	Cows' milk, cream, goats' milk, yoghurt
<b>Cattle meat<sup>a</sup></b>	Beef
<b>Pig meat<sup>a</sup></b>	Pork
<b>Sheep meat<sup>a</sup></b>	Lamb, mutton
<b>Poultry<sup>b</sup></b>	Chicken, duck, goose, grouse, guinea fowl, partridge, pheasant, pigeon, turkey, woodcock
<b>Eggs</b>	Chicken egg, duck egg, goose egg
<b>Wild/free foods</b>	Blackberry, chestnut, crab apple, damson, dandelion root, elderberry, nettle, rowanberry, sloe
<b>Honey</b>	Honey
<b>Wild fungi</b>	Mushrooms, other edible fungi



Food group	Examples of foods within the group
<b>Rabbits/hares</b>	Hare, rabbit
<b>Venison<sup>a</sup></b>	Venison
<b>Fish (sea)</b>	Bass, brill, cod, ling, dab, Dover sole, flounder, gurnard, haddock, hake, herring, lemon sole, mackerel, monkfish, mullet, plaice, pollack, rays, saithe, salmon, sea trout, sprat, turbot, whitebait, whiting, witch, cuttlefish <sup>c</sup> , squid <sup>c</sup>
<b>Fish (freshwater)</b>	Brown trout, eel (river), perch, pike, rainbow trout, salmon (river)
<b>Crustaceans</b>	Brown crab, common lobster, crawfish, Nephrops, prawn, shrimp, spider crab, squat lobster, velvet swimming crab
<b>Molluscs</b>	Cockles, limpets, mussels, oysters, razor clam, scallops, whelks, winkles
<b>Wildfowl<sup>b</sup></b>	Canada goose, greylag goose, mallard, pink-footed goose, pintail, shoveler, teal, wigeon

**Notes:**

<sup>a</sup> Including offal

<sup>b</sup> Domesticated ducks and geese are classified as poultry. Wild ducks and geese are classified as wildfowl.

<sup>c</sup> Although squid and cuttlefish are molluscs, radiologically they are more akin to fish.

Table 17. Adults' occupancy rates over river washed substrates in the Derby aquatic survey area (h y<sup>-1</sup>)

Person ID number	Location	Activity	Mud and grass
3069/1/1	Various locations within the aquatic survey area	Angling	350
3069/2/1	Various locations within the aquatic survey area	Angling	350
2944/1/1	Various locations within the aquatic survey area	Angling	246
2944/2/1	Various locations within the aquatic survey area	Angling	246
2964/2/1	Various locations within the aquatic survey area	Angling	156
2940/1/1	Various locations within the aquatic survey area	Angling	130
2942/1/1	Various locations within the aquatic survey area	Angling	108
3043/1/1	Various locations within the aquatic survey area	Angling	108
2964/1/1	Various locations within the aquatic survey area	Riverbank maintenance	84
2964/1/2	Various locations within the aquatic survey area	Riverbank maintenance	84
2964/1/3	Various locations within the aquatic survey area	Riverbank maintenance	84
2964/1/4	Various locations within the aquatic survey area	Riverbank maintenance	84
2964/1/5	Various locations within the aquatic survey area	Riverbank maintenance	84
2964/1/6	Various locations within the aquatic survey area	Riverbank maintenance	84
2964/1/7	Various locations within the aquatic survey area	Riverbank maintenance	84
2964/1/8	Various locations within the aquatic survey area	Rive bank maintenance	84
3004/1/1	Various locations within the aquatic survey area	Angling	54
3004/2/1	Various locations within the aquatic survey area	Angling	54
2962/4/1	Various locations within the aquatic survey area	Angling	42
2991/1/1	Various locations within the aquatic survey area	Angling	32
2991/2/1	Various locations within the aquatic survey area	Angling	32
2962/1/1	Various locations within the aquatic survey area	Riverbank maintenance	30
2962/1/2	Various locations within the aquatic survey area	Riverbank maintenance	30
2962/1/3	Various locations within the aquatic survey area	Riverbank maintenance	30
2962/1/4	Various locations within the aquatic survey area	Riverbank maintenance	30
2962/1/5	Various locations within the aquatic survey area	Riverbank maintenance	30
2962/1/6	Various locations within the aquatic survey area	Riverbank maintenance	30

Person ID number	Location	Activity	Mud and grass
<b>2962/1/7</b>	Various locations within the aquatic survey area	Riverbank maintenance	30
<b>2962/1/8</b>	Various locations within the aquatic survey area	Riverbank maintenance	30
<b>2962/1/9</b>	Various locations within the aquatic survey area	Riverbank maintenance	30
<b>2962/1/10</b>	Various locations within the aquatic survey area	Riverbank maintenance	30

### **Notes**

Emboldened observations are the high-rate individuals

The mean occupancy rate over mud and grass for adults based on 6 high-rate observations is 246 h y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 31 observations is 350 h y<sup>-1</sup>

**Table 18. Gamma dose rate measurements over river washed substrates in the Derby aquatic survey area (μGy h<sup>-1</sup>)**

Location	National Grid Reference	Substrate	Gamma dose rate at 1 metre <sup>a</sup>
Waste Transfer Station 1	SK 385 347	Mud	0.074
Waste Transfer Station 2	SK 386 349	Mud	0.077
East of Raynesway	SK 385 342	Mud	0.069
Derwent Flood Barrier	SK 387 341	Mud	0.067
Electro Mechanical Barrage	SK 393 340	Mud	0.067
Firnhook Avenue Bridge	SK 396 339	Mud	0.069
Borrowwash Weir	SK 405 339	Mud and grass	0.074
The Stryne	SK 411 339	Mud	0.071
B5010 Bridge	SK 415 339	Mud	0.071

### **Notes**

<sup>a</sup> These measurements have not been adjusted for background dose rates

**Table 19. Adults' occupancy rates in close proximity to liquid sewage sludge and dried sewage sludge (h y<sup>-1</sup>)**

Observation number	Activity	Occupancy in close proximity (<10 metres) to liquid sewage sludge	Occupancy in close proximity (<10 metres) to dried sewage sludge
3207/1/1	Servicing pumps and cleaning grit rag traps	47	-
3207/1/2	Servicing pumps and cleaning grit rag traps	47	-
3207/1/3	Servicing pumps and cleaning grit rag traps	47	-
3207/1/4	Servicing pumps and cleaning grit rag traps	47	-
3207/1/5	Servicing pumps and cleaning grit rag traps	47	-
3207/1/6	Servicing pumps and cleaning grit rag traps	47	-
3207/1/7	Servicing pumps and cleaning grit rag traps	47	-
3207/1/8	Servicing pumps and cleaning grit rag traps	47	-
3207/1/9	Servicing pumps and cleaning grit rag traps	47	-
3207/1/10	Servicing pumps and cleaning grit rag traps	47	-
3207/2/1	Processing sewage sludge including centrifuging, maintaining the gravity belt and moving dried sewage sludge to storage	297	70
3207/2/2	Processing sewage sludge including centrifuging, maintaining the gravity belt and moving dried sewage sludge to storage	297	70
3207/2/3	Processing sewage sludge including centrifuging, maintaining the gravity belt and moving dried sewage sludge to storage	297	70

Table 20. Adults' consumption rates of green vegetables from the Derby terrestrial survey area (kg y<sup>-1</sup>)

Person ID number	Globe artichoke	Asparagus	Broccoli	Brussels sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Kale	Lettuce	Marrow	Pak choi	Spinach	Total
3221/1/1	-	-	13.5	8.2	27.4	13.5	5.1	-	4.4	5.1	-	-	4.3	-	-	81.4
3221/2/1	-	-	13.5	8.2	27.4	13.5	5.1	-	4.4	5.1	-	-	4.3	-	-	81.4
3221/3/1	-	-	13.5	8.2	27.4	13.5	5.1	-	4.4	5.1	-	-	4.3	-	-	81.4
3058/3/1	-	-	11.2	6.8	9.1	-	16.9	-	4.6	-	-	8.3	-	-	-	57.0
2987/1/1	-	-	6.8	13.7	12.8	-	-	-	5.5	-	9.1	-	-	-	-	47.8
2987/2/1	-	-	6.8	13.7	12.8	-	-	-	5.5	-	9.1	-	-	-	-	47.8
3236/1/1	-	1.5	10.2	6.4	6.8	-	-	-	5.5	8.5	-	1.2	-	-	-	40.1
3236/2/1	-	1.5	10.2	6.4	6.8	-	-	-	5.5	8.5	-	1.2	-	-	-	40.1
3064/1/1	-	-	9.2	-	15.3	-	9.2	-	-	6.1	-	-	-	-	-	39.8
3064/2/1	-	-	9.2	-	15.3	-	9.2	-	-	6.1	-	-	-	-	-	39.8
3226/1/1	-	-	8.3	0.9	8.7	-	3.4	1.0	2.8	13.2	-	1.0	-	-	-	39.2
3226/2/1	-	-	8.3	0.9	8.7	-	3.4	1.0	2.8	13.2	-	1.0	-	-	-	39.2
3220/1/1	-	-	-	-	6.2	-	22.9	-	5.0	-	-	3.1	-	-	-	37.2
3234/1/1	-	-	-	-	4.1	-	-	-	16.6	7.7	-	3.2	-	-	3.7	35.2
3234/2/1	-	-	-	-	4.1	-	-	-	16.6	7.7	-	3.2	-	-	3.7	35.2
3216/1/1	-	-	-	-	11.5	-	-	-	19.9	3.1	-	-	-	-	-	34.4
3216/2/1	-	-	-	-	11.5	-	-	-	19.9	3.1	-	-	-	-	-	34.4
2955/1/1	-	0.6	-	8.2	7.7	-	8.7	-	1.5	2.6	-	-	-	-	1.0	30.2
2955/2/1	-	0.6	-	8.2	7.7	-	8.7	-	1.5	2.6	-	-	-	-	1.0	30.2
3058/1/1	-	-	5.8	3.5	4.8	-	8.8	-	2.4	-	-	4.3	-	-	-	29.6
3058/2/1	-	-	5.8	3.5	4.8	-	8.8	-	2.4	-	-	4.3	-	-	-	29.6
3224/1/1	-	-	2.1	-	4.8	-	1.7	-	16.1	2.6	-	-	-	-	2.1	29.4
3224/2/1	-	-	2.1	-	4.8	-	1.7	-	16.1	2.6	-	-	-	-	2.1	29.4

Person ID number	Globe artichoke	Asparagus	Broccoli	Brussels sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Kale	Lettuce	Marrow	Pak choi	Spinach	Total
<b>3068/1/1</b>	-	-	-	<b>4.6</b>	<b>4.3</b>	-	<b>3.4</b>	-	-	<b>14.9</b>	-	<b>0.7</b>	-	-	-	<b>27.7</b>
<b>3068/2/1</b>	-	-	-	<b>4.6</b>	<b>4.3</b>	-	<b>3.4</b>	-	-	<b>14.9</b>	-	<b>0.7</b>	-	-	-	<b>27.7</b>
<b>3068/3/1</b>	-	-	-	<b>4.6</b>	<b>4.3</b>	-	<b>3.4</b>	-	-	<b>14.9</b>	-	<b>0.7</b>	-	-	-	<b>27.7</b>
<b>3068/4/1</b>	-	-	-	<b>4.6</b>	<b>4.3</b>	-	<b>3.4</b>	-	-	<b>14.9</b>	-	<b>0.7</b>	-	-	-	<b>27.7</b>
3225/1/1	-	-	-	4.6	9.6	-	2.6	-	-	5.1	1.6	1.0	-	-	1.7	26.1
3225/2/1	-	-	-	4.6	9.6	-	2.6	-	-	5.1	1.6	1.0	-	-	1.7	26.1
3077/1/1	9.0	-	3.1	-	5.5	-	2.0	-	3.7	-	2.3	-	-	-	-	25.6
3077/2/1	9.0	-	3.1	-	5.5	-	2.0	-	3.7	-	2.3	-	-	-	-	25.6
3077/3/1	9.0	-	3.1	-	5.5	-	2.0	-	3.7	-	2.3	-	-	-	-	25.6
3077/4/1	9.0	-	3.1	-	5.5	-	2.0	-	3.7	-	2.3	-	-	-	-	25.6
3227/1/1	-	-	10.2	-	8.5	-	4.1	-	2.8	-	-	-	-	-	-	25.5
3227/2/1	-	-	10.2	-	8.5	-	4.1	-	2.8	-	-	-	-	-	-	25.5
3197/1/1	-	-	2.4	1.5	3.4	-	-	-	2.9	15.0	-	-	-	-	-	25.2
3197/2/1	-	-	2.4	1.5	3.4	-	-	-	2.9	15.0	-	-	-	-	-	25.2
3035/1/1	-	-	3.0	0.5	2.6	-	-	0.8	10.6	7.4	-	0.3	-	-	-	25.2
3035/2/1	-	-	3.0	0.5	2.6	-	-	0.8	10.6	7.4	-	0.3	-	-	-	25.2
3231/1/1	-	-	1.7	-	-	-	-	-	12.0	6.4	-	-	-	-	4.7	24.7
3231/2/1	-	-	1.7	-	-	-	-	-	12.0	6.4	-	-	-	-	4.7	24.7
3058/4/1	-	-	4.5	2.7	3.7	-	6.7	-	1.8	-	-	3.3	-	-	-	22.8
2992/1/1	-	0.5	-	4.6	8.5	-	-	-	9.2	-	-	-	-	-	-	22.7
2992/2/1	-	0.5	-	4.6	8.5	-	-	-	9.2	-	-	-	-	-	-	22.7
3213/1/1	-	-	-	3.6	5.8	-	-	-	-	12.8	-	0.5	-	-	-	22.7
3213/2/1	-	-	-	3.6	5.8	-	-	-	-	12.8	-	0.5	-	-	-	22.7
3217/1/1	6.0	-	-	2.0	-	-	-	-	3.4	3.9	6.8	-	-	-	-	22.2
3217/2/1	6.0	-	-	2.0	-	-	-	-	3.4	3.9	6.8	-	-	-	-	22.2

Person ID number	Globe artichoke	Asparagus	Broccoli	Brussels sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Kale	Lettuce	Marrow	Pak choi	Spinach	Total
2998/1/1	-	-	2.0	2.7	5.1	-	2.0	-	-	6.4	-	0.6	-	-	-	18.9
2998/2/1	-	-	2.0	2.7	5.1	-	2.0	-	-	6.4	-	0.6	-	-	-	18.9
2998/3/1	-	-	2.0	2.7	5.1	-	2.0	-	-	6.4	-	0.6	-	-	-	18.9
2998/4/1	-	-	2.0	2.7	5.1	-	2.0	-	-	6.4	-	0.6	-	-	-	18.9
2947/1/1	-	-	-	-	4.6	-	1.1	-	2.8	4.3	1.9	1.6	-	-	0.6	16.8
2947/2/1	-	-	-	-	4.6	-	1.1	-	2.8	4.3	1.9	1.6	-	-	0.6	16.8
2947/3/1	-	-	-	-	4.6	-	1.1	-	2.8	4.3	1.9	1.6	-	-	0.6	16.8
3067/1/1	-	-	5.4	-	-	-	-	-	11.0	-	-	-	-	-	-	16.5
3096/1/1	-	-	-	11.4	5.1	-	-	-	-	-	-	-	-	-	-	16.5
3096/2/1	-	-	-	11.4	5.1	-	-	-	-	-	-	-	-	-	-	16.5
3230/1/1	-	-	-	-	-	-	-	-	-	-	-	-	10.8	-	5.1	15.9
3066/1/1	-	-	-	-	-	-	-	-	14.7	-	-	-	-	-	-	14.7
3066/2/1	-	-	-	-	-	-	-	-	14.7	-	-	-	-	-	-	14.7
2938/1/1	-	-	3.4	-	-	-	3.4	-	-	6.8	-	-	1.1	-	-	14.7
3222/1/1	-	-	1.1	1.5	7.3	-	2.2	1.8	-	-	-	-	-	-	-	13.8
3222/2/1	-	-	1.1	1.5	7.3	-	2.2	1.8	-	-	-	-	-	-	-	13.8
3219/1/1	-	-	-	-	-	-	-	-	13.8	-	-	-	-	-	-	13.8
3219/2/1	-	-	-	-	-	-	-	-	13.8	-	-	-	-	-	-	13.8
3081/1/1	-	-	1.5	-	1.9	-	-	-	2.0	7.6	-	-	-	0.6	-	13.6
3081/2/1	-	-	1.5	-	1.9	-	-	-	2.0	7.6	-	-	-	0.6	-	13.6
3081/3/1	-	-	1.5	-	1.9	-	-	-	2.0	7.6	-	-	-	0.6	-	13.6
3081/4/1	-	-	1.5	-	1.9	-	-	-	2.0	7.6	-	-	-	0.6	-	13.6
3081/7/1	-	-	1.5	-	1.9	-	-	-	2.0	7.6	-	-	-	0.6	-	13.6
3081/9/1	-	-	1.5	-	1.9	-	-	-	2.0	7.6	-	-	-	0.6	-	13.6
3094/1/1	-	-	-	-	-	-	-	-	11.0	-	-	2.4	-	-	-	13.4

Person ID number	Globe artichoke	Asparagus	Broccoli	Brussels sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Kale	Lettuce	Marrow	Pak choi	Spinach	Total
3229/1/1	-	-	-	4.5	4.5	-	-	-	4.1	-	-	-	-	-	-	13.1
3229/2/1	-	-	-	4.5	4.5	-	-	-	4.1	-	-	-	-	-	-	13.1
3098/1/1	-	-	2.6	-	5.1	-	-	-	-	0.3	2.9	0.9	-	-	1.0	12.8
3098/2/1	-	-	2.6	-	5.1	-	-	-	-	0.3	2.9	0.9	-	-	1.0	12.8
3098/3/1	-	-	2.6	-	5.1	-	-	-	-	0.3	2.9	0.9	-	-	1.0	12.8
3034/1/1	-	-	4.1	-	3.0	-	-	-	2.4	2.4	-	0.8	-	-	-	12.6
3034/2/1	-	-	4.1	-	3.0	-	-	-	2.4	2.4	-	0.8	-	-	-	12.6
3023/1/1	-	-	-	-	2.0	-	1.2	0.3	2.5	-	2.1	1.0	-	-	1.1	10.3
3023/2/1	-	-	-	-	2.0	-	1.2	0.3	2.5	-	2.1	1.0	-	-	1.1	10.3
3023/3/1	-	-	-	-	2.0	-	1.2	0.3	2.5	-	2.1	1.0	-	-	1.1	10.3
3023/4/1	-	-	-	-	2.0	-	1.2	0.3	2.5	-	2.1	1.0	-	-	1.1	10.3
3023/5/1	-	-	-	-	2.0	-	1.2	0.3	2.5	-	2.1	1.0	-	-	1.1	10.3
3023/6/1	-	-	-	-	2.0	-	1.2	0.3	2.5	-	2.1	1.0	-	-	1.1	10.3
3028/1/1	-	-	1.9	2.5	2.4	-	1.9	-	1.5	-	-	-	-	-	-	10.2
3028/4/1	-	-	1.9	2.5	2.4	-	1.9	-	1.5	-	-	-	-	-	-	10.2
3028/5/1	-	-	1.9	2.5	2.4	-	1.9	-	1.5	-	-	-	-	-	-	10.2
3071/1/1	-	-	2.7	3.5	1.1	-	-	-	1.9	-	-	0.9	-	-	-	10.2
2927/1/1	-	-	2.4	-	-	-	2.4	-	-	5.1	-	-	-	-	-	10.0
2927/2/1	-	-	2.4	-	-	-	2.4	-	-	5.1	-	-	-	-	-	10.0
3071/2/1	-	-	2.6	3.4	1.1	-	-	-	1.8	-	-	0.9	-	-	-	9.8
3071/3/1	-	-	2.6	3.4	1.1	-	-	-	1.8	-	-	0.9	-	-	-	9.8
3102/1/1	-	-	-	-	5.1	-	-	-	-	2.2	-	2.4	-	-	-	9.7
3102/2/1	-	-	-	-	5.1	-	-	-	-	2.2	-	2.4	-	-	-	9.7
2925/1/1	-	-	-	4.9	4.6	-	-	-	-	-	-	-	-	-	-	9.5
2925/2/1	-	-	-	4.9	4.6	-	-	-	-	-	-	-	-	-	-	9.5



Person ID number	Globe artichoke	Asparagus	Broccoli	Brussels sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Kale	Lettuce	Marrow	Pak choi	Spinach	Total
3235/1/1	-	-	-	2.9	-	-	2.2	-	-	3.4	-	-	-	-	-	8.5
3235/2/1	-	-	-	2.9	-	-	2.2	-	-	3.4	-	-	-	-	-	8.5
2955/3/1	-	0.2	-	2.3	2.1	-	2.4	-	0.4	0.7	-	-	-	-	0.3	8.5
2955/4/1	-	0.2	-	2.3	2.1	-	2.4	-	0.4	0.7	-	-	-	-	0.3	8.5
2955/6/1	-	0.2	-	2.3	2.1	-	2.4	-	0.4	0.7	-	-	-	-	0.3	8.5
2955/7/1	-	0.2	-	2.3	2.1	-	2.4	-	0.4	0.7	-	-	-	-	0.3	8.5
2947/4/1	-	-	-	-	2.2	-	0.5	-	1.3	2.0	0.9	0.8	-	-	0.3	8.1
2947/5/1	-	-	-	-	2.2	-	0.5	-	1.3	2.0	0.9	0.8	-	-	0.3	8.1
2938/2/1	-	-	1.7	-	-	-	1.7	-	-	3.4	-	-	0.5	-	-	7.3
2938/3/1	-	-	1.7	-	-	-	1.7	-	-	3.4	-	-	0.5	-	-	7.3
3054/1/1	-	-	-	-	-	-	-	-	-	7.1	-	-	-	-	-	7.1
3054/2/1	-	-	-	-	-	-	-	-	-	7.1	-	-	-	-	-	7.1
3054/3/1	-	-	-	-	-	-	-	-	-	7.1	-	-	-	-	-	7.1
3054/4/1	-	-	-	-	-	-	-	-	-	7.1	-	-	-	-	-	7.1
3054/5/1	-	-	-	-	-	-	-	-	-	7.1	-	-	-	-	-	7.1
3054/6/1	-	-	-	-	-	-	-	-	-	7.1	-	-	-	-	-	7.1
3233/1/1	-	0.4	2.4	1.2	1.6	-	-	-	0.4	-	0.8	-	-	-	-	6.9
2949/1/1	-	-	-	0.9	-	-	0.5	-	-	5.1	-	0.3	-	-	-	6.9
2949/2/1	-	-	-	0.9	-	-	0.5	-	-	5.1	-	0.3	-	-	-	6.9
2949/3/1	-	-	-	0.9	-	-	0.5	-	-	5.1	-	0.3	-	-	-	6.9
2954/1/1	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-	6.8
2954/2/1	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-	6.8
3215/1/1	-	-	2.0	-	-	-	-	-	4.4	-	-	-	-	-	-	6.5
3056/1/1	-	-	0.9	-	1.7	-	-	-	3.7	-	-	-	-	-	-	6.3
3056/2/1	-	-	0.9	-	1.7	-	-	-	3.7	-	-	-	-	-	-	6.3

Person ID number	Globe artichoke	Asparagus	Broccoli	Brussels sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Kale	Lettuce	Marrow	Pak choi	Spinach	Total
3232/1/1	-	-	1.1	-	0.9	-	-	-	4.0	-	-	-	-	-	-	6.1
3232/2/1	-	-	1.1	-	0.9	-	-	-	4.0	-	-	-	-	-	-	6.1
3232/3/1	-	-	1.1	-	0.9	-	-	-	4.0	-	-	-	-	-	-	6.1
3232/4/1	-	-	1.1	-	0.9	-	-	-	4.0	-	-	-	-	-	-	6.1
3232/5/1	-	-	1.1	-	0.9	-	-	-	4.0	-	-	-	-	-	-	6.1
3228/1/1	-	-	-	4.1	-	-	-	-	-	1.9	-	-	-	-	-	6.0
3228/2/1	-	-	-	4.1	-	-	-	-	-	1.9	-	-	-	-	-	6.0
3228/3/1	-	-	-	4.1	-	-	-	-	-	1.9	-	-	-	-	-	6.0
3021/1/1	-	-	-	-	-	-	1.9	-	0.7	1.7	1.2	-	-	-	-	5.3
3021/2/1	-	-	-	-	-	-	1.9	-	0.7	1.7	1.2	-	-	-	-	5.3
3021/3/1	-	-	-	-	-	-	1.9	-	0.7	1.7	1.2	-	-	-	-	5.3
2953/1/1	-	-	-	-	-	-	-	-	-	-	5.1	-	-	-	-	5.1
2953/2/1	-	-	-	-	-	-	-	-	-	-	5.1	-	-	-	-	5.1
3099/1/1	-	-	0.1	0.6	0.3	-	0.3	-	1.4	2.1	-	0.3	-	-	-	5.0
3099/2/1	-	-	0.1	0.6	0.3	-	0.3	-	1.4	2.1	-	0.3	-	-	-	5.0
3099/3/1	-	-	0.1	0.6	0.3	-	0.3	-	1.4	2.1	-	0.3	-	-	-	5.0
3099/4/1	-	-	0.1	0.6	0.3	-	0.3	-	1.4	2.1	-	0.3	-	-	-	5.0
3099/5/1	-	-	0.1	0.6	0.3	-	0.3	-	1.4	2.1	-	0.3	-	-	-	5.0
3099/6/1	-	-	0.1	0.6	0.3	-	0.3	-	1.4	2.1	-	0.3	-	-	-	5.0
3099/8/1	-	-	0.1	0.6	0.3	-	0.3	-	1.4	2.1	-	0.3	-	-	-	5.0
3099/11/1	-	-	0.1	0.6	0.3	-	0.3	-	1.4	2.1	-	0.3	-	-	-	5.0
3099/12/1	-	-	0.1	0.6	0.3	-	0.3	-	1.4	2.1	-	0.3	-	-	-	5.0
3099/13/1	-	-	0.1	0.6	0.3	-	0.3	-	1.4	2.1	-	0.3	-	-	-	5.0
3099/17/1	-	-	0.1	0.6	0.3	-	0.3	-	1.4	2.1	-	0.3	-	-	-	5.0
3214/1/1	-	-	-	1.5	1.9	-	-	-	1.1	-	-	-	-	-	-	4.5

Person ID number	Globe artichoke	Asparagus	Broccoli	Brussels sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Kale	Lettuce	Marrow	Pak choi	Spinach	Total
3214/2/1	-	-	-	1.5	1.9	-	-	-	1.1	-	-	-	-	-	-	4.5
3218/1/1	-	-	-	0.5	1.8	-	0.6	-	0.9	-	-	-	-	-	0.4	4.2
3218/2/1	-	-	-	0.5	1.8	-	0.6	-	0.9	-	-	-	-	-	0.4	4.2
3022/1/1	-	-	-	2.3	0.9	-	-	-	-	-	-	-	-	-	0.2	3.3
3022/2/1	-	-	-	2.3	0.9	-	-	-	-	-	-	-	-	-	0.2	3.3
3022/3/1	-	-	-	2.3	0.9	-	-	-	-	-	-	-	-	-	0.2	3.3
3022/4/1	-	-	-	2.3	0.9	-	-	-	-	-	-	-	-	-	0.2	3.3
3098/4/1	-	-	0.6	-	1.2	-	-	-	-	0.1	0.7	0.2	-	-	0.2	3.1
3098/5/1	-	-	0.6	-	1.2	-	-	-	-	0.1	0.7	0.2	-	-	0.2	3.1
3098/6/1	-	-	0.6	-	1.2	-	-	-	-	0.1	0.7	0.2	-	-	0.2	3.1
3098/7/1	-	-	0.6	-	1.2	-	-	-	-	0.1	0.7	0.2	-	-	0.2	3.1
3101/1/1	-	-	-	-	-	-	-	3.0	-	-	-	-	-	-	-	3.0
3101/2/1	-	-	-	-	-	-	-	3.0	-	-	-	-	-	-	-	3.0
3101/3/1	-	-	-	-	-	-	-	3.0	-	-	-	-	-	-	-	3.0
2983/1/1	-	-	-	-	-	-	2.7	-	-	-	-	-	-	-	-	2.7
2917/1/1	-	-	-	-	-	-	2.4	-	-	-	-	-	-	-	-	2.4
2917/2/1	-	-	-	-	-	-	2.4	-	-	-	-	-	-	-	-	2.4
3071/4/1	-	-	0.6	0.8	0.3	-	-	-	0.4	-	-	0.2	-	-	-	2.3
3071/5/1	-	-	0.6	0.8	0.3	-	-	-	0.4	-	-	0.2	-	-	-	2.3
3071/6/1	-	-	0.6	0.8	0.3	-	-	-	0.4	-	-	0.2	-	-	-	2.3
3071/7/1	-	-	0.6	0.8	0.3	-	-	-	0.4	-	-	0.2	-	-	-	2.3
2954/3/1	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	2.2
2954/4/1	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	2.2
2954/5/1	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	2.2
2954/6/1	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	2.2

Person ID number	Globe artichoke	Asparagus	Broccoli	Brussels sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Kale	Lettuce	Marrow	Pak choi	Spinach	Total
2954/7/1	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	2.2
2954/8/1	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	2.2
2925/3/1	-	-	-	1.1	1.0	-	-	-	-	-	-	-	-	-	-	2.1
3062/1/1	-	-	-	0.3	-	-	-	-	1.2	-	-	-	-	-	0.2	1.6
3062/2/1	-	-	-	0.3	-	-	-	-	1.2	-	-	-	-	-	0.2	1.6
3062/3/1	-	-	-	0.3	-	-	-	-	1.2	-	-	-	-	-	0.2	1.6
3062/4/1	-	-	-	0.3	-	-	-	-	1.2	-	-	-	-	-	0.2	1.6
3062/6/1	-	-	-	0.3	-	-	-	-	1.2	-	-	-	-	-	0.2	1.6
3062/7/1	-	-	-	0.3	-	-	-	-	1.2	-	-	-	-	-	0.2	1.6
3062/8/1	-	-	-	0.3	-	-	-	-	1.2	-	-	-	-	-	0.2	1.6
3021/4/1	-	-	-	-	-	-	0.8	-	-	-	0.5	-	-	-	-	1.3
3021/5/1	-	-	-	-	-	-	0.8	-	-	-	0.5	-	-	-	-	1.3
3021/6/1	-	-	-	-	-	-	0.8	-	-	-	0.5	-	-	-	-	1.3
2917/3/1	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	1.2
2917/4/1	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	1.2
3070/1/1	-	-	-	-	0.5	-	-	-	0.5	-	-	-	-	-	-	1.0
3070/2/1	-	-	-	-	0.5	-	-	-	0.5	-	-	-	-	-	-	1.0
3070/3/1	-	-	-	-	0.5	-	-	-	0.5	-	-	-	-	-	-	1.0
3070/4/1	-	-	-	-	0.5	-	-	-	0.5	-	-	-	-	-	-	1.0
2927/6/1	-	-	0.2	-	-	-	0.2	-	-	0.5	-	-	-	-	-	1.0
2927/7/1	-	-	0.2	-	-	-	0.2	-	-	0.5	-	-	-	-	-	1.0
2927/8/1	-	-	0.2	-	-	-	0.2	-	-	0.5	-	-	-	-	-	1.0
2927/9/1	-	-	0.2	-	-	-	0.2	-	-	0.5	-	-	-	-	-	1.0
2927/10/1	-	-	0.2	-	-	-	0.2	-	-	0.5	-	-	-	-	-	1.0
2927/11/1	-	-	0.2	-	-	-	0.2	-	-	0.5	-	-	-	-	-	1.0

Person ID number	Globe artichoke	Asparagus	Broccoli	Brussels sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Kale	Lettuce	Marrow	Pak choi	Spinach	Total
2927/12/1	-	-	0.2	-	-	-	0.2	-	-	0.5	-	-	-	-	-	1.0
2927/13/1	-	-	0.2	-	-	-	0.2	-	-	0.5	-	-	-	-	-	1.0
2999/1/1	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	1.0
2999/2/1	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	1.0

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables for adults based on the 27 high-rate consumers is 40.8 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 202 observations is 47.6 kg y<sup>-1</sup>

Table 21. Adults' consumption rates of other vegetables from the Derby terrestrial survey area (kg y<sup>-1</sup>)

Person ID number	Aubergine	Broad bean	Chilli pepper	French bean	Mangetout	Okra	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	White Beans	Total
3236/1/1	-	-	0.5	0.6	-	-	10.1	1.1	-	1.0	-	4.8	54.4	-	72.6
3236/2/1	-	-	0.5	0.6	-	-	10.1	1.1	-	1.0	-	4.8	54.4	-	72.6
3217/1/1	-	-	-	2.0	-	-	-	-	18.0	5.7	-	4.3	40.5	-	70.6
3217/2/1	-	-	-	2.0	-	-	-	-	18.0	5.7	-	4.3	40.5	-	70.6
3094/1/1	-	-	-	-	-	-	-	11.8	-	-	5.4	-	43.2	-	60.4
3067/1/1	-	-	-	0.9	-	-	0.2	-	36.0	-	5.4	3.5	-	-	46.0
3064/1/1	-	4.1	-	-	-	-	1.2	4.4	-	2.8	2.4	1.2	29.4	-	45.6
3064/2/1	-	4.1	-	-	-	-	1.2	4.4	-	2.8	2.4	1.2	29.4	-	45.6
3234/1/1	9.2	4.1	3.2	-	-	-	10.1	-	5.4	-	-	-	10.5	-	42.6
3234/2/1	9.2	4.1	3.2	-	-	-	10.1	-	5.4	-	-	-	10.5	-	42.6
3068/1/1	-	-	3.3	-	-	-	3.3	3.2	-	7.7	-	2.9	19.8	-	40.1
3068/2/1	-	-	3.3	-	-	-	3.3	3.2	-	7.7	-	2.9	19.8	-	40.1
3068/3/1	-	-	3.3	-	-	-	3.3	3.2	-	7.7	-	2.9	19.8	-	40.1
3068/4/1	-	-	3.3	-	-	-	3.3	3.2	-	7.7	-	2.9	19.8	-	40.1
3213/1/1	-	-	-	0.7	-	-	-	-	-	8.2	2.2	-	28.8	-	39.9
3213/2/1	-	-	-	0.7	-	-	-	-	-	8.2	2.2	-	28.8	-	39.9
3221/1/1	-	1.0	0.1	4.9	-	-	-	-	-	3.1	8.7	2.8	17.3	-	37.8
3221/2/1	-	1.0	0.1	4.9	-	-	-	-	-	3.1	8.7	2.8	17.3	-	37.8
3221/3/1	-	1.0	0.1	4.9	-	-	-	-	-	3.1	8.7	2.8	17.3	-	37.8
3054/1/1	-	-	0.8	-	-	-	-	-	2.0	0.5	1.8	0.3	30.0	-	35.5
3054/2/1	-	-	0.8	-	-	-	-	-	2.0	0.5	1.8	0.3	30.0	-	35.5
3054/3/1	-	-	0.8	-	-	-	-	-	2.0	0.5	1.8	0.3	30.0	-	35.5
3054/4/1	-	-	0.8	-	-	-	-	-	2.0	0.5	1.8	0.3	30.0	-	35.5

Person ID number	Aubergine	Broad bean	Chilli pepper	French bean	Mangetout	Okra	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	White Beans	Total
3054/5/1	-	-	0.8	-	-	-	-	-	2.0	0.5	1.8	0.3	30.0	-	35.5
3054/6/1	-	-	0.8	-	-	-	-	-	2.0	0.5	1.8	0.3	30.0	-	35.5
2955/1/1	-	-	3.0	1.1	-	-	-	-	-	-	0.9	3.8	26.1	-	34.9
2955/2/1	-	-	3.0	1.1	-	-	-	-	-	-	0.9	3.8	26.1	-	34.9
3034/1/1	1.0	8.4	0.7	-	-	-	0.3	-	5.0	-	4.0	1.7	10.8	-	31.9
3034/2/1	1.0	8.4	0.7	-	-	-	0.3	-	5.0	-	4.0	1.7	10.8	-	31.9
3226/1/1	1.5	-	-	2.2	-	-	2.2	2.2	-	1.1	8.6	2.9	10.8	-	31.6
3226/2/1	1.5	-	-	2.2	-	-	2.2	2.2	-	1.1	8.6	2.9	10.8	-	31.6
3058/3/1	-	4.8	-	8.1	-	-	-	14.7	-	1.8	0.9	0.7	-	-	31.0
3229/1/1	-	5.0	-	3.4	-	-	4.5	-	-	3.4	4.1	2.9	5.4	-	28.5
3229/2/1	-	5.0	-	3.4	-	-	4.5	-	-	3.4	4.1	2.9	5.4	-	28.5
3225/1/1	-	-	-	0.5	-	-	11.8	-	-	1.5	4.5	-	9.0	-	27.4
3225/2/1	-	-	-	0.5	-	-	11.8	-	-	1.5	4.5	-	9.0	-	27.4
3096/1/1	-	-	1.1	9.1	-	-	-	-	-	7.9	-	9.2	-	-	27.3
3096/2/1	-	-	1.1	9.1	-	-	-	-	-	7.9	-	9.2	-	-	27.3
3092/1/1	-	-	-	-	-	-	-	-	-	3.8	7.3	2.3	13.5	-	26.9
3092/2/1	-	-	-	-	-	-	-	-	-	3.8	7.3	2.3	13.5	-	26.9
3092/3/1	-	-	-	-	-	-	-	-	-	3.8	7.3	2.3	13.5	-	26.9
3092/4/1	-	-	-	-	-	-	-	-	-	3.8	7.3	2.3	13.5	-	26.9
3216/1/1	0.2	-	1.6	-	-	-	-	4.0	-	0.9	2.4	1.2	16.2	-	26.6
3216/2/1	0.2	-	1.6	-	-	-	-	4.0	-	0.9	2.4	1.2	16.2	-	26.6
3220/1/1	-	9.3	-	11.5	-	-	2.3	-	-	-	1.9	-	-	-	25.0
3224/1/1	8.9	1.9	-	0.4	-	-	-	-	1.5	3.5	-	1.7	6.7	-	24.8
3224/2/1	8.9	1.9	-	0.4	-	-	-	-	1.5	3.5	-	1.7	6.7	-	24.8
2998/1/1	-	-	-	0.5	-	-	-	-	-	1.5	-	-	21.6	-	23.7

Person ID number	Aubergine	Broad bean	Chilli pepper	French bean	Mangetout	Okra	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	White Beans	Total
2998/2/1	-	-	-	0.5	-	-	-	-	-	1.5	-	-	21.6	-	23.7
2998/3/1	-	-	-	0.5	-	-	-	-	-	1.5	-	-	21.6	-	23.7
2998/4/1	-	-	-	0.5	-	-	-	-	-	1.5	-	-	21.6	-	23.7
3081/1/1	0.5	-	-	-	-	-	-	-	-	0.5	12.1	0.2	10.0	-	23.2
3081/2/1	0.5	-	-	-	-	-	-	-	-	0.5	12.1	0.2	10.0	-	23.2
3081/3/1	0.5	-	-	-	-	-	-	-	-	0.5	12.1	0.2	10.0	-	23.2
3081/4/1	0.5	-	-	-	-	-	-	-	-	0.5	12.1	0.2	10.0	-	23.2
3081/7/1	0.5	-	-	-	-	-	-	-	-	0.5	12.1	0.2	10.0	-	23.2
3081/9/1	0.5	-	-	-	-	-	-	-	-	0.5	12.1	0.2	10.0	-	23.2
3035/1/1	-	-	-	0.8	-	-	-	4.4	-	3.0	0.9	2.0	11.5	-	22.7
3035/2/1	-	-	-	0.8	-	-	-	4.4	-	3.0	0.9	2.0	11.5	-	22.7
3197/1/1	-	-	1.2	0.4	-	-	-	1.6	-	0.8	-	-	17.3	-	21.2
3197/2/1	-	-	1.2	0.4	-	-	-	1.6	-	0.8	-	-	17.3	-	21.2
3235/1/1	-	1.1	-	0.9	-	-	1.5	-	-	2.4	5.1	4.4	5.8	-	21.1
3235/2/1	-	1.1	-	0.9	-	-	1.5	-	-	2.4	5.1	4.4	5.8	-	21.1
2992/1/1	-	2.3	-	4.5	-	-	2.3	-	-	-	-	-	10.8	-	19.9
2992/2/1	-	2.3	-	4.5	-	-	2.3	-	-	-	-	-	10.8	-	19.9
3219/1/1	6.8	-	-	-	-	-	-	-	-	-	6.8	-	5.1	-	18.7
3219/2/1	6.8	-	-	-	-	-	-	-	-	-	6.8	-	5.1	-	18.7
3066/1/1	-	-	-	2.2	-	-	-	-	-	5.6	8.2	-	2.5	-	18.4
3066/2/1	-	-	-	2.2	-	-	-	-	-	5.6	8.2	-	2.5	-	18.4
3232/1/1	-	-	-	1.6	-	-	-	-	9.6	-	4.0	-	2.5	-	17.8
3232/2/1	-	-	-	1.6	-	-	-	-	9.6	-	4.0	-	2.5	-	17.8
3232/3/1	-	-	-	1.6	-	-	-	-	9.6	-	4.0	-	2.5	-	17.8
3232/4/1	-	-	-	1.6	-	-	-	-	9.6	-	4.0	-	2.5	-	17.8



Person ID number	Aubergine	Broad bean	Chilli pepper	French bean	Mangetout	Okra	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	White Beans	Total
3232/5/1	-	-	-	1.6	-	-	-	-	9.6	-	4.0	-	2.5	-	17.8
3231/1/1	10.2	-	0.6	0.05	-	0.6	-	1.2	-	0.8	0.2	2.9	-	-	16.5
3231/2/1	10.2	-	0.6	0.05	-	0.6	-	1.2	-	0.8	0.2	2.9	-	-	16.5
3058/1/1	-	2.5	-	4.2	-	-	-	7.6	-	0.9	0.5	0.4	-	-	16.1
3058/2/1	-	2.5	-	4.2	-	-	-	7.6	-	0.9	0.5	0.4	-	-	16.1
3071/1/1	-	-	1.2	-	-	-	7.0	-	-	5.3	-	2.4	-	-	16.0
3101/1/1	1.4	-	-	3.0	-	-	-	-	-	3.0	0.8	-	7.6	-	15.7
3101/2/1	1.4	-	-	3.0	-	-	-	-	-	3.0	0.8	-	7.6	-	15.7
3101/3/1	1.4	-	-	3.0	-	-	-	-	-	3.0	0.8	-	7.6	-	15.7
2927/1/1	-	-	-	1.5	-	-	1.5	-	-	-	8.2	-	4.3	-	15.5
2927/2/1	-	-	-	1.5	-	-	1.5	-	-	-	8.2	-	4.3	-	15.5
3071/2/1	-	-	1.2	-	-	-	6.8	-	-	5.1	-	2.3	-	-	15.3
3071/3/1	-	-	1.2	-	-	-	6.8	-	-	5.1	-	2.3	-	-	15.3
3028/1/1	-	-	-	-	-	-	0.2	-	-	2.0	-	1.4	11.5	-	15.1
3028/4/1	-	-	-	-	-	-	0.2	-	-	2.0	-	1.4	11.5	-	15.1
3028/5/1	-	-	-	-	-	-	0.2	-	-	2.0	-	1.4	11.5	-	15.1
3056/1/1	-	-	-	-	-	-	0.3	-	-	1.5	3.6	-	9.6	-	15.1
3056/2/1	-	-	-	-	-	-	0.3	-	-	1.5	3.6	-	9.6	-	15.1
2938/1/1	-	3.4	-	-	-	-	-	-	-	7.3	-	-	4.3	-	15.0
3227/1/1	-	-	-	13.3	-	-	-	-	-	-	1.4	-	-	-	14.6
3227/2/1	-	-	-	13.3	-	-	-	-	-	-	1.4	-	-	-	14.6
3021/1/1	-	0.3	-	2.3	-	-	5.8	0.3	-	0.9	-	2.6	1.3	-	13.6
3021/2/1	-	0.3	-	2.3	-	-	5.8	0.3	-	0.9	-	2.6	1.3	-	13.6
3021/3/1	-	0.3	-	2.3	-	-	5.8	0.3	-	0.9	-	2.6	1.3	-	13.6
2925/1/1	-	-	-	-	-	-	-	-	5.4	-	-	-	8.1	-	13.5

Person ID number	Aubergine	Broad bean	Chilli pepper	French bean	Mangetout	Okra	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	White Beans	Total
2925/2/1	-	-	-	-	-	-	-	-	5.4	-	-	-	8.1	-	13.5
3058/4/1	-	1.9	-	3.2	-	-	-	5.9	-	0.7	0.4	0.3	-	-	12.4
2954/1/1	-	5.1	-	6.8	-	-	-	-	-	-	-	-	-	-	11.9
2954/2/1	-	5.1	-	6.8	-	-	-	-	-	-	-	-	-	-	11.9
3023/1/1	-	-	-	3.8	-	-	0.8	-	-	-	-	-	6.0	-	10.5
3023/2/1	-	-	-	3.8	-	-	0.8	-	-	-	-	-	6.0	-	10.5
3023/3/1	-	-	-	3.8	-	-	0.8	-	-	-	-	-	6.0	-	10.5
3023/4/1	-	-	-	3.8	-	-	0.8	-	-	-	-	-	6.0	-	10.5
3023/5/1	-	-	-	3.8	-	-	0.8	-	-	-	-	-	6.0	-	10.5
3023/6/1	-	-	-	3.8	-	-	0.8	-	-	-	-	-	6.0	-	10.5
2949/1/1	-	-	-	-	-	-	0.1	-	-	0.4	-	0.3	9.4	-	10.1
2949/2/1	-	-	-	-	-	-	0.1	-	-	0.4	-	0.3	9.4	-	10.1
2949/3/1	-	-	-	-	-	-	0.1	-	-	0.4	-	0.3	9.4	-	10.1
2955/3/1	-	-	0.8	0.3	-	-	-	-	-	-	0.3	1.1	7.3	-	9.8
2955/4/1	-	-	0.8	0.3	-	-	-	-	-	-	0.3	1.1	7.3	-	9.8
2955/6/1	-	-	0.8	0.3	-	-	-	-	-	-	0.3	1.1	7.3	-	9.8
2955/7/1	-	-	0.8	0.3	-	-	-	-	-	-	0.3	1.1	7.3	-	9.8
3222/1/1	-	2.2	-	1.4	1.5	-	-	-	-	-	0.7	2.8	-	-	8.6
3222/2/1	-	2.2	-	1.4	1.5	-	-	-	-	-	0.7	2.8	-	-	8.6
3102/2/1	-	3.6	-	-	-	-	-	-	-	-	-	-	4.8	-	8.4
2938/2/1	-	1.7	-	-	-	-	-	-	-	3.7	-	-	2.2	-	7.5
2938/3/1	-	1.7	-	-	-	-	-	-	-	3.7	-	-	2.2	-	7.5
3215/1/1	-	-	-	-	-	-	-	-	5.4	1.8	-	-	-	-	7.2
3099/1/1	0.2	0.4	-	0.4	-	-	1.4	0.3	-	0.2	1.7	0.5	1.4	-	6.5
3099/2/1	0.2	0.4	-	0.4	-	-	1.4	0.3	-	0.2	1.7	0.5	1.4	-	6.5

Person ID number	Aubergine	Broad bean	Chilli pepper	French bean	Mangetout	Okra	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	White Beans	Total
3099/3/1	0.2	0.4	-	0.4	-	-	1.4	0.3	-	0.2	1.7	0.5	1.4	-	6.5
3099/4/1	0.2	0.4	-	0.4	-	-	1.4	0.3	-	0.2	1.7	0.5	1.4	-	6.5
3099/5/1	0.2	0.4	-	0.4	-	-	1.4	0.3	-	0.2	1.7	0.5	1.4	-	6.5
3099/6/1	0.2	0.4	-	0.4	-	-	1.4	0.3	-	0.2	1.7	0.5	1.4	-	6.5
3099/8/1	0.2	0.4	-	0.4	-	-	1.4	0.3	-	0.2	1.7	0.5	1.4	-	6.5
3099/11/1	0.2	0.4	-	0.4	-	-	1.4	0.3	-	0.2	1.7	0.5	1.4	-	6.5
3099/12/1	0.2	0.4	-	0.4	-	-	1.4	0.3	-	0.2	1.7	0.5	1.4	-	6.5
3099/13/1	0.2	0.4	-	0.4	-	-	1.4	0.3	-	0.2	1.7	0.5	1.4	-	6.5
3099/17/1	0.2	0.4	-	0.4	-	-	1.4	0.3	-	0.2	1.7	0.5	1.4	-	6.5
3233/1/1	-	2.4	-	0.8	-	-	-	-	-	1.6	0.8	-	-	0.4	6.1
2953/1/1	-	1.0	-	-	-	-	0.03	-	-	-	3.6	0.9	-	-	5.6
2953/2/1	-	1.0	-	-	-	-	0.03	-	-	-	3.6	0.9	-	-	5.6
3098/1/1	-	-	-	-	-	-	0.04	1.0	-	0.8	-	-	3.6	-	5.4
3098/2/1	-	-	-	-	-	-	0.04	1.0	-	0.8	-	-	3.6	-	5.4
3098/3/1	-	-	-	-	-	-	0.04	1.0	-	0.8	-	-	3.6	-	5.4
2947/1/1	-	-	-	1.1	-	-	-	-	-	1.0	1.8	1.2	-	-	5.1
2947/2/1	-	-	-	1.1	-	-	-	-	-	1.0	1.8	1.2	-	-	5.1
2947/3/1	-	-	-	1.1	-	-	-	-	-	1.0	1.8	1.2	-	-	5.1
3021/4/1	-	-	-	1.0	-	-	2.5	-	-	0.4	-	1.2	-	-	5.1
3021/5/1	-	-	-	1.0	-	-	2.5	-	-	0.4	-	1.2	-	-	5.1
3021/6/1	-	-	-	1.0	-	-	2.5	-	-	0.4	-	1.2	-	-	5.1
3214/1/1	-	0.4	-	-	-	-	-	-	-	0.8	1.4	0.2	2.3	-	4.9
3214/2/1	-	0.4	-	-	-	-	-	-	-	0.8	1.4	0.2	2.3	-	4.9
3102/1/1	-	-	-	-	-	-	-	-	-	-	-	-	4.8	-	4.8
2916/1/1	-	-	-	-	-	-	-	-	-	-	-	-	4.5	-	4.5

Person ID number	Aubergine	Broad bean	Chilli pepper	French bean	Mangetout	Okra	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	White Beans	Total
2916/2/1	-	-	-	-	-	-	-	-	-	-	-	-	4.5	-	4.5
3062/1/1	0.4	-	0.2	0.1	-	-	-	-	1.5	0.1	-	0.2	1.8	-	4.3
3062/2/1	0.4	-	0.2	0.1	-	-	-	-	1.5	0.1	-	0.2	1.8	-	4.3
3062/3/1	0.4	-	0.2	0.1	-	-	-	-	1.5	0.1	-	0.2	1.8	-	4.3
3062/4/1	0.4	-	0.2	0.1	-	-	-	-	1.5	0.1	-	0.2	1.8	-	4.3
3062/6/1	0.4	-	0.2	0.1	-	-	-	-	1.5	0.1	-	0.2	1.8	-	4.3
3062/7/1	0.4	-	0.2	0.1	-	-	-	-	1.5	0.1	-	0.2	1.8	-	4.3
3062/8/1	0.4	-	0.2	0.1	-	-	-	-	1.5	0.1	-	0.2	1.8	-	4.3
3228/1/1	-	-	0.1	0.8	-	-	-	-	-	2.1	-	-	1.0	-	4.0
3228/2/1	-	-	0.1	0.8	-	-	-	-	-	2.1	-	-	1.0	-	4.0
3228/3/1	-	-	0.1	0.8	-	-	-	-	-	2.1	-	-	1.0	-	4.0
2954/3/1	-	1.6	-	2.2	-	-	-	-	-	-	-	-	-	-	3.8
2954/4/1	-	1.6	-	2.2	-	-	-	-	-	-	-	-	-	-	3.8
2954/5/1	-	1.6	-	2.2	-	-	-	-	-	-	-	-	-	-	3.8
2954/6/1	-	1.6	-	2.2	-	-	-	-	-	-	-	-	-	-	3.8
2954/7/1	-	1.6	-	2.2	-	-	-	-	-	-	-	-	-	-	3.8
2954/8/1	-	1.6	-	2.2	-	-	-	-	-	-	-	-	-	-	3.8
3071/4/1	-	-	0.3	-	-	-	1.6	-	-	1.2	-	0.6	-	-	3.7
3071/5/1	-	-	0.3	-	-	-	1.6	-	-	1.2	-	0.6	-	-	3.7
3071/6/1	-	-	0.3	-	-	-	1.6	-	-	1.2	-	0.6	-	-	3.7
3071/7/1	-	-	0.3	-	-	-	1.6	-	-	1.2	-	0.6	-	-	3.7
3230/1/1	-	-	-	0.9	-	-	-	-	-	-	-	2.3	-	-	3.2
2925/3/1	-	-	-	-	-	-	-	-	1.2	-	-	-	1.8	-	3.0
2916/3/1	-	-	-	-	-	-	-	-	-	-	-	-	2.9	-	2.9
2916/4/1	-	-	-	-	-	-	-	-	-	-	-	-	2.9	-	2.9

Person ID number	Aubergine	Broad bean	Chilli pepper	French bean	Mangetout	Okra	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	White Beans	Total
2916/5/1	-	-	-	-	-	-	-	-	-	-	-	-	2.9	-	2.9
2999/1/1	-	-	-	-	-	-	-	-	-	1.5	-	-	0.9	-	2.4
2999/2/1	-	-	-	-	-	-	-	-	-	1.5	-	-	0.9	-	2.4
2947/4/1	-	-	-	0.5	-	-	-	-	-	0.5	0.9	0.6	-	-	2.4
2947/5/1	-	-	-	0.5	-	-	-	-	-	0.5	0.9	0.6	-	-	2.4
2917/1/1	-	0.3	-	-	-	-	0.1	-	-	1.2	-	0.6	-	-	2.2
2917/2/1	-	0.3	-	-	-	-	0.1	-	-	1.2	-	0.6	-	-	2.2
3218/1/1	-	-	0.1	0.2	-	-	-	-	-	0.6	-	0.3	0.9	-	2.2
3218/2/1	-	-	0.1	0.2	-	-	-	-	-	0.6	-	0.3	0.9	-	2.2
3022/1/1	-	-	-	-	-	-	-	-	-	1.0	-	0.9	0.2	-	2.2
3022/2/1	-	-	-	-	-	-	-	-	-	1.0	-	0.9	0.2	-	2.2
3022/3/1	-	-	-	-	-	-	-	-	-	1.0	-	0.9	0.2	-	2.2
3022/4/1	-	-	-	-	-	-	-	-	-	1.0	-	0.9	0.2	-	2.2
3070/1/1	-	-	-	0.5	-	-	0.5	-	-	0.5	-	-	0.5	-	2.0
3070/2/1	-	-	-	0.5	-	-	0.5	-	-	0.5	-	-	0.5	-	2.0
3070/3/1	-	-	-	0.5	-	-	0.5	-	-	0.5	-	-	0.5	-	2.0
3070/4/1	-	-	-	0.5	-	-	0.5	-	-	0.5	-	-	0.5	-	2.0
3077/1/1	-	0.4	0.5	0.3	-	-	-	-	-	-	0.6	-	-	-	1.7
3077/2/1	-	0.4	0.5	0.3	-	-	-	-	-	-	0.6	-	-	-	1.7
3077/3/1	-	0.4	0.5	0.3	-	-	-	-	-	-	0.6	-	-	-	1.7
3077/4/1	-	0.4	0.5	0.3	-	-	-	-	-	-	0.6	-	-	-	1.7
2927/6/1	-	-	-	0.2	-	-	0.2	-	-	-	0.8	-	0.4	-	1.5
2927/7/1	-	-	-	0.2	-	-	0.2	-	-	-	0.8	-	0.4	-	1.5
2927/8/1	-	-	-	0.2	-	-	0.2	-	-	-	0.8	-	0.4	-	1.5
2927/9/1	-	-	-	0.2	-	-	0.2	-	-	-	0.8	-	0.4	-	1.5

Person ID number	Aubergine	Broad bean	Chilli pepper	French bean	Mangetout	Okra	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	White Beans	Total
2927/10/1	-	-	-	0.2	-	-	0.2	-	-	-	0.8	-	0.4	-	1.5
2927/11/1	-	-	-	0.2	-	-	0.2	-	-	-	0.8	-	0.4	-	1.5
2927/12/1	-	-	-	0.2	-	-	0.2	-	-	-	0.8	-	0.4	-	1.5
2927/13/1	-	-	-	0.2	-	-	0.2	-	-	-	0.8	-	0.4	-	1.5
3098/4/1	-	-	-	-	-	-	0.01	0.2	-	0.2	-	-	0.9	-	1.3
3098/5/1	-	-	-	-	-	-	0.01	0.2	-	0.2	-	-	0.9	-	1.3
3098/6/1	-	-	-	-	-	-	0.01	0.2	-	0.2	-	-	0.9	-	1.3
3098/7/1	-	-	-	-	-	-	0.01	0.2	-	0.2	-	-	0.9	-	1.3
2917/3/1	-	0.2	-	-	-	-	0.03	-	-	0.6	-	0.3	-	-	1.1
2917/4/1	-	0.2	-	-	-	-	0.03	-	-	0.6	-	0.3	-	-	1.1
2983/1/1	-	-	-	0.4	-	-	-	0.5	-	-	-	-	-	-	1.0

### **Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of other vegetables for adults based on the 47 high-rate consumers is 37.6 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 209 observations is 45.9 kg y<sup>-1</sup>

Table 22. Adults' consumption rates of root vegetables from the Derby terrestrial survey area (kg y<sup>-1</sup>)

Person ID number	Jerusalem artichoke	Beetroot	Carrot	Celeriac	Celery	Chicory root	Fennel	Garlic	Horseradish	Kohl rabi	Leek	Oca	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Sweet potato	Turnip	Total
3221/1/1	-	8.1	4.1	1.4	-	-	-	-	-	2.7	16.2	-	23.8	3.2	-	-	0.9	12.2	-	-	72.6
3221/2/1	-	8.1	4.1	1.4	-	-	-	-	-	2.7	16.2	-	23.8	3.2	-	-	0.9	12.2	-	-	72.6
3221/3/1	-	8.1	4.1	1.4	-	-	-	-	-	2.7	16.2	-	23.8	3.2	-	-	0.9	12.2	-	-	72.6
3220/1/1	-	13.8	6.9	3.3	-	-	0.6	1.3	-	-	9.2	-	18.4	1.8	-	-	-	-	-	5.5	60.8
3064/1/1	-	-	6.6	-	0.4	-	-	-	-	-	13.5	-	14.8	1.6	-	-	0.2	9.8	2.7	4.5	54.2
3064/2/1	-	-	6.6	-	0.4	-	-	-	-	-	13.5	-	14.8	1.6	-	-	0.2	9.8	2.7	4.5	54.2
3058/3/1	-	4.7	6.8	-	-	-	-	-	-	-	6.8	-	13.5	-	-	4.8	1.1	10.2	-	-	47.8
3226/1/1	-	2.4	10.0	-	-	-	-	-	-	0.8	2.0	-	8.2	3.5	0.4	-	0.2	2.7	3.8	-	34.0
3226/2/1	-	2.4	10.0	-	-	-	-	-	-	0.8	2.0	-	8.2	3.5	0.4	-	0.2	2.7	3.8	-	34.0
2987/1/1	-	9.0	-	-	-	-	-	-	-	-	3.0	-	9.9	1.8	-	-	-	-	-	4.2	27.9
2987/2/1	-	9.0	-	-	-	-	-	-	-	-	3.0	-	9.9	1.8	-	-	-	-	-	4.2	27.9
3035/1/1	-	2.9	2.3	-	1.9	-	-	0.9	-	-	1.5	-	9.0	2.2	-	-	0.8	5.5	-	-	27.0
3035/2/1	-	2.9	2.3	-	1.9	-	-	0.9	-	-	1.5	-	9.0	2.2	-	-	0.8	5.5	-	-	27.0
3236/1/1	-	-	4.3	1.0	-	-	-	-	-	-	8.0	-	11.0	0.9	-	-	-	-	-	-	25.1
3236/2/1	-	-	4.3	1.0	-	-	-	-	-	-	8.0	-	11.0	0.9	-	-	-	-	-	-	25.1
3058/1/1	-	2.5	3.5	-	-	-	-	-	-	-	3.5	-	7.0	-	-	2.5	0.5	5.3	-	-	24.8
3058/2/1	-	2.5	3.5	-	-	-	-	-	-	-	3.5	-	7.0	-	-	2.5	0.5	5.3	-	-	24.8
3021/1/1	-	6.9	2.0	-	-	-	-	0.4	-	-	-	-	7.6	2.9	-	3.5	-	-	-	-	23.2
3021/2/1	-	6.9	2.0	-	-	-	-	0.4	-	-	-	-	7.6	2.9	-	3.5	-	-	-	-	23.2
3021/3/1	-	6.9	2.0	-	-	-	-	0.4	-	-	-	-	7.6	2.9	-	3.5	-	-	-	-	23.2
3094/1/1	-	1.8	-	-	-	-	-	6.0	-	-	-	-	6.6	-	-	7.7	-	-	-	-	22.0
3068/1/1	-	0.5	4.3	-	2.5	-	-	-	-	-	1.8	-	12.5	-	0.1	-	-	-	-	-	21.6
3068/2/1	-	0.5	4.3	-	2.5	-	-	-	-	-	1.8	-	12.5	-	0.1	-	-	-	-	-	21.6

Person ID number	Jerusalem artichoke	Beetroot	Carrot	Celeriac	Celery	Chicory root	Fennel	Garlic	Horseradish	Kohl rabi	Leek	Oca	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Sweet potato	Turnip	Total
3068/3/1	-	0.5	4.3	-	2.5	-	-	-	-	-	1.8	-	12.5	-	0.1	-	-	-	-	-	21.6
3068/4/1	-	0.5	4.3	-	2.5	-	-	-	-	-	1.8	-	12.5	-	0.1	-	-	-	-	-	21.6
3234/1/1	-	-	6.5	-	-	-	-	-	-	-	8.1	-	6.5	-	-	-	-	-	-	-	21.1
3234/2/1	-	-	6.5	-	-	-	-	-	-	-	8.1	-	6.5	-	-	-	-	-	-	-	21.1
2955/1/1	-	1.9	-	-	-	-	-	-	-	-	2.4	-	8.2	-	-	-	-	8.2	-	-	20.7
2955/2/1	-	1.9	-	-	-	-	-	-	-	-	2.4	-	8.2	-	-	-	-	8.2	-	-	20.7
3222/1/1	-	-	-	-	-	-	-	3.0	-	-	2.9	-	8.8	-	-	6.0	-	-	-	-	20.7
3222/2/1	-	-	-	-	-	-	-	3.0	-	-	2.9	-	8.8	-	-	6.0	-	-	-	-	20.7
3225/1/1	-	0.6	1.1	-	-	-	-	-	-	0.8	2.5	-	6.6	1.4	-	1.3	-	5.6	-	-	19.7
3225/2/1	-	0.6	1.1	-	-	-	-	-	-	0.8	2.5	-	6.6	1.4	-	1.3	-	5.6	-	-	19.7
3058/4/1	-	1.9	2.7	-	-	-	-	-	-	-	2.7	-	5.4	-	-	1.9	0.4	4.1	-	-	19.1
2947/1/1	-	-	1.6	1.1	-	-	-	-	-	-	1.1	-	9.9	1.3	-	-	0.7	2.4	-	0.9	18.9
2947/2/1	-	-	1.6	1.1	-	-	-	-	-	-	1.1	-	9.9	1.3	-	-	0.7	2.4	-	0.9	18.9
2947/3/1	-	-	1.6	1.1	-	-	-	-	-	-	1.1	-	9.9	1.3	-	-	0.7	2.4	-	0.9	18.9
3023/1/1	8.4	-	1.5	-	-	0.9	-	0.4	-	-	1.5	-	5.1	-	0.1	0.5	-	-	-	-	18.6
3023/2/1	8.4	-	1.5	-	-	0.9	-	0.4	-	-	1.5	-	5.1	-	0.1	0.5	-	-	-	-	18.6
3023/3/1	8.4	-	1.5	-	-	0.9	-	0.4	-	-	1.5	-	5.1	-	0.1	0.5	-	-	-	-	18.6
3023/4/1	8.4	-	1.5	-	-	0.9	-	0.4	-	-	1.5	-	5.1	-	0.1	0.5	-	-	-	-	18.6
3023/5/1	8.4	-	1.5	-	-	0.9	-	0.4	-	-	1.5	-	5.1	-	0.1	0.5	-	-	-	-	18.6
3023/6/1	8.4	-	1.5	-	-	0.9	-	0.4	-	-	1.5	-	5.1	-	0.1	0.5	-	-	-	-	18.6
3096/1/1	-	10.5	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0
3096/2/1	-	10.5	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0
2917/1/1	-	-	4.3	-	-	-	-	-	-	-	-	-	13.0	-	-	-	-	-	-	-	17.3
2917/2/1	-	-	4.3	-	-	-	-	-	-	-	-	-	13.0	-	-	-	-	-	-	-	17.3



Person ID number	Jerusalem artichoke	Beetroot	Carrot	Celeriac	Celery	Chicory root	Fennel	Garlic	Horseradish	Kohl rabi	Leek	Oca	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Sweet potato	Turnip	Total
3235/1/1	-	-	1.4	-	-	-	-	-	5.0	-	-	-	2.6	3.5	-	-	-	4.4	-	-	16.8
3235/2/1	-	-	1.4	-	-	-	-	-	5.0	-	-	-	2.6	3.5	-	-	-	4.4	-	-	16.8
3219/1/1	-	-	-	-	-	-	-	-	-	-	-	-	16.2	-	-	-	-	-	-	-	16.2
3219/2/1	-	-	-	-	-	-	-	-	-	-	-	-	16.2	-	-	-	-	-	-	-	16.2
2954/1/1	-	-	-	-	-	-	-	-	-	-	8.1	-	6.5	1.4	-	-	-	-	-	-	15.9
2954/2/1	-	-	-	-	-	-	-	-	-	-	8.1	-	6.5	1.4	-	-	-	-	-	-	15.9
3098/1/1	-	3.2	1.8	1.6	2.2	-	-	-	-	-	1.4	-	3.2	1.6	0.5	-	-	-	-	-	15.5
3098/2/1	-	3.2	1.8	1.6	2.2	-	-	-	-	-	1.4	-	3.2	1.6	0.5	-	-	-	-	-	15.5
3098/3/1	-	3.2	1.8	1.6	2.2	-	-	-	-	-	1.4	-	3.2	1.6	0.5	-	-	-	-	-	15.5
2983/1/1	-	-	1.2	-	-	-	-	-	-	-	8.9	-	3.7	-	-	0.9	-	-	-	-	14.6
3101/1/1	-	7.6	3.8	-	-	-	-	-	-	-	-	-	3.0	-	-	-	-	-	-	-	14.4
3101/2/1	-	7.6	3.8	-	-	-	-	-	-	-	-	-	3.0	-	-	-	-	-	-	-	14.4
3101/3/1	-	7.6	3.8	-	-	-	-	-	-	-	-	-	3.0	-	-	-	-	-	-	-	14.4
2916/1/1	-	-	-	-	-	-	-	0.9	-	-	-	-	12.5	-	-	-	-	-	-	-	13.4
2916/2/1	-	-	-	-	-	-	-	0.9	-	-	-	-	12.5	-	-	-	-	-	-	-	13.4
3233/1/1	0.8	1.6	0.8	-	0.8	-	0.4	1.6	-	0.4	2.4	0.8	2.4	-	-	-	-	-	-	-	12.2
3227/1/1	-	6.6	-	-	-	-	-	-	-	-	-	-	5.5	-	-	-	-	-	-	-	12.1
3227/2/1	-	6.6	-	-	-	-	-	-	-	-	-	-	5.5	-	-	-	-	-	-	-	12.1
3230/1/1	-	-	-	-	-	-	-	1.9	-	-	10.0	-	-	-	-	-	-	-	-	-	11.9
2992/1/1	-	3.8	-	-	-	-	-	0.5	-	-	3.0	-	4.4	-	-	-	-	-	-	-	11.6
2992/2/1	-	3.8	-	-	-	-	-	0.5	-	-	3.0	-	4.4	-	-	-	-	-	-	-	11.6
3071/1/1	-	3.5	-	-	-	-	-	-	-	-	5.3	-	-	1.4	-	-	0.3	-	-	-	10.4
3028/1/1	-	3.0	-	-	-	-	-	1.6	-	-	-	-	5.7	-	-	-	-	-	-	-	10.4
3028/4/1	-	3.0	-	-	-	-	-	1.6	-	-	-	-	5.7	-	-	-	-	-	-	-	10.4

Person ID number	Jerusalem artichoke	Beetroot	Carrot	Celeriac	Celery	Chicory root	Fennel	Garlic	Horseradish	Kohl rabi	Leek	Oca	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Sweet potato	Turnip	Total	
3028/5/1	-	3.0	-	-	-	-	-	1.6	-	-	-	-	5.7	-	-	-	-	-	-	-	-	10.4
3021/4/1	-	3.0	0.9	-	-	-	-	0.2	-	-	-	-	3.3	1.3	-	1.5	-	-	-	-	-	10.1
3021/5/1	-	3.0	0.9	-	-	-	-	0.2	-	-	-	-	3.3	1.3	-	1.5	-	-	-	-	-	10.1
3021/6/1	-	3.0	0.9	-	-	-	-	0.2	-	-	-	-	3.3	1.3	-	1.5	-	-	-	-	-	10.1
3071/2/1	-	3.4	-	-	-	-	-	-	-	-	5.1	-	-	1.3	-	-	0.3	-	-	-	-	10.0
3071/3/1	-	3.4	-	-	-	-	-	-	-	-	5.1	-	-	1.3	-	-	0.3	-	-	-	-	10.0
2947/4/1	-	-	0.8	0.5	-	-	-	-	-	-	0.5	-	4.8	0.6	-	-	0.3	1.1	-	0.5	-	9.1
2947/5/1	-	-	0.8	0.5	-	-	-	-	-	-	0.5	-	4.8	0.6	-	-	0.3	1.1	-	0.5	-	9.1
3077/1/1	-	2.3	-	-	-	-	0.1	-	-	0.6	-	5.6	-	-	0.4	-	-	-	-	-	-	8.9
3077/2/1	-	2.3	-	-	-	-	0.1	-	-	0.6	-	5.6	-	-	0.4	-	-	-	-	-	-	8.9
3077/3/1	-	2.3	-	-	-	-	0.1	-	-	0.6	-	5.6	-	-	0.4	-	-	-	-	-	-	8.9
3077/4/1	-	2.3	-	-	-	-	0.1	-	-	0.6	-	5.6	-	-	0.4	-	-	-	-	-	-	8.9
2917/3/1	-	-	2.2	-	-	-	-	-	-	-	-	-	6.5	-	-	-	-	-	-	-	-	8.6
2917/4/1	-	-	2.2	-	-	-	-	-	-	-	-	-	6.5	-	-	-	-	-	-	-	-	8.6
2916/3/1	-	-	-	-	-	-	-	0.6	-	-	-	-	8.0	-	-	-	-	-	-	-	-	8.6
2916/4/1	-	-	-	-	-	-	-	0.6	-	-	-	-	8.0	-	-	-	-	-	-	-	-	8.6
2916/5/1	-	-	-	-	-	-	-	0.6	-	-	-	-	8.0	-	-	-	-	-	-	-	-	8.6
3215/1/1	-	4.9	-	-	-	-	-	-	-	-	-	-	3.3	-	-	-	-	-	-	-	-	8.2
3216/1/1	-	-	-	-	-	-	-	-	-	-	8.1	-	-	-	-	-	-	-	-	-	-	8.1
3216/2/1	-	-	-	-	-	-	-	-	-	-	8.1	-	-	-	-	-	-	-	-	-	-	8.1
2927/1/1	-	1.4	-	-	-	-	-	-	-	-	-	-	6.5	-	-	-	-	-	-	-	-	7.8
2927/2/1	-	1.4	-	-	-	-	-	-	-	-	-	-	6.5	-	-	-	-	-	-	-	-	7.8
3066/1/1	-	-	-	-	-	-	-	-	-	-	-	-	7.5	-	-	-	-	-	-	-	-	7.5
3066/2/1	-	-	-	-	-	-	-	-	-	-	-	-	7.5	-	-	-	-	-	-	-	-	7.5

Person ID number	Jerusalem artichoke	Beetroot	Carrot	Celeriac	Celery	Chicory root	Fennel	Garlic	Horseradish	Kohl rabi	Leek	Oca	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Sweet potato	Turnip	Total
3197/1/1	-	0.6	2.9	-	-	-	-	-	-	-	-	-	-	-	3.5	-	0.1	-	-	-	7.0
3197/2/1	-	0.6	2.9	-	-	-	-	-	-	-	-	-	-	-	3.5	-	0.1	-	-	-	7.0
3054/1/1	-	-	-	-	-	-	-	1.8	-	-	-	-	4.8	-	-	-	-	-	-	-	6.6
3054/2/1	-	-	-	-	-	-	-	1.8	-	-	-	-	4.8	-	-	-	-	-	-	-	6.6
3054/3/1	-	-	-	-	-	-	-	1.8	-	-	-	-	4.8	-	-	-	-	-	-	-	6.6
3054/4/1	-	-	-	-	-	-	-	1.8	-	-	-	-	4.8	-	-	-	-	-	-	-	6.6
3054/5/1	-	-	-	-	-	-	-	1.8	-	-	-	-	4.8	-	-	-	-	-	-	-	6.6
3054/6/1	-	-	-	-	-	-	-	1.8	-	-	-	-	4.8	-	-	-	-	-	-	-	6.6
2999/1/1	-	4.4	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.3
2999/2/1	-	4.4	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.3
2955/3/1	-	0.5	-	-	-	-	-	-	-	-	0.7	-	2.3	-	-	-	-	2.3	-	-	5.8
2955/4/1	-	0.5	-	-	-	-	-	-	-	-	0.7	-	2.3	-	-	-	-	2.3	-	-	5.8
2955/6/1	-	0.5	-	-	-	-	-	-	-	-	0.7	-	2.3	-	-	-	-	2.3	-	-	5.8
2955/7/1	-	0.5	-	-	-	-	-	-	-	-	0.7	-	2.3	-	-	-	-	2.3	-	-	5.8
3034/1/1	-	1.4	-	-	-	-	-	-	-	-	-	-	2.4	-	1.4	-	-	-	-	-	5.2
3034/2/1	-	1.4	-	-	-	-	-	-	-	-	-	-	2.4	-	1.4	-	-	-	-	-	5.2
2954/3/1	-	-	-	-	-	-	-	-	-	-	2.6	-	2.1	0.4	-	-	-	-	-	-	5.1
2954/4/1	-	-	-	-	-	-	-	-	-	-	2.6	-	2.1	0.4	-	-	-	-	-	-	5.1
2954/5/1	-	-	-	-	-	-	-	-	-	-	2.6	-	2.1	0.4	-	-	-	-	-	-	5.1
2954/6/1	-	-	-	-	-	-	-	-	-	-	2.6	-	2.1	0.4	-	-	-	-	-	-	5.1
2954/7/1	-	-	-	-	-	-	-	-	-	-	2.6	-	2.1	0.4	-	-	-	-	-	-	5.1
2954/8/1	-	-	-	-	-	-	-	-	-	-	2.6	-	2.1	0.4	-	-	-	-	-	-	5.1
3231/1/1	-	1.1	-	-	-	-	-	-	-	-	0.5	-	-	-	1.2	-	-	-	-	2.2	5.0
3231/2/1	-	1.1	-	-	-	-	-	-	-	-	0.5	-	-	-	1.2	-	-	-	-	2.2	5.0

Person ID number	Jerusalem artichoke	Beetroot	Carrot	Celeriac	Celery	Chicory root	Fennel	Garlic	Horseradish	Kohl rabi	Leek	Oca	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Sweet potato	Turnip	Total
3056/1/1	-	-	0.6	-	-	-	-	0.6	-	-	-	-	3.7	-	-	-	-	-	-	-	4.9
3056/2/1	-	-	0.6	-	-	-	-	0.6	-	-	-	-	3.7	-	-	-	-	-	-	-	4.9
3099/1/1	-	0.6	0.3	0.1	-	-	-	0.1	-	-	-	-	0.4	0.2	0.04	2.3	-	0.3	-	-	4.1
3099/2/1	-	0.6	0.3	0.1	-	-	-	0.1	-	-	-	-	0.4	0.2	0.04	2.3	-	0.3	-	-	4.1
3099/3/1	-	0.6	0.3	0.1	-	-	-	0.1	-	-	-	-	0.4	0.2	0.04	2.3	-	0.3	-	-	4.1
3099/4/1	-	0.6	0.3	0.1	-	-	-	0.1	-	-	-	-	0.4	0.2	0.04	2.3	-	0.3	-	-	4.1
3099/5/1	-	0.6	0.3	0.1	-	-	-	0.1	-	-	-	-	0.4	0.2	0.04	2.3	-	0.3	-	-	4.1
3099/6/1	-	0.6	0.3	0.1	-	-	-	0.1	-	-	-	-	0.4	0.2	0.04	2.3	-	0.3	-	-	4.1
3099/8/1	-	0.6	0.3	0.1	-	-	-	0.1	-	-	-	-	0.4	0.2	0.04	2.3	-	0.3	-	-	4.1
3099/11/1	-	0.6	0.3	0.1	-	-	-	0.1	-	-	-	-	0.4	0.2	0.04	2.3	-	0.3	-	-	4.1
3099/12/1	-	0.6	0.3	0.1	-	-	-	0.1	-	-	-	-	0.4	0.2	0.04	2.3	-	0.3	-	-	4.1
3099/13/1	-	0.6	0.3	0.1	-	-	-	0.1	-	-	-	-	0.4	0.2	0.04	2.3	-	0.3	-	-	4.1
3099/17/1	-	0.6	0.3	0.1	-	-	-	0.1	-	-	-	-	0.4	0.2	0.04	2.3	-	0.3	-	-	4.1
3218/1/1	-	-	0.4	1.0	-	-	-	-	-	-	-	-	2.7	-	-	-	-	-	-	-	4.1
3218/2/1	-	-	0.4	1.0	-	-	-	-	-	-	-	-	2.7	-	-	-	-	-	-	-	4.1
3062/1/1	-	0.1	-	-	-	-	-	-	-	-	-	-	2.7	-	-	0.9	-	-	-	-	3.8
3062/2/1	-	0.1	-	-	-	-	-	-	-	-	-	-	2.7	-	-	0.9	-	-	-	-	3.8
3062/3/1	-	0.1	-	-	-	-	-	-	-	-	-	-	2.7	-	-	0.9	-	-	-	-	3.8
3062/4/1	-	0.1	-	-	-	-	-	-	-	-	-	-	2.7	-	-	0.9	-	-	-	-	3.8
3062/6/1	-	0.1	-	-	-	-	-	-	-	-	-	-	2.7	-	-	0.9	-	-	-	-	3.8
3062/7/1	-	0.1	-	-	-	-	-	-	-	-	-	-	2.7	-	-	0.9	-	-	-	-	3.8
3062/8/1	-	0.1	-	-	-	-	-	-	-	-	-	-	2.7	-	-	0.9	-	-	-	-	3.8
3098/4/1	-	0.8	0.4	0.4	0.5	-	-	-	-	-	0.3	-	0.8	0.4	0.1	-	-	-	-	-	3.7
3098/5/1	-	0.8	0.4	0.4	0.5	-	-	-	-	-	0.3	-	0.8	0.4	0.1	-	-	-	-	-	3.7

Person ID number	Jerusalem artichoke	Beetroot	Carrot	Celeriac	Celery	Chicory root	Fennel	Garlic	Horseradish	Kohl rabi	Leek	Oca	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Sweet potato	Turnip	Total
3098/6/1	-	0.8	0.4	0.4	0.5	-	-	-	-	-	0.3	-	0.8	0.4	0.1	-	-	-	-	-	3.7
3098/7/1	-	0.8	0.4	0.4	0.5	-	-	-	-	-	0.3	-	0.8	0.4	0.1	-	-	-	-	-	3.7
2953/1/1	-	-	-	-	-	-	-	-	-	-	3.6	-	-	-	-	-	-	-	-	-	3.6
2953/2/1	-	-	-	-	-	-	-	-	-	-	3.6	-	-	-	-	-	-	-	-	-	3.6
2998/1/1	-	-	-	-	-	-	-	-	-	-	1.0	-	2.2	-	-	-	-	-	-	-	3.2
2998/2/1	-	-	-	-	-	-	-	-	-	-	1.0	-	2.2	-	-	-	-	-	-	-	3.2
2998/3/1	-	-	-	-	-	-	-	-	-	-	1.0	-	2.2	-	-	-	-	-	-	-	3.2
2998/4/1	-	-	-	-	-	-	-	-	-	-	1.0	-	2.2	-	-	-	-	-	-	-	3.2
3022/1/1	-	1.5	-	-	-	-	-	-	-	-	-	-	1.5	-	-	-	-	-	-	-	3.0
3022/2/1	-	1.5	-	-	-	-	-	-	-	-	-	-	1.5	-	-	-	-	-	-	-	3.0
3022/3/1	-	1.5	-	-	-	-	-	-	-	-	-	-	1.5	-	-	-	-	-	-	-	3.0
3022/4/1	-	1.5	-	-	-	-	-	-	-	-	-	-	1.5	-	-	-	-	-	-	-	3.0
3213/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	2.9	-	-	-	-	-	-	2.9
3213/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	2.9	-	-	-	-	-	-	2.9
3214/1/1	-	0.2	-	-	-	-	-	0.2	-	-	-	-	2.3	-	-	0.2	-	-	-	-	2.8
3214/2/1	-	0.2	-	-	-	-	-	0.2	-	-	-	-	2.3	-	-	0.2	-	-	-	-	2.8
3102/1/1	-	1.2	-	-	-	-	-	-	-	-	-	-	-	1.4	-	-	-	-	-	-	2.6
3102/2/1	-	1.2	-	-	-	-	-	-	-	-	-	-	-	1.4	-	-	-	-	-	-	2.6
3081/1/1	-	0.5	0.8	-	-	-	-	-	-	-	-	-	1.0	0.4	-	-	-	-	-	-	2.6
3081/2/1	-	0.5	0.8	-	-	-	-	-	-	-	-	-	1.0	0.4	-	-	-	-	-	-	2.6
3081/3/1	-	0.5	0.8	-	-	-	-	-	-	-	-	-	1.0	0.4	-	-	-	-	-	-	2.6
3081/4/1	-	0.5	0.8	-	-	-	-	-	-	-	-	-	1.0	0.4	-	-	-	-	-	-	2.6
3081/7/1	-	0.5	0.8	-	-	-	-	-	-	-	-	-	1.0	0.4	-	-	-	-	-	-	2.6
3081/9/1	-	0.5	0.8	-	-	-	-	-	-	-	-	-	1.0	0.4	-	-	-	-	-	-	2.6

Person ID number	Jerusalem artichoke	Beetroot	Carrot	Celeriac	Celery	Chicory root	Fennel	Garlic	Horseradish	Kohl rabi	Leek	Oca	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Sweet potato	Turnip	Total	
3232/1/1	-	0.5	-	-	-	-	-	-	-	-	-	-	1.4	0.7	-	-	-	-	-	-	-	2.6
3232/2/1	-	0.5	-	-	-	-	-	-	-	-	-	-	1.4	0.7	-	-	-	-	-	-	-	2.6
3232/3/1	-	0.5	-	-	-	-	-	-	-	-	-	-	1.4	0.7	-	-	-	-	-	-	-	2.6
3232/4/1	-	0.5	-	-	-	-	-	-	-	-	-	-	1.4	0.7	-	-	-	-	-	-	-	2.6
3232/5/1	-	0.5	-	-	-	-	-	-	-	-	-	-	1.4	0.7	-	-	-	-	-	-	-	2.6
3224/1/1	-	-	1.5	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-	-	2.6
3224/2/1	-	-	1.5	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-	-	2.6
3071/4/1	-	0.8	-	-	-	-	-	-	-	-	1.2	-	-	0.3	-	-	0.1	-	-	-	-	2.4
3071/5/1	-	0.8	-	-	-	-	-	-	-	-	1.2	-	-	0.3	-	-	0.1	-	-	-	-	2.4
3071/6/1	-	0.8	-	-	-	-	-	-	-	-	1.2	-	-	0.3	-	-	0.1	-	-	-	-	2.4
3071/7/1	-	0.8	-	-	-	-	-	-	-	-	1.2	-	-	0.3	-	-	0.1	-	-	-	-	2.4
3217/1/1	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7
3217/2/1	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7
3070/1/1	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	1.5
3070/2/1	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	1.5
3070/3/1	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	1.5
3070/4/1	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	1.5
3228/1/1	-	-	-	-	-	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-	-	-	0.9
3228/2/1	-	-	-	-	-	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-	-	-	0.9
3228/3/1	-	-	-	-	-	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-	-	-	0.9
2949/1/1	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
2949/2/1	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
2949/3/1	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
2927/6/1	-	0.1	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	0.8

Person ID number	Jerusalem artichoke	Beetroot	Carrot	Celeriac	Celery	Chicory root	Fennel	Garlic	Horseradish	Kohl rabi	Leek	Oca	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Sweet potato	Turnip	Total	
2927/7/1	-	0.1	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	0.8
2927/8/1	-	0.1	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	0.8
2927/9/1	-	0.1	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	0.8
2927/10/1	-	0.1	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	0.8
2927/11/1	-	0.1	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	0.8
2927/12/1	-	0.1	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	0.8
2927/13/1	-	0.1	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	0.8
3229/1/1	-	-	-	-	-	-	-	-	-	-	0.4	-	0.4	-	-	-	-	-	-	-	-	0.8
3229/2/1	-	-	-	-	-	-	-	-	-	-	0.4	-	0.4	-	-	-	-	-	-	-	-	0.8
3067/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	0.3

### **Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables for adults based on the 17 high-rate consumers is 41.9 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 201 observations is 54.2 kg y<sup>-1</sup>

**Table 23. Adults' consumption rates of potato from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

<b>Person ID number</b>	<b>Potato</b>
3096/1/1	127.0
3096/2/1	127.0
3236/1/1	109.2
3236/2/1	109.2
3058/3/1	75.0
3068/1/1	74.6
3068/2/1	74.6
3068/3/1	74.6
3068/4/1	74.6
3217/1/1	68.3
3217/2/1	68.3
3064/1/1	67.5
3064/2/1	67.5
2916/1/1	62.5
2916/2/1	62.5
2927/1/1	60.0
2927/2/1	60.0
3226/1/1	53.7
3226/2/1	53.7
3235/1/1	44.0
3235/2/1	44.0
3219/1/1	41.0
3219/2/1	41.0
3058/1/1	39.0
3058/2/1	39.0
2955/1/1	37.5
2955/2/1	37.5
3094/1/1	31.8
2947/1/1	30.0
2947/2/1	30.0
2947/3/1	30.0
3058/4/1	30.0
2999/1/1	29.9
2999/2/1	29.9
3221/1/1	27.2
3221/2/1	27.2
3221/3/1	27.2
2925/1/1	27.0
2925/2/1	27.0



Person ID number	Potato
3225/1/1	25.0
3225/2/1	25.0
3071/1/1	24.8
3071/2/1	23.9
3071/3/1	23.9
3067/1/1	20.2
3035/1/1	20.0
3035/2/1	20.0
3227/1/1	20.0
3227/2/1	20.0
3234/1/1	19.7
3234/2/1	19.7
3099/1/1	19.2
3099/2/1	19.2
3099/3/1	19.2
3099/4/1	19.2
3099/5/1	19.2
3099/6/1	19.2
3099/8/1	19.2
3099/11/1	19.2
3099/12/1	19.2
3099/13/1	19.2
3099/17/1	19.2
2992/1/1	17.7
2992/2/1	17.7
3220/1/1	15.4
3066/1/1	15.0
3066/2/1	15.0
3215/1/1	15.0
3213/1/1	14.6
3213/2/1	14.6
2947/4/1	14.4
2947/5/1	14.4
2954/1/1	12.5
2954/2/1	12.5
3224/1/1	11.2
3224/2/1	11.2
2955/3/1	10.5
2955/4/1	10.5
2955/6/1	10.5
2955/7/1	10.5
3028/1/1	10.1
3028/4/1	10.1

Person ID number	Potato
3028/5/1	10.1
3214/1/1	9.4
3214/2/1	9.4
3023/1/1	9.1
3023/2/1	9.1
3023/3/1	9.1
3023/4/1	9.1
3023/5/1	9.1
3023/6/1	9.1
2983/1/1	9.0
3101/1/1	8.3
3101/2/1	8.3
3101/3/1	8.3
2953/1/1	6.8
2953/2/1	6.8
3056/1/1	6.7
3056/2/1	6.7
2925/3/1	6.0
2927/6/1	6.0
2927/7/1	6.0
2927/8/1	6.0
2927/9/1	6.0
2927/10/1	6.0
2927/11/1	6.0
2927/12/1	6.0
2927/13/1	6.0
3071/4/1	5.7
3071/5/1	5.7
3071/6/1	5.7
3071/7/1	5.7
2949/1/1	5.5
2949/2/1	5.5
2949/3/1	5.5
3218/1/1	5.5
3218/2/1	5.5
2938/1/1	5.0
3022/1/1	5.0
3022/2/1	5.0
3022/3/1	5.0
3022/4/1	5.0
3216/1/1	4.5
3216/2/1	4.5
2954/3/1	4.0

Person ID number	Potato
2954/4/1	4.0
2954/5/1	4.0
2954/6/1	4.0
2954/7/1	4.0
2954/8/1	4.0
3232/1/1	3.6
3232/2/1	3.6
3232/3/1	3.6
3232/4/1	3.6
3232/5/1	3.6
3081/1/1	3.3
3081/2/1	3.3
3081/3/1	3.3
3081/4/1	3.3
3081/7/1	3.3
3081/9/1	3.3
3102/1/1	3.0
3102/2/1	3.0
2938/2/1	2.5
2938/3/1	2.5
3231/1/1	2.1
3231/2/1	2.1
3062/1/1	1.3
3062/2/1	1.3
3062/3/1	1.3
3062/4/1	1.3
3062/6/1	1.3
3062/7/1	1.3
3062/8/1	1.3
3233/1/1	0.8
3054/1/1	0.7
3054/2/1	0.7
3054/3/1	0.7
3054/4/1	0.7
3054/5/1	0.7
3054/6/1	0.7

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of potato for adults based on the 21 high-rate consumers is 74.2 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 161 observations is 75.0 kg y<sup>-1</sup>

**Table 24. Adults' consumption rates of domestic fruit from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Apple	Blackberry	Blackcurrant	Blueberry	Cape Gooseberry	Cherry	Damson	Fig	Gooseberry	Grapes	Loganberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
3236/1/1	34.0	2.3	3.4	2.3	-	-	-	-	-	-	-	-	-	-	2.0	3.4	-	5.7	53.1
3236/2/1	34.0	2.3	3.4	2.3	-	-	-	-	-	-	-	-	-	-	2.0	3.4	-	5.7	53.1
3225/1/1	20.0	1.4	-	0.1	-	-	5.0	-	-	-	-	-	1.0	10.0	3.4	-	1.1	6.2	48.3
3225/2/1	20.0	1.4	-	0.1	-	-	5.0	-	-	-	-	-	1.0	10.0	3.4	-	1.1	6.2	48.3
3101/1/1	33.3	-	3.0	3.0	-	-	-	-	-	-	-	-	-	-	1.5	3.0	-	-	43.9
3101/2/1	33.3	-	3.0	3.0	-	-	-	-	-	-	-	-	-	-	1.5	3.0	-	-	43.9
3101/3/1	33.3	-	3.0	3.0	-	-	-	-	-	-	-	-	-	-	1.5	3.0	-	-	43.9
3235/1/1	-	15.9	-	-	-	1.8	-	-	1.6	3.0	-	-	-	-	2.0	-	2.3	3.2	29.8
3235/2/1	-	15.9	-	-	-	1.8	-	-	1.6	3.0	-	-	-	-	2.0	-	2.3	3.2	29.8
3096/1/1	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	-	9.1	7.3	19.4
3096/2/1	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	-	9.1	7.3	19.4
3233/1/1	0.8	-	1.6	-	-	-	0.8	-	4.9	-	-	-	0.4	0.4	3.3	0.8	3.3	-	16.3
3221/1/1	4.1	-	-	-	-	-	-	-	-	-	-	-	4.1	4.1	-	-	2.7	-	15.0
3221/2/1	4.1	-	-	-	-	-	-	-	-	-	-	-	4.1	4.1	-	-	2.7	-	15.0
3221/3/1	4.1	-	-	-	-	-	-	-	-	-	-	-	4.1	4.1	-	-	2.7	-	15.0
3092/1/1	2.1	-	-	-	-	-	-	0.2	-	7.2	-	-	1.7	0.4	-	-	-	2.5	14.2
3092/2/1	2.1	-	-	-	-	-	-	0.2	-	7.2	-	-	1.7	0.4	-	-	-	2.5	14.2
3092/3/1	2.1	-	-	-	-	-	-	0.2	-	7.2	-	-	1.7	0.4	-	-	-	2.5	14.2
3092/4/1	2.1	-	-	-	-	-	-	0.2	-	7.2	-	-	1.7	0.4	-	-	-	2.5	14.2
3064/1/1	4.1	-	1.2	-	-	-	1.0	-	-	-	-	1.6	-	-	4.1	-	-	2.0	14.1
3064/2/1	4.1	-	1.2	-	-	-	1.0	-	-	-	-	1.6	-	-	4.1	-	-	2.0	14.1

Person ID number	Apple	Blackberry	Blackcurrant	Blueberry	Cape Gooseberry	Cherry	Damson	Fig	Gooseberry	Grapes	Loganberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
2925/1/1	-	-	-	-	-	-	-	-	-	6.8	-	-	1.2	-	0.9	-	1.0	-	9.9
2925/2/1	-	-	-	-	-	-	-	-	-	6.8	-	-	1.2	-	0.9	-	1.0	-	9.9
3229/1/1	2.6	2.3	-	-	-	-	-	-	2.3	-	-	-	-	-	2.3	-	-	-	9.3
3229/2/1	2.6	2.3	-	-	-	-	-	-	2.3	-	-	-	-	-	2.3	-	-	-	9.3
3217/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8	5.1	8.9
3217/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8	5.1	8.9
3220/1/1	4.6	0.1	-	-	-	-	1.4	-	-	-	-	-	-	-	-	-	2.3	-	8.4
3226/1/1	0.6	-	-	0.3	-	-	-	-	5.1	-	0.1	-	-	-	1.4	-	0.1	-	7.6
3226/2/1	0.6	-	-	0.3	-	-	-	-	5.1	-	0.1	-	-	-	1.4	-	0.1	-	7.6
3215/1/1	5.4	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	1.4	-	7.1
2916/1/1	-	0.5	-	-	-	-	-	-	-	0.3	-	-	5.0	-	0.5	-	-	-	6.3
2916/2/1	-	0.5	-	-	-	-	-	-	-	0.3	-	-	5.0	-	0.5	-	-	-	6.3
2955/1/1	-	-	-	-	-	-	-	-	-	-	-	3.0	1.6	-	-	-	1.4	-	6.1
2955/2/1	-	-	-	-	-	-	-	-	-	-	-	3.0	1.6	-	-	-	1.4	-	6.1
3068/1/1	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.7
3068/2/1	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.7
3068/3/1	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.7
3068/4/1	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.7
2953/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	-	-	3.6	-	5.6
2953/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	-	-	3.6	-	5.6
3056/1/1	-	-	-	1.3	-	-	-	-	-	-	-	0.6	-	0.7	1.7	0.1	1.3	-	5.6
3056/2/1	-	-	-	1.3	-	-	-	-	-	-	-	0.6	-	0.7	1.7	0.1	1.3	-	5.6
3227/1/1	0.3	-	-	-	-	-	-	-	-	-	-	-	2.5	-	-	-	1.1	1.1	5.1

Person ID number	Apple	Blackberry	Blackcurrant	Blueberry	Cape Gooseberry	Cherry	Damson	Fig	Gooseberry	Grapes	Loganberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
3227/2/1	0.3	-	-	-	-	-	-	-	-	-	-	-	2.5	-	-	-	1.1	1.1	5.1
3098/1/1	1.1	-	-	0.8	-	-	-	-	0.2	-	-	3.0	-	-	-	-	-	-	5.0
3098/2/1	1.1	-	-	0.8	-	-	-	-	0.2	-	-	3.0	-	-	-	-	-	-	5.0
3098/3/1	1.1	-	-	0.8	-	-	-	-	0.2	-	-	3.0	-	-	-	-	-	-	5.0
3035/1/1	3.0	-	-	0.3	-	-	-	-	-	-	-	-	-	-	1.5	-	-	-	4.8
3035/2/1	3.0	-	-	0.3	-	-	-	-	-	-	-	-	-	-	1.5	-	-	-	4.8
2983/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.6	-	4.6
3066/1/1	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	4.1	-	-	-	4.4
3066/2/1	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	4.1	-	-	-	4.4
3213/1/1	-	-	1.8	-	-	-	-	-	-	-	-	-	-	0.9	0.4	0.9	0.1	-	4.2
3213/2/1	-	-	1.8	-	-	-	-	-	-	-	-	-	-	0.9	0.4	0.9	0.1	-	4.2
3021/1/1	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	1.2	-	1.7	1.0	4.2
3021/2/1	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	1.2	-	1.7	1.0	4.2
3021/3/1	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	1.2	-	1.7	1.0	4.2
2916/3/1	-	0.3	-	-	-	-	-	-	-	0.2	-	-	3.2	-	0.3	-	-	-	4.0
2916/4/1	-	0.3	-	-	-	-	-	-	-	0.2	-	-	3.2	-	0.3	-	-	-	4.0
2916/5/1	-	0.3	-	-	-	-	-	-	-	0.2	-	-	3.2	-	0.3	-	-	-	4.0
3070/1/1	1.1	0.5	-	-	-	1.1	-	-	-	-	-	-	-	-	0.5	-	-	0.5	3.8
3070/2/1	1.1	0.5	-	-	-	1.1	-	-	-	-	-	-	-	-	0.5	-	-	0.5	3.8
3070/3/1	1.1	0.5	-	-	-	1.1	-	-	-	-	-	-	-	-	0.5	-	-	0.5	3.8
3070/4/1	1.1	0.5	-	-	-	1.1	-	-	-	-	-	-	-	-	0.5	-	-	0.5	3.8
2992/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	2.5	3.6
2992/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	2.5	3.6

Person ID number	Apple	Blackberry	Blackcurrant	Blueberry	Cape Gooseberry	Cherry	Damson	Fig	Gooseberry	Grapes	Loganberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
3214/1/1	-	1.7	-	0.4	-	-	0.8	-	-	-	-	-	-	-	0.8	-	-	-	3.6
3214/2/1	-	1.7	-	0.4	-	-	0.8	-	-	-	-	-	-	-	0.8	-	-	-	3.6
2987/1/1	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4
2987/2/1	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4
2927/1/1	-	0.2	0.1	0.7	-	0.4	-	-	-	-	-	-	-	-	0.3	0.1	0.3	1.2	3.4
2927/2/1	-	0.2	0.1	0.7	-	0.4	-	-	-	-	-	-	-	-	0.3	0.1	0.3	1.2	3.4
3054/1/1	1.7	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-	-	3.3
3054/2/1	1.7	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-	-	3.3
3054/3/1	1.7	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-	-	3.3
3054/4/1	1.7	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-	-	3.3
3054/5/1	1.7	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-	-	3.3
3054/6/1	1.7	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-	-	3.3
2998/1/1	0.6	0.9	-	-	-	0.2	-	-	-	0.3	-	-	0.6	0.2	0.4	-	-	-	3.0
2998/2/1	0.6	0.9	-	-	-	0.2	-	-	-	0.3	-	-	0.6	0.2	0.4	-	-	-	3.0
2998/3/1	0.6	0.9	-	-	-	0.2	-	-	-	0.3	-	-	0.6	0.2	0.4	-	-	-	3.0
2998/4/1	0.6	0.9	-	-	-	0.2	-	-	-	0.3	-	-	0.6	0.2	0.4	-	-	-	3.0
3067/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	2.3
3218/1/1	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	0.3	1.1	2.2
3218/2/1	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	0.3	1.1	2.2
2925/3/1	-	-	-	-	-	-	-	-	-	1.5	-	-	0.3	-	0.2	-	0.2	-	2.2
3022/1/1	1.0	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	2.0
3022/2/1	1.0	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	2.0
3022/3/1	1.0	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	2.0

Person ID number	Apple	Blackberry	Blackcurrant	Blueberry	Cape Gooseberry	Cherry	Damson	Fig	Gooseberry	Grapes	Loganberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
3022/4/1	1.0	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	2.0
3081/1/1	0.3	-	-	0.1	0.1	-	-	-	-	0.2	-	-	-	-	-	-	1.3	-	1.9
3081/2/1	0.3	-	-	0.1	0.1	-	-	-	-	0.2	-	-	-	-	-	-	1.3	-	1.9
3081/3/1	0.3	-	-	0.1	0.1	-	-	-	-	0.2	-	-	-	-	-	-	1.3	-	1.9
3081/4/1	0.3	-	-	0.1	0.1	-	-	-	-	0.2	-	-	-	-	-	-	1.3	-	1.9
3081/7/1	0.3	-	-	0.1	0.1	-	-	-	-	0.2	-	-	-	-	-	-	1.3	-	1.9
3081/9/1	0.3	-	-	0.1	0.1	-	-	-	-	0.2	-	-	-	-	-	-	1.3	-	1.9
3234/1/1	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8
3234/2/1	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8
3023/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.5	-	-	0.5	1.8
3023/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.5	-	-	0.5	1.8
3023/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.5	-	-	0.5	1.8
3023/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.5	-	-	0.5	1.8
3023/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.5	-	-	0.5	1.8
3023/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.5	-	-	0.5	1.8
3231/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	1.0	1.6
3231/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	1.0	1.6
3058/3/1	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	1.1	-	-	-	1.5
3077/1/1	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	1.5
3077/2/1	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	1.5
3077/3/1	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	1.5
3077/4/1	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	1.5
2955/3/1	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-	-	-	0.4	-	1.2



Person ID number	Apple	Blackberry	Blackcurrant	Blueberry	Cape Gooseberry	Cherry	Damson	Fig	Gooseberry	Grapes	Loganberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
2955/4/1	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-	-	-	0.4	-	1.2
2955/6/1	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-	-	-	0.4	-	1.2
2955/7/1	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-	-	-	0.4	-	1.2
3098/4/1	0.3	-	-	0.2	-	-	-	-	0.04	-	-	0.7	-	-	-	-	-	-	1.2
3098/5/1	0.3	-	-	0.2	-	-	-	-	0.04	-	-	0.7	-	-	-	-	-	-	1.2
3098/6/1	0.3	-	-	0.2	-	-	-	-	0.04	-	-	0.7	-	-	-	-	-	-	1.2
3098/7/1	0.3	-	-	0.2	-	-	-	-	0.04	-	-	0.7	-	-	-	-	-	-	1.2
3099/1/1	0.3	0.1	0.05	0.04	-	-	-	0.03	-	0.2	-	-	-	-	0.1	0.05	0.3	0.03	1.2
3099/2/1	0.3	0.1	0.05	0.04	-	-	-	0.03	-	0.2	-	-	-	-	0.1	0.05	0.3	0.03	1.2
3099/3/1	0.3	0.1	0.05	-	-	-	-	0.03	-	0.2	-	-	-	-	0.1	0.05	0.3	0.03	1.1
3099/4/1	0.3	0.1	0.05	-	-	-	-	0.03	-	0.2	-	-	-	-	0.1	0.05	0.3	0.03	1.1
3099/5/1	0.3	0.1	0.05	-	-	-	-	0.03	-	0.2	-	-	-	-	0.1	0.05	0.3	0.03	1.1
3099/6/1	0.3	0.1	0.05	-	-	-	-	0.03	-	0.2	-	-	-	-	0.1	0.05	0.3	0.03	1.1
3099/8/1	0.3	0.1	0.05	-	-	-	-	0.03	-	0.2	-	-	-	-	0.1	0.05	0.3	0.03	1.1
3099/11/1	0.3	0.1	0.05	-	-	-	-	0.03	-	0.2	-	-	-	-	0.1	0.05	0.3	0.03	1.1
3099/12/1	0.3	0.1	0.05	-	-	-	-	0.03	-	0.2	-	-	-	-	0.1	0.05	0.3	0.03	1.1
3099/13/1	0.3	0.1	0.05	-	-	-	-	0.03	-	0.2	-	-	-	-	0.1	0.05	0.3	0.03	1.1
3099/17/1	0.3	0.1	0.05	-	-	-	-	0.03	-	0.2	-	-	-	-	0.1	0.05	0.3	0.03	1.1
2938/1/1	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	1.0
3028/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	1.0
3028/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	1.0
3028/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	1.0
3197/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	0.9

Person ID number	Apple	Blackberry	Blackcurrant	Blueberry	Cape Gooseberry	Cherry	Damson	Fig	Gooseberry	Grapes	Loganberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
3197/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	0.9
3062/1/1	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.7	0.8
3062/2/1	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.7	0.8
3062/3/1	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.7	0.8
3062/4/1	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.7	0.8
3062/6/1	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.7	0.8
3062/7/1	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.7	0.8
3062/8/1	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.7	0.8
3058/1/1	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	0.6	-	-	-	0.8
3058/2/1	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	0.6	-	-	-	0.8
3216/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-	0.4	0.7
3216/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-	0.4	0.7
3058/4/1	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	0.4	-	-	-	0.6
2938/2/1	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	0.5
2938/3/1	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	0.5
3021/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	0.5
3021/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	0.5
3021/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	0.5
2917/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.4
2917/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.4
2927/6/1	-	0.02	0.01	0.1	-	0.04	-	-	-	-	-	-	-	-	0.03	0.01	0.03	0.1	0.3
2927/7/1	-	0.02	0.01	0.1	-	0.04	-	-	-	-	-	-	-	-	0.03	0.01	0.03	0.1	0.3
2927/8/1	-	0.02	0.01	0.1	-	0.04	-	-	-	-	-	-	-	-	0.03	0.01	0.03	0.1	0.3

Person ID number	Apple	Blackberry	Blackcurrant	Blueberry	Cape Gooseberry	Cherry	Damson	Fig	Gooseberry	Grapes	Loganberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
2927/9/1	-	0.02	0.01	0.1	-	0.04	-	-	-	-	-	-	-	-	0.03	0.01	0.03	0.1	0.3
2927/10/1	-	0.02	0.01	0.1	-	0.04	-	-	-	-	-	-	-	-	0.03	0.01	0.03	0.1	0.3
2927/11/1	-	0.02	0.01	0.1	-	0.04	-	-	-	-	-	-	-	-	0.03	0.01	0.03	0.1	0.3
2927/12/1	-	0.02	0.01	0.1	-	0.04	-	-	-	-	-	-	-	-	0.03	0.01	0.03	0.1	0.3
2927/13/1	-	0.02	0.01	0.1	-	0.04	-	-	-	-	-	-	-	-	0.03	0.01	0.03	0.1	0.3
3034/1/1	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	0.2
3034/2/1	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	0.2
3228/1/1	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
3228/2/1	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
3228/3/1	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
2917/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2
2917/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2

### **Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit for adults based on the 11 high-rate consumers is 39.3 kg y<sup>-1</sup>

The observed 97.5th percentile rate based on 171 observations is 43.9 kg y<sup>-1</sup>

**Table 25. Adults' consumption rates of milk from the Derby terrestrial survey area (l y<sup>-1</sup>)**

Person ID number	Cows' milk
<b>3100/1/1</b>	<b>182.5</b>
<b>3100/2/1</b>	<b>182.5</b>
<b>3100/3/1</b>	<b>182.5</b>
<b>3100/4/1</b>	<b>182.5</b>
<b>3236/1/1</b>	<b>148.1</b>
<b>3236/2/1</b>	<b>148.1</b>
<b>3052/1/1</b>	<b>132.1</b>
<b>3052/2/1</b>	<b>132.1</b>
3070/1/1	50.0
3070/2/1	50.0
3070/3/1	50.0
3070/4/1	50.0
3099/1/1	8.5
3099/2/1	8.5

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of milk for adults based on the 8 high-rate consumers is 161.3 l y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 14 observations is 182.5 l y<sup>-1</sup>

**Table 26. Adults' consumption rates of cattle meat from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Beef
<b>3196/1/1</b>	<b>37.8</b>
<b>3196/2/1</b>	<b>37.8</b>
<b>3196/3/1</b>	<b>37.8</b>
<b>3052/1/1</b>	<b>12.6</b>
<b>3052/2/1</b>	<b>12.6</b>
<b>3052/3/1</b>	<b>12.6</b>
<b>3052/3/2</b>	<b>12.6</b>
<b>3052/3/3</b>	<b>12.6</b>
<b>3052/3/4</b>	<b>12.6</b>
<b>3052/3/5</b>	<b>12.6</b>
<b>3052/3/6</b>	<b>12.6</b>
<b>3052/3/7</b>	<b>12.6</b>
<b>3052/3/8</b>	<b>12.6</b>
<b>3052/3/9</b>	<b>12.6</b>

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of cattle meat for adults based on the 14 high-rate consumers is 18.0 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 14 observations is 37.8 kg y<sup>-1</sup>

**Table 27. Adults' consumption rates of sheep meat from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Lamb
<b>3044/1/1</b>	<b>2.9</b>
<b>3044/2/1</b>	<b>2.9</b>
<b>3044/3/1</b>	<b>2.9</b>
<b>3044/4/1</b>	<b>2.9</b>
<b>3044/5/1</b>	<b>2.9</b>

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of sheep meat for adults based on the 5 high-rate consumers is 2.9 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 5 observations is 2.9 kg y<sup>-1</sup>

**Table 28. Adults' consumption rates of poultry from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Pheasant
<b>3070/1/1</b>	<b>5.4</b>
3100/1/1	0.3
3100/2/1	0.3
3100/3/1	0.3
3100/4/1	0.3

**Notes**

The emboldened observation is the high-rate consumer

The mean consumption rate of poultry for adults based on the 1 high-rate consumer is 5.4 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 5 observations is 4.9 kg y<sup>-1</sup>

**Table 29. Adults' consumption rates of eggs from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Chicken egg
<b>3100/1/1</b>	<b>17.8</b>
<b>3100/2/1</b>	<b>17.8</b>
<b>3100/3/1</b>	<b>17.8</b>
<b>3100/4/1</b>	<b>17.8</b>
<b>3236/1/1</b>	<b>17.8</b>
<b>3236/2/1</b>	<b>17.8</b>
<b>3064/1/1</b>	<b>12.0</b>
<b>3064/2/1</b>	<b>12.0</b>
<b>3070/1/1</b>	<b>8.9</b>
<b>3070/2/1</b>	<b>8.9</b>
<b>3070/3/1</b>	<b>8.9</b>
<b>3070/4/1</b>	<b>8.9</b>
3044/4/1	3.5
3044/5/1	3.5
3044/1/1	2.7
3044/2/1	2.7
3044/3/1	2.7
2983/1/1	2.4
3233/1/1	0.6

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of eggs for adults based on the 12 high-rate consumers is 13.9 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 19 observations is 17.8 kg y<sup>-1</sup>

**Table 30. Adults' consumption rates of wild/free foods from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Blackberry	Elderberry	Elderflower	Garlic	Hawthorn fruit	Rosehip	Sloe	Total
3233/1/1	4.9	0.2	0.2	0.2	-	-	-	5.5
3052/1/1	2.5	-	-	-	-	-	-	2.5
3052/2/1	2.5	-	-	-	-	-	-	2.5
3102/1/1	2.3	-	-	-	-	-	-	2.3
3102/2/1	2.3	-	-	-	-	-	-	2.3
3077/1/1	0.6	-	0.2	0.9	-	-	-	1.7
3077/2/1	0.6	-	0.2	0.9	-	-	-	1.7
3077/3/1	0.6	-	0.2	0.9	-	-	-	1.7
3077/4/1	0.6	-	0.2	0.9	-	-	-	1.7
2925/1/1	1.4	-	-	-	-	-	-	1.4
2925/2/1	1.4	-	-	-	-	-	-	1.4
3034/1/1	0.3	-	0.1	-	0.5	0.5	-	1.3
3034/2/1	0.3	-	0.1	-	0.5	0.5	-	1.3
3044/4/1	0.9	-	-	-	-	-	-	0.9
3044/5/1	0.9	-	-	-	-	-	-	0.9
3022/1/1	0.9	-	-	-	-	-	-	0.9
3213/1/1	0.9	-	-	-	-	-	-	0.9
3213/2/1	0.9	-	-	-	-	-	-	0.9
3023/1/1	0.5	-	-	-	-	-	-	0.5
3023/2/1	0.5	-	-	-	-	-	-	0.5
3023/3/1	0.5	-	-	-	-	-	-	0.5
3023/4/1	0.5	-	-	-	-	-	-	0.5
3023/5/1	0.5	-	-	-	-	-	-	0.5
3023/6/1	0.5	-	-	-	-	-	-	0.5
3044/1/1	0.5	-	-	-	-	-	-	0.5
3044/2/1	0.5	-	-	-	-	-	-	0.5
3044/3/1	0.5	-	-	-	-	-	-	0.5
3232/1/1	0.4	-	-	-	-	-	-	0.4
3232/2/1	0.4	-	-	-	-	-	-	0.4
3232/3/1	0.4	-	-	-	-	-	-	0.4
3232/4/1	0.4	-	-	-	-	-	-	0.4
3232/5/1	0.4	-	-	-	-	-	-	0.4
3101/1/1	-	-	-	-	-	-	0.3	0.3
3101/2/1	-	-	-	-	-	-	0.3	0.3
3101/3/1	-	-	-	-	-	-	0.3	0.3
2925/3/1	0.3	-	-	-	-	-	-	0.3
3035/1/1	0.2	-	-	-	-	-	-	0.2
3035/2/1	0.2	-	-	-	-	-	-	0.2

Person ID number	Blackberry	Elderberry	Elderflower	Garlic	Hawthorn fruit	Rosehip	Sloe	Total
3028/1/1	0.2	-	-	-	-	-	-	0.2
3028/4/1	0.2	-	-	-	-	-	-	0.2
3028/5/1	0.2	-	-	-	-	-	-	0.2
2916/1/1	0.2	-	-	-	-	-	-	0.2
2916/2/1	0.2	-	-	-	-	-	-	0.2
2916/3/1	0.1	-	-	-	-	-	-	0.1
2916/4/1	0.1	-	-	-	-	-	-	0.1
2916/5/1	0.1	-	-	-	-	-	-	0.1

### **Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of wild/free foods for adults based on the 5 high-rate consumers is 3.0 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 46 observations is 2.5 kg y<sup>-1</sup>

**Table 31. Adults' consumption rates of rabbits/hares from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Rabbit
<b>3070/1/1</b>	<b>5.4</b>
3100/1/1	0.3
3100/2/1	0.3
3100/3/1	0.3
3100/4/1	0.3

### **Notes**

The emboldened observation is the high-rate consumer

The mean consumption rate of rabbits/hares for adults based on the 1 high-rate consumer is 5.4 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 5 observations is 4.9 kg y<sup>-1</sup>



**Table 32. Adults' consumption rates of honey from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Honey
<b>3071/1/1</b>	<b>6.8</b>
<b>3070/2/1</b>	<b>5.4</b>
<b>3011/1/1</b>	<b>4.5</b>
3071/6/1	0.9
3071/7/1	0.9
3071/4/1	0.5
3071/5/1	0.5
3052/1/1	0.2
3052/2/1	0.2
3099/3/1	0.2
3100/1/1	0.2
3100/2/1	0.2
3100/3/1	0.2
3100/4/1	0.2

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of honey for adults based on the 3 high-rate consumers is 5.6 kg y<sup>-1</sup>

The observed 97.5th percentile rate based on 14 observations is 6.4 kg y<sup>-1</sup>

**Table 33. Adults' consumption rates of wild fungi from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Mushrooms
<b>3070/1/1</b>	<b>0.5</b>
<b>3070/2/1</b>	<b>0.5</b>
<b>3070/3/1</b>	<b>0.5</b>
<b>3070/4/1</b>	<b>0.5</b>

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of wild fungi for adults based on the 4 high-rate consumers is 0.5 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 4 observations is 0.5 kg y<sup>-1</sup>

Table 34. Children's consumption rates of green vegetables from the Derby terrestrial survey area (kg y<sup>-1</sup>)

Person ID number	Age	Asparagus	Broccoli	Brussel sprout	Cabbage	Cauliflower	Courgette	Cucumber	Lettuce	Pak choi	Spinach	Total
3081/5/1	15	-	1.5	-	1.9	-	2.0	7.6	-	0.6	-	13.6
3081/6/1	14	-	1.5	-	1.9	-	2.0	7.6	-	0.6	-	13.6
3081/8/1	12	-	1.5	-	1.9	-	2.0	7.6	-	0.6	-	13.6
3028/2/1	9	-	1.9	2.5	2.4	1.9	1.5	-	-	-	-	10.2
3028/3/1	10	-	1.9	2.5	2.4	1.9	1.5	-	-	-	-	10.2
2955/8/1	14	0.2	-	2.3	2.1	2.4	0.4	0.7	-	-	0.3	8.5
2955/9/1	12	0.2	-	2.3	2.1	2.4	0.4	0.7	-	-	0.3	8.5
2949/4/1	15	-	-	0.9	-	0.5	-	5.1	0.3	-	-	6.9
2949/5/1	13	-	-	0.9	-	0.5	-	5.1	0.3	-	-	6.9
3056/3/1	12	-	0.9	-	1.7	-	3.7	-	-	-	-	6.3
3099/7/1	15	-	0.1	0.6	0.3	0.3	1.4	2.1	0.3	-	-	5.0
3099/9/1	14	-	0.1	0.6	0.3	0.3	1.4	2.1	0.3	-	-	5.0
3099/14/1	14	-	0.1	0.6	0.3	0.3	1.4	2.1	0.3	-	-	5.0
3099/15/1	13	-	0.1	0.6	0.3	0.3	1.4	2.1	0.3	-	-	5.0
3099/16/1	12	-	0.1	0.6	0.3	0.3	1.4	2.1	0.3	-	-	5.0
3062/5/1	15	-	-	0.3	-	-	1.2	-	-	-	0.2	1.6
2927/14/1	15	-	0.2	-	-	0.2	-	0.5	-	-	-	1.0

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables for the child age group based on the 15 high-rate consumers is 8.2 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 17 observations is 13.6 kg y<sup>-1</sup>

**Table 35. Infants' consumption rates of green vegetables from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Age	Asparagus	Broccoli	Brussel sprout	Cabbage	Cauliflower	Courgette	Cucumber	Lettuce	Pak choi	Spinach	Total
<b>3197/3/1</b>	<b>5</b>	-	<b>1.2</b>	<b>0.7</b>	<b>1.7</b>	-	<b>1.5</b>	<b>7.5</b>	-	-	-	<b>12.6</b>
<b>2955/5/1</b>	<b>2</b>	<b>0.2</b>	-	<b>2.3</b>	<b>2.1</b>	<b>2.4</b>	<b>0.4</b>	<b>0.7</b>	-	-	<b>0.3</b>	<b>8.5</b>
3099/10/1	1	-	0.03	0.1	0.1	0.1	0.3	0.5	0.1	-	-	1.3
2927/3/1	3	-	0.2	-	-	0.2	-	0.5	-	-	-	1.0
2927/4/1	3	-	0.2	-	-	0.2	-	0.5	-	-	-	1.0
2927/5/1	3	-	0.2	-	-	0.2	-	0.5	-	-	-	1.0
2917/5/1	5	-	-	-	-	0.8	-	-	-	-	-	0.8

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables for the infant age group based on the 2 high-rate consumers is 10.5 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 7 observations is 12 kg y<sup>-1</sup>

Table 36. Children's consumption rates of other vegetables from the Derby terrestrial survey area (kg y<sup>-1</sup>)

Person ID number	Age	Aubergine	Broad bean	Chilli pepper	French bean	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
3081/5/1	15	<b>0.5</b>	-	-	-	-	-	-	<b>0.5</b>	<b>12.1</b>	<b>0.2</b>	<b>10.0</b>	<b>23.2</b>
3081/6/1	14	<b>0.5</b>	-	-	-	-	-	-	<b>0.5</b>	<b>12.1</b>	<b>0.2</b>	<b>10.0</b>	<b>23.2</b>
3081/8/1	12	<b>0.5</b>	-	-	-	-	-	-	<b>0.5</b>	<b>12.1</b>	<b>0.2</b>	<b>10.0</b>	<b>23.2</b>
3028/2/1	9	-	-	-	-	<b>0.2</b>	-	-	<b>2.0</b>	-	<b>1.4</b>	<b>11.5</b>	<b>15.1</b>
3028/3/1	10	-	-	-	-	<b>0.2</b>	-	-	<b>2.0</b>	-	<b>1.4</b>	<b>11.5</b>	<b>15.1</b>
3056/3/1	12	-	-	-	-	<b>0.3</b>	-	-	<b>1.5</b>	<b>3.6</b>	-	<b>9.6</b>	<b>15.1</b>
2949/4/1	15	-	-	-	-	<b>0.1</b>	-	-	<b>0.4</b>	-	<b>0.3</b>	<b>9.4</b>	<b>10.1</b>
2949/5/1	13	-	-	-	-	<b>0.1</b>	-	-	<b>0.4</b>	-	<b>0.3</b>	<b>9.4</b>	<b>10.1</b>
2955/8/1	14	-	-	<b>0.8</b>	<b>0.3</b>	-	-	-	-	<b>0.3</b>	<b>1.1</b>	<b>7.3</b>	<b>9.8</b>
2955/9/1	12	-	-	<b>0.8</b>	<b>0.3</b>	-	-	-	-	<b>0.3</b>	<b>1.1</b>	<b>7.3</b>	<b>9.8</b>
3099/7/1	15	0.2	0.4	-	0.4	1.4	0.3	-	0.2	1.7	0.5	1.4	6.5
3099/9/1	14	0.2	0.4	-	0.4	1.4	0.3	-	0.2	1.7	0.5	1.4	6.5
3099/14/1	14	0.2	0.4	-	0.4	1.4	0.3	-	0.2	1.7	0.5	1.4	6.5
3099/15/1	13	0.2	0.4	-	0.4	1.4	0.3	-	0.2	1.7	0.5	1.4	6.5
3099/16/1	12	0.2	0.4	-	0.4	1.4	0.3	-	0.2	1.7	0.5	1.4	6.5
3062/5/1	15	0.4	-	0.2	0.1	-	-	1.5	0.1	-	0.2	1.8	4.3
2927/14/1	15	-	-	-	0.2	0.2	-	-	-	0.8	-	0.4	1.5

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of other vegetables for the child age group based on the 10 high-rate consumers is 15.5 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 17 observations is 23.2 kg y<sup>-1</sup>

**Table 37. Infants' consumption rates of other vegetables from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Age	Aubergine	Broad bean	Chilli pepper	French bean	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
<b>3197/3/1</b>	<b>5</b>	-	-	<b>0.6</b>	<b>0.2</b>	-	<b>0.8</b>	-	<b>0.4</b>	-	-	<b>8.6</b>	<b>10.6</b>
<b>2955/5/1</b>	<b>2</b>	-	-	<b>0.8</b>	<b>0.3</b>	-	-	-	-	<b>0.3</b>	<b>1.1</b>	<b>7.3</b>	<b>9.8</b>
3099/10/1	1	0.04	0.1	-	0.1	0.3	0.1	-	0.04	0.4	0.1	0.3	1.6
2927/3/1	3	-	-	-	0.2	0.2	-	-	-	0.8	-	0.4	1.5
2927/4/1	3	-	-	-	0.2	0.2	-	-	-	0.8	-	0.4	1.5
2927/5/1	3	-	-	-	0.2	0.2	-	-	-	0.8	-	0.4	1.5
2917/5/1	5	-	0.1	-	-	0.02	-	-	0.4	-	0.2	-	0.7

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of other vegetables for the infant age group based on the 2 high-rate consumers is 10.2 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 7 observations is 10.5 kg y<sup>-1</sup>

Table 38. Children's consumption rates of root vegetables from the Derby terrestrial survey area (kg y<sup>-1</sup>)

Person ID number	Age	Beetroot	Carrot	Celeriac	Garlic	Leek	Onion	Parsnip	Radish	Shallot	Swede	Total
<b>3028/2/1</b>	<b>9</b>	<b>3.0</b>	-	-	<b>1.6</b>	-	<b>5.7</b>	-	-	-	-	<b>10.4</b>
<b>3028/3/1</b>	<b>10</b>	<b>3.0</b>	-	-	<b>1.6</b>	-	<b>5.7</b>	-	-	-	-	<b>10.4</b>
<b>2955/8/1</b>	<b>14</b>	<b>0.5</b>	-	-	-	<b>0.7</b>	<b>2.3</b>	-	-	-	<b>2.3</b>	<b>5.8</b>
<b>2955/9/1</b>	<b>12</b>	<b>0.5</b>	-	-	-	<b>0.7</b>	<b>2.3</b>	-	-	-	<b>2.3</b>	<b>5.8</b>
<b>3056/3/1</b>	<b>12</b>	-	<b>0.6</b>	-	<b>0.6</b>	-	<b>3.7</b>	-	-	-	-	<b>4.9</b>
<b>3099/7/1</b>	<b>15</b>	<b>0.6</b>	<b>0.3</b>	<b>0.1</b>	<b>0.1</b>	-	<b>0.4</b>	<b>0.2</b>	<b>0.04</b>	<b>2.3</b>	<b>0.3</b>	<b>4.1</b>
<b>3099/9/1</b>	<b>14</b>	<b>0.6</b>	<b>0.3</b>	<b>0.1</b>	<b>0.1</b>	-	<b>0.4</b>	<b>0.2</b>	<b>0.04</b>	<b>2.3</b>	<b>0.3</b>	<b>4.1</b>
<b>3099/14/1</b>	<b>14</b>	<b>0.6</b>	<b>0.3</b>	<b>0.1</b>	<b>0.1</b>	-	<b>0.4</b>	<b>0.2</b>	<b>0.04</b>	<b>2.3</b>	<b>0.3</b>	<b>4.1</b>
<b>3099/15/1</b>	<b>13</b>	<b>0.6</b>	<b>0.3</b>	<b>0.1</b>	<b>0.1</b>	-	<b>0.4</b>	<b>0.2</b>	<b>0.04</b>	<b>2.3</b>	<b>0.3</b>	<b>4.1</b>
<b>3099/16/1</b>	<b>12</b>	<b>0.6</b>	<b>0.3</b>	<b>0.1</b>	<b>0.1</b>	-	<b>0.4</b>	<b>0.2</b>	<b>0.04</b>	<b>2.3</b>	<b>0.3</b>	<b>4.1</b>
<b>3062/5/1</b>	<b>15</b>	<b>0.1</b>	-	-	-	-	<b>2.7</b>	-	-	<b>0.9</b>	-	<b>3.8</b>
3081/5/1	15	0.5	0.8	-	-	-	1.0	0.4	-	-	-	2.6
3081/6/1	14	0.5	0.8	-	-	-	1.0	0.4	-	-	-	2.6
3081/8/1	12	0.5	0.8	-	-	-	1.0	0.4	-	-	-	2.6
2949/4/1	15	-	0.9	-	-	-	-	-	-	-	-	0.9
2949/5/1	13	-	0.9	-	-	-	-	-	-	-	-	0.9
2927/14/1	15	0.1	-	-	-	-	0.6	-	-	-	-	0.8

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables for the child age group based on the 11 high-rate consumers is 5.6 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 17 observations is 10.4 kg y<sup>-1</sup>

**Table 39. Infants' consumption rates of root vegetables from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Age	Beetroot	Carrot	Celeriac	Garlic	Leek	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Total
<b>2955/5/1</b>	<b>2</b>	<b>0.5</b>	-	-	-	<b>0.7</b>	<b>2.3</b>	-	-	-	-	<b>2.3</b>	<b>5.8</b>
<b>2917/5/1</b>	<b>5</b>	-	<b>1.4</b>	-	-	-	<b>4.3</b>	-	-	-	-	-	<b>5.8</b>
<b>3197/3/1</b>	<b>5</b>	<b>0.3</b>	<b>1.4</b>	-	-	-	-	-	<b>1.7</b>	-	<b>0.04</b>	-	<b>3.5</b>
3099/10/1	1	0.1	0.1	0.02	0.02	-	0.1	0.1	0.01	0.6	-	0.1	1.0
2927/3/1	3	0.1	-	-	-	-	0.6	-	-	-	-	-	0.8
2927/4/1	3	0.1	-	-	-	-	0.6	-	-	-	-	-	0.8
2927/5/1	3	0.1	-	-	-	-	0.6	-	-	-	-	-	0.8

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables for the infant age group based on the 3 high-rate consumers is 5.0 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 7 observations is 5.8 kg y<sup>-1</sup>

**Table 40. Children’s consumption rates of potato from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Age	Potato
<b>3099/7/1</b>	<b>15</b>	<b>19.2</b>
<b>3099/9/1</b>	<b>14</b>	<b>19.2</b>
<b>3099/14/1</b>	<b>14</b>	<b>19.2</b>
<b>3099/15/1</b>	<b>13</b>	<b>19.2</b>
<b>3099/16/1</b>	<b>12</b>	<b>19.2</b>
<b>2955/8/1</b>	<b>14</b>	<b>10.5</b>
<b>2955/9/1</b>	<b>12</b>	<b>10.5</b>
<b>3028/2/1</b>	<b>9</b>	<b>10.1</b>
<b>3028/3/1</b>	<b>10</b>	<b>10.1</b>
<b>3056/3/1</b>	<b>12</b>	<b>6.7</b>
2927/14/1	15	6.0
2949/4/1	15	5.5
2949/5/1	13	5.5
3081/5/1	15	3.3
3081/6/1	14	3.3
3081/8/1	12	3.3
3062/5/1	15	1.3

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of potato for the child age group based on the 10 high-rate consumers is 14.4 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 17 observations is 19.2 kg y<sup>-1</sup>

**Table 41. Infants’ consumption rates of potato from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Age	Potato
<b>2955/5/1</b>	<b>2</b>	<b>10.5</b>
<b>2927/3/1</b>	<b>3</b>	<b>6.0</b>
<b>2927/4/1</b>	<b>3</b>	<b>6.0</b>
<b>2927/5/1</b>	<b>3</b>	<b>6.0</b>
<b>3099/10/1</b>	<b>1</b>	<b>4.8</b>

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of potato for the infant age group based on the 5 high-rate consumers is 6.7 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 5 observations is 10.0 kg y<sup>-1</sup>



**Table 42. Children's consumption rates of domestic fruit from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Age	Apple	Blackberry	Blackcurrant	Blueberry	Cape Gooseberry	Cherry	Fig	Gooseberry	Grapes	Melon	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
<b>3056/3/1</b>	<b>12</b>	-	-	-	<b>1.3</b>	-	-	-	-	-	<b>0.6</b>	<b>0.7</b>	<b>1.7</b>	<b>0.1</b>	<b>1.3</b>	-	<b>5.6</b>
3081/5/1	15	0.3	-	-	0.1	0.1	-	-	-	0.2	-	-	-	-	1.3	-	1.9
3081/6/1	14	0.3	-	-	0.1	0.1	-	-	-	0.2	-	-	-	-	1.3	-	1.9
3081/8/1	12	0.3	-	-	0.1	0.1	-	-	-	0.2	-	-	-	-	1.3	-	1.9
2955/8/1	14	-	-	-	-	-	-	-	-	-	0.8	-	-	-	0.4	-	1.2
2955/9/1	12	-	-	-	-	-	-	-	-	-	0.8	-	-	-	0.4	-	1.2
3099/7/1	15	0.3	0.1	0.05	-	-	-	0.03	-	0.2	-	-	0.1	0.05	0.3	0.03	1.1
3099/9/1	14	0.3	0.1	0.05	-	-	-	0.03	-	0.2	-	-	0.1	0.05	0.3	0.03	1.1
3099/14/1	14	0.3	0.1	0.05	-	-	-	0.03	-	0.2	-	-	0.1	0.05	0.3	0.03	1.1
3099/15/1	13	0.3	0.1	0.05	-	-	-	0.03	-	0.2	-	-	0.1	0.05	0.3	0.03	1.1
3099/16/1	12	0.3	0.1	0.05	-	-	-	0.03	-	0.2	-	-	0.1	0.05	0.3	0.03	1.1
3028/2/1	9	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	1.0
3028/3/1	10	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	1.0
3062/5/1	15	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	0.7	0.8
2927/14/1	15	-	0.02	0.01	0.1	-	0.04	-	-	-	-	-	0.03	0.01	0.03	0.1	0.3

**Notes**

The emboldened observations is the high-rate consumer

The mean consumption rate of domestic fruit for the child age group based on the 1 high-rate consumer is 5.6 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 15 observations is 4.3 kg y<sup>-1</sup>

**Table 43. Infants' consumption rates of domestic fruit from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Age	Apple	Blackberry	Blackcurrant	Blueberry	Cherry	Fig	Grapes	Melon	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
<b>2955/5/1</b>	<b>2</b>	-	-	-	-	-	-	-	<b>0.8</b>	-	-	<b>0.4</b>	-	<b>1.2</b>
<b>3197/3/1</b>	<b>5</b>	-	-	-	-	-	-	-	-	-	-	<b>0.5</b>	-	<b>0.5</b>
2927/3/1	3	-	0.02	0.01	0.1	0.04	-	-	-	0.03	0.01	0.03	0.1	0.3
2927/4/1	3	-	0.02	0.01	0.1	0.04	-	-	-	0.03	0.01	0.03	0.1	0.3
2927/5/1	3	-	0.02	0.01	0.1	0.04	-	-	-	0.03	0.01	0.03	0.1	0.3
3099/10/1	1	0.1	0.02	0.01	-	-	0.01	0.1	-	0.02	0.01	0.1	0.01	0.3
2917/5/1	5	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit for the infant age group based on the 2 high-rate consumers is 0.8 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 7 observations is 1.1 kg y<sup>-1</sup>

**Table 44. Children's consumption rates of cattle meat from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Age	Beef
<b>3052/5/1</b>	<b>15</b>	<b>12.6</b>
<b>3052/8/1</b>	<b>12</b>	<b>12.6</b>
<b>3052/6/1</b>	<b>7</b>	<b>9.5</b>
<b>3052/7/1</b>	<b>9</b>	<b>9.5</b>

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of cattle meat for the child age group based on the 4 high-rate consumers is 11.0 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 4 observations is 12.6 kg y<sup>-1</sup>

**Table 45. Infants' consumption rates of cattle meat from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Age	Beef
<b>3052/4/1</b>	<b>5</b>	<b>6.3</b>

**Notes**

The emboldened observation is the high-rate consumer

The mean consumption rate of cattle meat for the infant age group based on the 1 high-rate consumer is 6.3 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile is not applicable for 1 observation

**Table 46. Children's consumption rates of sheep meat from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Age	Lamb
<b>3044/6/1</b>	<b>15</b>	<b>2.9</b>
<b>3044/7/1</b>	<b>10</b>	<b>2.9</b>
<b>3044/8/1</b>	<b>6</b>	<b>2.2</b>

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of sheep meat for the child age group based on the 3 high-rate consumers is 2.7 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 3 observations is 2.9 kg y<sup>-1</sup>

**Table 47. Children's consumption rates of eggs from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Age	Chicken egg
<b>3044/6/1</b>	<b>15</b>	<b>3.5</b>
<b>3044/7/1</b>	<b>10</b>	<b>3.5</b>
<b>3044/8/1</b>	<b>6</b>	<b>2.6</b>

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of eggs for the child age group based on the 3 high-rate consumers is 3.2 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 3 observations is 3.5 kg y<sup>-1</sup>

**Table 48. Children's consumption rates of wild/free foods from the Derby terrestrial survey area (kg y<sup>-1</sup>)**

Person ID number	Age	Blackberry
<b>3044/6/1</b>	<b>15</b>	<b>0.9</b>
<b>3044/7/1</b>	<b>10</b>	<b>0.9</b>
<b>3044/8/1</b>	<b>6</b>	<b>0.7</b>
3028/2/1	9	0.2
3028/3/1	10	0.2

**Notes**

Emboldened observations are the high-rate consumers

The mean consumption rate of wild/free foods for the child age group based on the 3 high-rate consumers is 0.9 kg y<sup>-1</sup>

The observed 97.5<sup>th</sup> percentile rate based on 5 observations is 0.9 kg y<sup>-1</sup>

**Table 49. Percentage contribution each food type makes to its terrestrial food group for adults**

Green vegetables		Root vegetables		Domestic fruit		Wild/free foods	
Cabbage	20.7%	Onion	36.6%	Apple	33.2%	Blackberry	81.0%
Cucumber	18.2%	Leek	13.7%	Rhubarb	10.1%	Garlic	9.1%
Courgette	17.4%	Beetroot	12.6%	Strawberry	10.0%	Rosehip	2.4%
Brussel sprout	10.4%	Carrot	9.7%	Raspberry	8.3%	Hawthorn fruit	2.4%
Broccoli	10.1%	Swede	7.0%	Pear	7.1%	Elderflower	2.3%
Cauliflower	9.9%	Parsnip	4.2%	Blackberry	5.7%	Sloe	2.2%
Kale	3.4%	Shallot	3.8%	Grapes	5.6%	Elderberry	0.5%
Lettuce	2.8%	Artichoke (Jerusalem)	2.3%	Plum	4.8%	<b>Rabbits/hares</b>	
Spinach	1.8%	Garlic	2.1%	Melon	2.6%	Rabbit	100.0%
Artichoke (globe)	1.8%	Turnip	1.4%	Blueberry	2.6%	<b>Honey</b>	
Calabrese	1.5%	Celery	1.1%	Blackcurrant	2.6%	Honey	100.0%
Marrow	1.0%	Oca	1.1%	Gooseberry	2.6%	<b>Wild fungi</b>	
Chard	0.7%	Celeriac	1.0%	Redcurrant	2.0%	Mushrooms	100.0%
Asparagus	0.2%	Radish	0.9%	Damson	1.6%		
Pak choi	0.1%	Kohl rabi	0.6%	Cherry	1.0%		
<b>Other vegetables</b>		Sweet potato	0.6%	Fig	0.1%		
Tomato	45.2%	Spring onion	0.5%	Cape Gooseberry	0.03%		
Squash	10.8%	Horseradish	0.5%	Loganberry	0.02%		
Runner bean	8.1%	Chicory root	0.2%	<b>Milk</b>			
French bean	7.3%	Fennel	0.1%	Cows' milk	100.0%		
Pumpkin	5.7%	<b>Potato</b>		<b>Cattle meat</b>			
Pea	5.6%	Potato	100.0%	Beef	100.0%		
Sweetcorn	5.6%			<b>Sheep meat</b>			
Broad bean	3.9%			Lamb	100.0%		
Pepper	3.3%			<b>Poultry</b>			
Aubergine	2.7%			Pheasant	100.0%		
Chilli pepper	1.7%			<b>Eggs</b>			
Mangetout	0.1%			Chicken egg	100.0%		
Okra	0.03%						
White Beans	0.01%						

**Notes**

Percentages are based on the consumption of all adults in the survey consuming that particular food group.

**Table 50. Direct radiation occupancy rates for adults, children and infants in the Derby area (h y<sup>-1</sup>)**

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
<b>0 to 0.25 km zone</b>				
2991/1/1	Visiting	-	2503	2503
2967/1/1	Working	1831	-	1831
2967/2/1	Working	1641	190	1831
2967/1/2	Working	1831	-	1831
2967/2/2	Working	1641	190	1831
2967/1/3	Working	1831	-	1831
2967/1/4	Working	1831	-	1831
2967/1/5	Working	1831	-	1831
2967/1/6	Working	1831	-	1831
2967/1/7	Working	1831	-	1831
2967/1/8	Working	1831	-	1831
2966/3/1	Working	1303	434	1737
2991/2/1	Visiting	-	1251	1251
3012/1/1	Visiting	-	1233	1233
3020/1/1	Visiting	-	1022	1022
3003/1/1	Visiting	-	834	834
3016/1/1	Visiting	-	657	657
3228/1/1	Visiting	521	3	524
2966/1/1	Visiting	-	437	437
2966/1/2	Visiting	-	437	437
2966/1/3	Visiting	-	437	437
2966/1/4	Visiting	-	437	437

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
<b>0 to 0.25 km zone</b>				
2966/1/5	Visiting	-	437	437
2966/1/6	Visiting	-	437	437
2943/1/1	Visiting	-	417	417
2956/1/1	Visiting		365	365
2989/1/1	Visiting	-	313	313
2944/1/1	Visiting	-	248	248
2944/2/1	Visiting	-	248	248
2966/2/1	Visiting	-	219	219
2966/2/2	Visiting	-	219	219
2966/2/3	Visiting	-	219	219
2966/2/4	Visiting	-	219	219
2966/2/5	Visiting	-	219	219
2966/2/6	Visiting	-	219	219
2966/2/7	Visiting	-	219	219
2966/2/8	Visiting	-	219	219
2966/2/9	Visiting	-	219	219
2966/2/10	Visiting	-	219	219
2962/2/1	Visiting	-	156	156
2962/3/1	Visiting	-	156	156
2962/2/2	Visiting	-	156	156
2962/3/2	Visiting	-	156	156
2962/3/3	Visiting	-	156	156
2961/1/1	Visiting	-	139	139
2961/2/1	Visiting	-	139	139

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
<b>0 to 0.25 km zone</b>				
2957/1/1	Visiting	-	104	104
2957/2/1	Visiting	-	104	104
2957/3/1	Visiting	-	104	104
2957/4/1	Visiting	-	104	104
2961/3/1	Visiting	-	104	104
2961/4/1	Visiting	-	104	104
3004/1/1	Visiting	-	54	54
3004/2/1	Visiting	-	54	54
2966/4/1	Visiting	-	22	22
2966/5/1	Visiting	-	22	22
2966/6/1	Visiting	-	22	22
2966/7/1	Visiting	-	22	22
2966/8/1	Visiting	-	22	22
2966/9/1	Visiting	-	22	22
2966/10/1	Visiting	-	22	22
2966/11/1	Visiting	-	22	22
2966/12/1	Visiting	-	22	22
2966/9/2	Visiting	-	22	22
3038/1/1	Visiting	-	9	9
2939/1/1	Visiting	-	7	7
2939/2/1	Visiting	-	7	7
<b>&gt;0.25 to 0.5 km zone</b>				
3217/1/1	Residing	6560	731	7291
3217/2/1	Residing	4931	731	5662



Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
<b>&gt;0.25 to 0.5 km zone</b>				
3205/1/1	Working	1725	123	1848
3205/2/1	Working	1725	123	1848
3205/2/2	Working	1725	123	1848
3205/2/3	Working	1725	123	1848
3205/3/1	Working	665	508	1173
3205/3/2	Working	665	508	1173
3205/3/3	Working	665	508	1173
3205/3/4	Working	665	508	1173
2929/1/1	Visiting	-	548	548
3205/4/1	Working	-	448	448
3205/4/2	Working	-	448	448
3205/4/3	Working	-	448	448
3205/4/4	Working	-	448	448
2928/1/1	Visiting	-	365	365
2931/1/1	Visiting	-	365	365
3013/1/1	Visiting	-	365	365
2932/1/1	Visiting	-	274	274
2941/1/1	Visiting	-	209	209
2941/2/1	Visiting	-	209	209
2941/3/1	Visiting	-	209	209
2941/4/1	Visiting	-	209	209
3014/1/1	Visiting	-	52	52
3014/2/1	Visiting	-	52	52
2930/1/1	Visiting	-	36	36

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
<b>&gt;0.25 to 0.5 km zone</b>				
2942/1/1	Visiting	-	36	36
2940/1/1	Visiting	-	26	26
2916/1/1	Visiting	-	12	12
2916/2/1	Visiting	-	12	12
2916/6/1	Visiting	-	12	12
2916/7/1	Visiting	-	12	12
2916/8/1	Visiting	-	12	12
2916/9/1	Visiting	-	12	12
2916/10/1	Visiting	-	12	12
2916/11/1	Visiting	-	12	12
2933/1/1	Visiting	-	12	12
2933/2/1	Visiting	-	12	12
3015/1/1	Visiting	-	10	10
<b>&gt;0.5 to 1.0 km zone</b>				
2965/1/1	Residing	8368	392	8760
2965/2/1	Residing	8368	392	8760
2965/1/2	Residing	8368	392	8760
2965/2/2	Residing	8368	392	8760
2965/2/3	Residing	8368	392	8760
2965/2/4	Residing	8368	392	8760
2965/2/5	Residing	8368	392	8760
2965/2/6	Residing	8368	392	8760
2965/2/7	Residing	8368	392	8760
2965/2/8	Residing	8368	392	8760

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
<b>&gt;0.5 to 1.0 km zone</b>				
2921/1/1	Residing	4954	3650	8604
3019/1/1	Residing	8342	261	8604
2959/2/1	Residing	8030	209	8239
3056/2/1	Residing	8055	179	8234
3049/1/1	Residing	7697	526	8223
3049/2/1	Residing	7697	526	8223
3018/2/1	Residing	7961	196	8158
3069/1/1	Residing	6135	1947	8082
3069/2/1	Residing	7717	365	8082
3235/2/1	Residing	7514	412	7926
3197/1/1	Residing	6736	1176	7912
3197/3/1	Residing	7424	488	7912
3235/1/1	Residing	7322	412	7734
3018/1/1	Residing	6319	1348	7666
3210/1/1	Residing	7157	509	7666
3048/1/1	Residing	6418	1074	7492
3056/1/1	Residing	6612	548	7160
3056/3/1	Residing	6612	548	7160
2919/1/1	Residing	6234	457	6691
2959/1/1	Residing	5997	469	6466
3197/2/1	Residing	6146	144	6290
2990/1/1	Residing	5605	287	5892
3210/2/1	Residing	5552	172	5724
3049/3/1	Residing	5635	74	5709

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
<b>&gt;0.5 to 1.0 km zone</b>				
3208/2/1	Residing	5209	167	5376
3208/1/1	Residing	4739	176	4914
3204/1/1	Working	1926	481	2407
3204/2/1	Working	1926	481	2407
3204/4/1	Working	-	2407	2407
3204/1/2	Working	1926	481	2407
3204/2/2	Working	1926	481	2407
3204/4/2	Working	-	2407	2407
3204/1/3	Working	1926	481	2407
3204/2/3	Working	1926	481	2407
3204/1/4	Working	1926	481	2407
2965/4/1	Working	2021	49	2070
2965/6/1	Working	2021	49	2070
2965/4/2	Working	2021	49	2070
2965/4/3	Working	2021	49	2070
2968/1/1	Working	1332	605	1937
2968/2/1	Working	1332	605	1937
2968/3/1	Working	1332	605	1937
2968/4/1	Working	1332	605	1937
2968/5/1	Working	1332	605	1937
2968/6/1	Working	1332	605	1937
2968/7/1	Working	1332	605	1937
2968/8/1	Working	1332	605	1937
3207/1/1	Working	442	1281	1723

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
<b>&gt;0.5 to 1.0 km zone</b>				
3207/2/1	Working	442	1281	1723
3207/1/2	Working	442	1281	1723
3207/2/2	Working	442	1281	1723
3207/1/3	Working	442	1281	1723
3207/2/3	Working	442	1281	1723
3207/1/4	Working	442	1281	1723
3207/1/5	Working	442	1281	1723
3207/1/6	Working	442	1281	1723
3207/1/7	Working	442	1281	1723
3207/1/8	Working	442	1281	1723
3207/1/9	Working	442	1281	1723
3207/1/10	Working	442	1281	1723
2959/3/1	Working	1460	104	1564
2968/12/1	Visiting	1074	358	1431
2968/13/1	Visiting	1074	358	1431
2968/14/1	Visiting	1074	358	1431
2968/15/1	Visiting	1074	358	1431
2968/12/2	Visiting	1074	358	1431
2968/13/2	Visiting	1074	358	1431
2968/14/2	Visiting	1074	358	1431
2968/15/2	Visiting	1074	358	1431
2968/14/3	Visiting	1074	358	1431
2968/15/3	Visiting	1074	358	1431
3204/3/1	Working	722	481	1204

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
<b>&gt;0.5 to 1.0 km zone</b>				
2965/3/1	Working	986	49	1035
2965/5/1	Working	986	49	1035
2965/3/2	Working	986	49	1035
2965/3/3	Working	986	49	1035
2965/3/4	Working	986	49	1035
2965/3/5	Working	986	49	1035
2968/9/1	Working	611	366	977
2968/10/1	Working	611	366	977
2968/11/1	Working	611	366	977
3034/1/1	Visiting	-	11	11

**Table 51. Analysis of direct radiation occupancy rates for adults, children and infants in the Derby area (h y<sup>-1</sup>)**

<b>0 to 0.25 km zone</b>	
<b>Number of hours</b>	<b>Number of observations</b>
>8000 to 8760	0
>7000 to 8000	0
>6000 to 7000	0
>5000 to 6000	0
>4000 to 5000	0
>3000 to 4000	0
>2000 to 3000	1
>1000 to 2000	14
0 to 1000	52
0 to 8760	67
<b>&gt;0.25 to 0.5 km zone</b>	
<b>Number of hours</b>	<b>Number of observations</b>
>8000 to 8760	0
>7000 to 8000	1
>6000 to 7000	0
>5000 to 6000	1
>4000 to 5000	0
>3000 to 4000	0
>2000 to 3000	0
>1000 to 2000	8
0 to 1000	29
0 to 8760	39
<b>&gt;0.5 to 1.0 km zone</b>	
<b>Number of hours</b>	<b>Number of observations</b>
>8000 to 8760	19
>7000 to 8000	9
>6000 to 7000	3
>5000 to 6000	4
>4000 to 5000	1
>3000 to 4000	0
>2000 to 3000	13
>1000 to 2000	39
0 to 1000	4
0 to 8760	92

**Table 52. Gamma dose rate measurements for the Derby direct radiation survey area ( $\mu\text{Gy h}^{-1}$ )**

Location	National Grid Reference	Outdoor substrate	Outdoor gamma dose rate at 1 metre <sup>a</sup>
Wilmorton	SK 370 347	Grass	0.076
Wilmorton	SK 375 345	Grass	0.084
Pride Park	SK 373 349	Concrete	0.075
Cherrytree Hill	SK 382 359	Mud and stones	0.086
Raynesway	SK 385 349	Mud and stones	0.075
Crewton	SK378 338	Concrete	0.113
Alvaston Park	SK 380 344	Grass	0.082

**Notes**

<sup>a</sup> These measurements have not been adjusted for background dose rates

**Table 53. Background gamma dose rate measurements for the Derby survey area ( $\mu\text{Gy h}^{-1}$ )**

	Location	National Grid Reference	Substrate	Gamma dose rate at 1 metre
Background 1	Near Stanley Common	SK 414 412	Grass	0.078
Background 2	Shardlow	SK 432 307	Grass	0.074
Background 3	Near Barrow upon Trent	SK 331 293	Grass	0.073
Background 4	Near Kirk Langley	SK 291 395	Grass	0.080



**Table 54. Combinations of adult pathways for consideration in dose assessments in the Derby area**

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
1															X	X	X
2						X			X	X		X	X				
3	X	X	X	X	X								X				
4	X	X	X	X	X	X				X							
5	X	X	X	X	X											X	X
6															X		
7	X	X	X		X	X				X			X	X			
8	X	X	X		X	X			X	X		X		X			
9						X	X				X		X				
10	X	X	X		X						X					X	X
11	X	X	X	X	X					X	X						
12		X	X	X	X						X					X	X
13								X		X	X						

**Notes**

The food groups and external pathways marked with a cross are combined for the corresponding combination number. For example, combination number 1 represents an individual (or individuals) from Annex 1 who had positive data for the following pathways: occupancy over river washed substrates: mud and grass, indoor occupancy within 1 km of the licensed site boundary, outdoor occupancy within 1 km of the licensed site boundary.

## Annex 1. Adults' consumption rates (kg y<sup>-1</sup> and l y<sup>-1</sup>) and occupancy rates (h y<sup>-1</sup>) in the Derby area

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
<b>2916/1/1</b>	-	4.5	13.4	<b>62.5</b>	6.3	-	-	-	-	-	0.2	-	-	-	-	-	-	-	12
<b>2916/2/1</b>	-	4.5	13.4	<b>62.5</b>	6.3	-	-	-	-	-	0.2	-	-	-	-	-	-	-	12
2916/3/1	-	2.9	8.6	-	4.0	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-
2916/4/1	-	2.9	8.6	-	4.0	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-
2916/5/1	-	2.9	8.6	-	4.0	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-
2917/1/1	2.4	2.2	17.3	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2917/2/1	2.4	2.2	17.3	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2917/3/1	1.2	1.1	8.6	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2917/4/1	1.2	1.1	8.6	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2919/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6234	457
2921/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4954	3650
2925/1/1	9.5	13.5	-	27.0	9.9	-	-	-	-	-	1.4	-	-	-	-	-	-	-	-
2925/2/1	9.5	13.5	-	27.0	9.9	-	-	-	-	-	1.4	-	-	-	-	-	-	-	-
2925/3/1	2.1	3.0	-	6.0	2.2	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-
<b>2927/1/1</b>	10.0	15.5	7.8	<b>60.0</b>	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>2927/2/1</b>	10.0	15.5	7.8	<b>60.0</b>	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2927/6/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2927/7/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2927/8/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2927/9/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2927/10/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2927/11/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2927/12/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2927/13/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2928/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365
2929/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	548
2930/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36
2931/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365
2932/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	274
2933/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
2933/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
2938/1/1	14.7	15.0	-	5.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2938/2/1	7.3	7.5	-	2.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2938/3/1	7.3	7.5	-	2.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2939/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
2939/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
<b>2940/1/1</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>130</b>	-	-	-	26
2941/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209
2941/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209
2942/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	108	-	-	-	36
2943/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	417
<b>2944/1/1</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>246</b>	-	-	-	248
<b>2944/2/1</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>246</b>	-	-	-	248
2947/1/1	16.8	5.1	18.9	30.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2947/2/1	16.8	5.1	18.9	30.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2947/3/1	16.8	5.1	18.9	30.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2947/4/1	8.1	2.4	9.1	14.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2947/5/1	8.1	2.4	9.1	14.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2949/1/1	6.9	10.1	0.9	5.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2949/2/1	6.9	10.1	0.9	5.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2949/3/1	6.9	10.1	0.9	5.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2953/1/1	5.1	5.6	3.6	6.8	5.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2953/2/1	5.1	5.6	3.6	6.8	5.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2954/1/1	6.8	11.9	15.9	12.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2954/2/1	6.8	11.9	15.9	12.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2954/3/1	2.2	3.8	5.1	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2954/4/1	2.2	3.8	5.1	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2954/5/1	2.2	3.8	5.1	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2954/6/1	2.2	3.8	5.1	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2954/7/1	2.2	3.8	5.1	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2954/8/1	2.2	3.8	5.1	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>2955/1/1</b>	<b>30.2</b>	<b>34.9</b>	20.7	37.5	6.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>2955/2/1</b>	<b>30.2</b>	<b>34.9</b>	20.7	37.5	6.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2955/3/1	8.5	9.8	5.8	10.5	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2955/4/1	8.5	9.8	5.8	10.5	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2955/6/1	8.5	9.8	5.8	10.5	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2955/7/1	8.5	9.8	5.8	10.5	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2956/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365
2957/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104
2957/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2959/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5997	469
2959/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8030	209
2959/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1460	104
2961/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	139
2961/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	139
2962/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-
2962/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-
2962/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-
2962/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-
2962/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-
2962/1/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-
2962/1/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-
2962/1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-
2962/1/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-
2962/1/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-
2962/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156
2962/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156
2962/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2962/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156
2962/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156
2962/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42	-	-	-	-
2964/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	-	-	-	-
2964/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	-	-	-	-
2964/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	-	-	-	-
2964/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	-	-	-	-
2964/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	-	-	-	-
2964/1/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	-	-	-	-
2964/1/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	-	-	-	-
2964/1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	-	-	-	-
<b>2964/2/1</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>156</b>	-	-	-	-
2965/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2965/2/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	986	49
2965/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	986	49
2965/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	986	49
2965/3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	986	49
2965/3/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	986	49
2965/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2021	49
2965/4/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2021	49
2965/4/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2021	49
2965/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	986	49
2965/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2021	49
2966/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	437
2966/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	437
2966/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	437
2966/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	437



Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2966/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	437
2966/1/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	437
2966/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	219
2966/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	219
2966/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	219
2966/2/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	219
2966/2/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	219
2966/2/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	219
2966/2/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	219
2966/2/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	219
2966/2/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	219
2966/2/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	219
2966/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1303	434
2967/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1641	190
2967/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1641	190
2968/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1332	605
2968/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1332	605
2968/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1332	605

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2968/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1332	605
2968/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1332	605
2968/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1332	605
2968/7/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1332	605
2968/8/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1332	605
2968/9/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	611	366
2968/10/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	611	366
2968/11/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	611	366
2983/1/1	2.7	1.0	14.6	9.0	4.6	-	-	-	-	2.4	-	-	-	-	-	-	-	-	-
<b>2987/1/1</b>	<b>47.8</b>	-	<b>27.9</b>	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>2987/2/1</b>	<b>47.8</b>	-	<b>27.9</b>	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2989/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	313
2990/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5605	287
2991/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	-	-	-	2503
2991/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	-	-	-	1251
2992/1/1	22.7	19.9	11.6	17.7	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2992/2/1	22.7	19.9	11.6	17.7	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2998/1/1	18.9	23.7	3.2	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2998/2/1	18.9	23.7	3.2	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2998/3/1	18.9	23.7	3.2	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2998/4/1	18.9	23.7	3.2	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2999/1/1	1.0	2.4	6.3	29.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2999/2/1	1.0	2.4	6.3	29.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3003/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	834
3004/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	-	-	-	54
3004/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	-	-	-	54
<b>3011/1/1</b>	-	-	-	-	-	-	-	-	-	-	-	-	<b>4.5</b>	-	-	-	-	-	-
3013/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365
3014/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52
3014/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52
3015/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
3016/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	657
3018/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6319	1348
3018/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7961	196
3019/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8342	261
3020/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1022

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3021/1/1	5.3	13.6	23.2	-	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3021/2/1	5.3	13.6	23.2	-	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3021/3/1	5.3	13.6	23.2	-	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3021/4/1	1.3	5.1	10.1	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3021/5/1	1.3	5.1	10.1	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3021/6/1	1.3	5.1	10.1	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3022/1/1	3.3	2.2	3.0	5.0	2.0	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-
3022/2/1	3.3	2.2	3.0	5.0	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3022/3/1	3.3	2.2	3.0	5.0	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3022/4/1	3.3	2.2	3.0	5.0	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3023/1/1	10.3	10.5	18.6	9.1	1.8	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-
3023/2/1	10.3	10.5	18.6	9.1	1.8	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-
3023/3/1	10.3	10.5	18.6	9.1	1.8	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-
3023/4/1	10.3	10.5	18.6	9.1	1.8	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-
3023/5/1	10.3	10.5	18.6	9.1	1.8	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-
3023/6/1	10.3	10.5	18.6	9.1	1.8	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-
3028/1/1	10.2	15.1	10.4	10.1	1.0	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-
3028/4/1	10.2	15.1	10.4	10.1	1.0	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3028/5/1	10.2	15.1	10.4	10.1	1.0	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-
<b>3034/1/1</b>	12.6	<b>31.9</b>	5.2	-	0.2	-	-	-	-	-	1.3	-	-	-	-	-	-	-	11
<b>3034/2/1</b>	12.6	<b>31.9</b>	5.2	-	0.2	-	-	-	-	-	1.3	-	-	-	-	-	-	-	-
<b>3035/1/1</b>	25.2	22.7	<b>27.0</b>	20.0	4.8	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-
<b>3035/2/1</b>	25.2	22.7	<b>27.0</b>	20.0	4.8	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-
3038/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
3043/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88	-	-	-	-
<b>3044/1/1</b>	-	-	-	-	-	-	-	<b>2.9</b>	-	2.7	0.5	-	-	-	-	-	-	-	-
<b>3044/2/1</b>	-	-	-	-	-	-	-	<b>2.9</b>	-	2.7	0.5	-	-	-	-	-	-	-	-
<b>3044/3/1</b>	-	-	-	-	-	-	-	<b>2.9</b>	-	2.7	0.5	-	-	-	-	-	-	-	-
<b>3044/4/1</b>	-	-	-	-	-	-	-	<b>2.9</b>	-	3.5	0.9	-	-	-	-	-	-	-	-
<b>3044/5/1</b>	-	-	-	-	-	-	-	<b>2.9</b>	-	3.5	0.9	-	-	-	-	-	-	-	-
3048/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6418	1074
3049/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7697	526
3049/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7697	526
3049/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5635	74
<b>3052/1/1</b>	-	-	-	-	-	<b>132.1</b>	<b>12.6</b>	-	-	-	<b>2.5</b>	-	0.2	-	-	-	-	-	-
<b>3052/2/1</b>	-	-	-	-	-	<b>132.1</b>	<b>12.6</b>	-	-	-	<b>2.5</b>	-	0.2	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3052/3/1	-	-	-	-	-	-	12.6	-	-	-	-	-	-	-	-	-	-	-	-
3052/3/2	-	-	-	-	-	-	12.6	-	-	-	-	-	-	-	-	-	-	-	-
3052/3/3	-	-	-	-	-	-	12.6	-	-	-	-	-	-	-	-	-	-	-	-
3052/3/4	-	-	-	-	-	-	12.6	-	-	-	-	-	-	-	-	-	-	-	-
3052/3/5	-	-	-	-	-	-	12.6	-	-	-	-	-	-	-	-	-	-	-	-
3052/3/6	-	-	-	-	-	-	12.6	-	-	-	-	-	-	-	-	-	-	-	-
3052/3/7	-	-	-	-	-	-	12.6	-	-	-	-	-	-	-	-	-	-	-	-
3052/3/8	-	-	-	-	-	-	12.6	-	-	-	-	-	-	-	-	-	-	-	-
3052/3/9	-	-	-	-	-	-	12.6	-	-	-	-	-	-	-	-	-	-	-	-
3054/1/1	7.1	35.5	6.6	0.7	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3054/2/1	7.1	35.5	6.6	0.7	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3054/3/1	7.1	35.5	6.6	0.7	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3054/4/1	7.1	35.5	6.6	0.7	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3054/5/1	7.1	35.5	6.6	0.7	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3054/6/1	7.1	35.5	6.6	0.7	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3056/1/1	6.3	15.1	4.9	6.7	5.6	-	-	-	-	-	-	-	-	-	-	-	-	6612	548
3056/2/1	6.3	15.1	4.9	6.7	5.6	-	-	-	-	-	-	-	-	-	-	-	-	8055	179
3058/1/1	29.6	16.1	24.8	39.0	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
<b>3058/2/1</b>	<b>29.6</b>	16.1	<b>24.8</b>	39.0	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3058/3/1</b>	<b>57.0</b>	<b>31.0</b>	<b>47.8</b>	<b>75.0</b>	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3058/4/1	22.8	12.4	19.1	30.0	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3062/1/1	1.6	4.3	3.8	1.3	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3062/2/1	1.6	4.3	3.8	1.3	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3062/3/1	1.6	4.3	3.8	1.3	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3062/4/1	1.6	4.3	3.8	1.3	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3062/6/1	1.6	4.3	3.8	1.3	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3062/7/1	1.6	4.3	3.8	1.3	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3062/8/1	1.6	4.3	3.8	1.3	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3064/1/1</b>	<b>39.8</b>	<b>45.6</b>	<b>54.2</b>	<b>67.5</b>	14.1	-	-	-	-	<b>12.0</b>	-	-	-	-	-	-	-	-	-
<b>3064/2/1</b>	<b>39.8</b>	<b>45.6</b>	<b>54.2</b>	<b>67.5</b>	14.1	-	-	-	-	<b>12.0</b>	-	-	-	-	-	-	-	-	-
3066/1/1	14.7	18.4	7.5	15.0	4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3066/2/1	14.7	18.4	7.5	15.0	4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3067/1/1</b>	16.5	<b>46.0</b>	0.3	20.2	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3068/1/1</b>	<b>27.7</b>	<b>40.1</b>	21.6	<b>74.6</b>	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3068/2/1</b>	<b>27.7</b>	<b>40.1</b>	21.6	<b>74.6</b>	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3068/3/1</b>	<b>27.7</b>	<b>40.1</b>	21.6	<b>74.6</b>	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3068/4/1	27.7	40.1	21.6	74.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3069/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350	-	-	6135	1947
3069/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350	-	-	7717	365
3070/1/1	1.0	2.0	1.5	-	3.8	50.0	-	-	5.4	8.9	-	5.4	-	0.5	-	-	-	-	-
3070/2/1	1.0	2.0	1.5	-	3.8	50.0	-	-	-	8.9	-	-	5.4	0.5	-	-	-	-	-
3070/3/1	1.0	2.0	1.5	-	3.8	50.0	-	-	-	8.9	-	-	-	0.5	-	-	-	-	-
3070/4/1	1.0	2.0	1.5	-	3.8	50.0	-	-	-	8.9	-	-	-	0.5	-	-	-	-	-
3071/1/1	10.2	16.0	10.4	24.8	-	-	-	-	-	-	-	-	6.8	-	-	-	-	-	-
3071/2/1	9.8	15.3	10.0	23.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3071/3/1	9.8	15.3	10.0	23.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3071/4/1	2.3	3.7	2.4	5.7	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-
3071/5/1	2.3	3.7	2.4	5.7	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-
3071/6/1	2.3	3.7	2.4	5.7	-	-	-	-	-	-	-	-	0.9	-	-	-	-	-	-
3071/7/1	2.3	3.7	2.4	5.7	-	-	-	-	-	-	-	-	0.9	-	-	-	-	-	-
3077/1/1	25.6	1.7	8.9	-	1.5	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-
3077/2/1	25.6	1.7	8.9	-	1.5	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-
3077/3/1	25.6	1.7	8.9	-	1.5	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-
3077/4/1	25.6	1.7	8.9	-	1.5	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-



Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3081/1/1	13.6	23.2	2.6	3.3	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3081/2/1	13.6	23.2	2.6	3.3	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3081/3/1	13.6	23.2	2.6	3.3	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3081/4/1	13.6	23.2	2.6	3.3	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3081/7/1	13.6	23.2	2.6	3.3	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3081/9/1	13.6	23.2	2.6	3.3	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3092/1/1</b>	-	<b>26.9</b>	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3092/2/1</b>	-	<b>26.9</b>	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3092/3/1</b>	-	<b>26.9</b>	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3092/4/1</b>	-	<b>26.9</b>	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3094/1/1</b>	13.4	<b>60.4</b>	22.0	31.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3096/1/1</b>	16.5	<b>27.3</b>	18.0	<b>127.0</b>	<b>19.4</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3096/2/1</b>	16.5	<b>27.3</b>	18.0	<b>127.0</b>	<b>19.4</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3098/1/1	12.8	5.4	15.5	-	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3098/2/1	12.8	5.4	15.5	-	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3098/3/1	12.8	5.4	15.5	-	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3098/4/1	3.1	1.3	3.7	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3098/5/1	3.1	1.3	3.7	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3098/6/1	3.1	1.3	3.7	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3098/7/1	3.1	1.3	3.7	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3099/1/1	5.0	6.5	4.1	19.2	1.2	8.5	-	-	-	-	-	-	-	-	-	-	-	-	-
3099/2/1	5.0	6.5	4.1	19.2	1.2	8.5	-	-	-	-	-	-	-	-	-	-	-	-	-
3099/3/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-
3099/4/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3099/5/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3099/6/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3099/8/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3099/11/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3099/12/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3099/13/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3099/17/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3100/1/1</b>	-	-	-	-	-	<b>182.5</b>	-	-	0.3	<b>17.8</b>	-	0.3	0.2	-	-	-	-	-	-
<b>3100/2/1</b>	-	-	-	-	-	<b>182.5</b>	-	-	0.3	<b>17.8</b>	-	0.3	0.2	-	-	-	-	-	-
<b>3100/3/1</b>	-	-	-	-	-	<b>182.5</b>	-	-	0.3	<b>17.8</b>	-	0.3	0.2	-	-	-	-	-	-
<b>3100/4/1</b>	-	-	-	-	-	<b>182.5</b>	-	-	0.3	<b>17.8</b>	-	0.3	0.2	-	-	-	-	-	-
<b>3101/1/1</b>	3.0	15.7	14.4	8.3	<b>43.9</b>	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3101/2/1	3.0	15.7	14.4	8.3	43.9	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-
3101/3/1	3.0	15.7	14.4	8.3	43.9	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-
3102/1/1	9.7	4.8	2.6	3.0	-	-	-	-	-	-	2.3	-	-	-	-	-	-	-	-
3102/2/1	9.7	8.4	2.6	3.0	-	-	-	-	-	-	2.3	-	-	-	-	-	-	-	-
3196/1/1	-	-	-	-	-	-	37.8	-	-	-	-	-	-	-	-	-	-	-	-
3196/2/1	-	-	-	-	-	-	37.8	-	-	-	-	-	-	-	-	-	-	-	-
3196/3/1	-	-	-	-	-	-	37.8	-	-	-	-	-	-	-	-	-	-	-	-
3197/1/1	25.2	21.2	7.0	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	6736	1176
3197/2/1	25.2	21.2	7.0	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	6146	144
3204/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1926	481
3204/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1926	481
3204/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1926	481
3204/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1926	481
3204/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1926	481
3204/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1926	481
3204/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1926	481
3204/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	722	481
3204/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2407

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3204/4/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2407
3205/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1725	123
3205/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1725	123
3205/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1725	123
3205/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1725	123
3205/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	665	508
3205/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	665	508
3205/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	665	508
3205/3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	665	508
3205/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	448
3205/4/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	448
3205/4/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	448
3205/4/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	448
3207/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	442	1281
3207/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	442	1281
3207/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	442	1281
3207/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	442	1281
3207/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	442	1281

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3207/1/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	442	1281
3207/1/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	442	1281
3207/1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	442	1281
3207/1/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	442	1281
3207/1/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	442	1281
3207/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	297	70	442	1281
3207/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	297	70	442	1281
3207/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	297	70	442	1281
3208/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4739	176
3208/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5209	167
3210/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7157	509
3210/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5552	172
<b>3213/1/1</b>	22.7	<b>39.9</b>	2.9	14.6	4.2	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-
<b>3213/2/1</b>	22.7	<b>39.9</b>	2.9	14.6	4.2	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-
3214/1/1	4.5	4.9	2.8	9.4	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3214/2/1	4.5	4.9	2.8	9.4	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3215/1/1</b>	6.5	7.2	8.2	15.0	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3216/1/1</b>	<b>34.4</b>	<b>26.6</b>	8.1	4.5	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
<b>3216/2/1</b>	<b>34.4</b>	<b>26.6</b>	8.1	4.5	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3217/1/1</b>	22.2	<b>70.6</b>	1.7	<b>68.3</b>	8.9	-	-	-	-	-	-	-	-	-	-	-	-	6560	731
<b>3217/2/1</b>	22.2	<b>70.6</b>	1.7	<b>68.3</b>	8.9	-	-	-	-	-	-	-	-	-	-	-	-	4931	731
3218/1/1	4.2	2.2	4.1	5.5	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3218/2/1	4.2	2.2	4.1	5.5	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3219/1/1	13.8	18.7	16.2	41.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3219/2/1	13.8	18.7	16.2	41.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3220/1/1</b>	<b>37.2</b>	<b>25.0</b>	<b>60.8</b>	15.4	8.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3221/1/1</b>	<b>81.4</b>	<b>37.8</b>	<b>72.6</b>	27.2	15.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3221/2/1</b>	<b>81.4</b>	<b>37.8</b>	<b>72.6</b>	27.2	15.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3221/3/1</b>	<b>81.4</b>	<b>37.8</b>	<b>72.6</b>	27.2	15.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3222/1/1	13.8	8.6	20.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3222/2/1	13.8	8.6	20.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3224/1/1</b>	<b>29.4</b>	<b>24.8</b>	2.6	11.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3224/2/1</b>	<b>29.4</b>	<b>24.8</b>	2.6	11.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3225/1/1</b>	26.1	<b>27.4</b>	19.7	25.0	<b>48.3</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3225/2/1</b>	26.1	<b>27.4</b>	19.7	25.0	<b>48.3</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3226/1/1</b>	<b>39.2</b>	<b>31.6</b>	<b>34.0</b>	<b>53.7</b>	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
<b>3226/2/1</b>	<b>39.2</b>	<b>31.6</b>	<b>34.0</b>	<b>53.7</b>	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3227/1/1	25.5	14.6	12.1	20.0	5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3227/2/1	25.5	14.6	12.1	20.0	5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3228/1/1	6.0	4.0	0.9	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	521	3
3228/2/1	6.0	4.0	0.9	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3228/3/1	6.0	4.0	0.9	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3229/1/1</b>	13.1	<b>28.5</b>	0.8	-	9.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3229/2/1</b>	13.1	<b>28.5</b>	0.8	-	9.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3230/1/1	15.9	3.2	11.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3231/1/1	24.7	16.5	5.0	2.1	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3231/2/1	24.7	16.5	5.0	2.1	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3232/1/1	6.1	17.8	2.6	3.6	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-
3232/2/1	6.1	17.8	2.6	3.6	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-
3232/3/1	6.1	17.8	2.6	3.6	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-
3232/4/1	6.1	17.8	2.6	3.6	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-
3232/5/1	6.1	17.8	2.6	3.6	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-
3233/1/1	6.9	6.1	12.2	0.8	16.3	-	-	-	-	0.6	<b>5.5</b>	-	-	-	-	-	-	-	-
<b>3234/1/1</b>	<b>35.2</b>	<b>42.6</b>	21.1	19.7	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Occupancy over river washed substrates: mud and grass	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3234/2/1	<b>35.2</b>	<b>42.6</b>	21.1	19.7	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3235/1/1	8.5	21.1	16.8	<b>44.0</b>	<b>29.8</b>	-	-	-	-	-	-	-	-	-	-	-	-	7322	412
3235/2/1	8.5	21.1	16.8	<b>44.0</b>	<b>29.8</b>	-	-	-	-	-	-	-	-	-	-	-	-	7514	412
3236/1/1	<b>40.1</b>	<b>72.6</b>	<b>25.1</b>	<b>109.2</b>	<b>53.1</b>	<b>148.1</b>	-	-	-	<b>17.8</b>	-	-	-	-	-	-	-	-	-
3236/2/1	<b>40.1</b>	<b>72.6</b>	<b>25.1</b>	<b>109.2</b>	<b>53.1</b>	<b>148.1</b>	-	-	-	<b>17.8</b>	-	-	-	-	-	-	-	-	-

### Notes

U = Unknown

Emboldened observations are the high-rate individuals



**Annex 2. Children's consumption rates (kg y<sup>-1</sup>) and occupancy rates (h y<sup>-1</sup>) in the Derby area**

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Eggs	Wild/free foods	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2916/6/1	-	-	-	-	-	-	-	-	-	-	12
2916/7/1	-	-	-	-	-	-	-	-	-	-	12
2916/8/1	-	-	-	-	-	-	-	-	-	-	12
2916/9/1	-	-	-	-	-	-	-	-	-	-	12
2916/10/1	-	-	-	-	-	-	-	-	-	-	12
2927/14/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-
2941/3/1	-	-	-	-	-	-	-	-	-	-	209
<b>2949/4/1</b>	<b>6.9</b>	<b>10.1</b>	0.9	5.5	-	-	-	-	-	-	-
<b>2949/5/1</b>	<b>6.9</b>	<b>10.1</b>	0.9	5.5	-	-	-	-	-	-	-
<b>2955/8/1</b>	<b>8.5</b>	<b>9.8</b>	<b>5.8</b>	<b>10.5</b>	1.2	-	-	-	-	-	-
<b>2955/9/1</b>	<b>8.5</b>	<b>9.8</b>	<b>5.8</b>	<b>10.5</b>	1.2	-	-	-	-	-	-
2957/3/1	-	-	-	-	-	-	-	-	-	-	104
2957/4/1	-	-	-	-	-	-	-	-	-	-	104
2961/3/1	-	-	-	-	-	-	-	-	-	-	104
2961/4/1	-	-	-	-	-	-	-	-	-	-	104
2966/4/1	-	-	-	-	-	-	-	-	-	-	22
2966/5/1	-	-	-	-	-	-	-	-	-	-	22
2966/6/1	-	-	-	-	-	-	-	-	-	-	22
2966/7/1	-	-	-	-	-	-	-	-	-	-	22
2966/8/1	-	-	-	-	-	-	-	-	-	-	22
2966/9/1	-	-	-	-	-	-	-	-	-	-	22
2966/9/2	-	-	-	-	-	-	-	-	-	-	22
2966/10/1	-	-	-	-	-	-	-	-	-	-	22
2966/11/1	-	-	-	-	-	-	-	-	-	-	22
2966/12/1	-	-	-	-	-	-	-	-	-	-	22
3012/1/1	-	-	-	-	-	-	-	-	-	-	1233
<b>3028/2/1</b>	<b>10.2</b>	<b>15.1</b>	<b>10.4</b>	<b>10.1</b>	1.0	-	-	-	0.2	-	-
<b>3028/3/1</b>	<b>10.2</b>	<b>15.1</b>	<b>10.4</b>	<b>10.1</b>	1.0	-	-	-	0.2	-	-
<b>3044/6/1</b>	-	-	-	-	-	-	<b>2.9</b>	<b>3.5</b>	<b>0.9</b>	-	-
<b>3044/7/1</b>	-	-	-	-	-	-	<b>2.9</b>	<b>3.5</b>	<b>0.9</b>	-	-
<b>3044/8/1</b>	-	-	-	-	-	-	<b>2.2</b>	<b>2.6</b>	<b>0.7</b>	-	-
<b>3052/5/1</b>	-	-	-	-	-	<b>12.6</b>	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Eggs	Wild/free foods	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3052/6/1	-	-	-	-	-	9.5	-	-	-	-	-
3052/7/1	-	-	-	-	-	9.5	-	-	-	-	-
3052/8/1	-	-	-	-	-	12.6	-	-	-	-	-
3056/3/1	6.3	15.1	4.9	6.7	5.6	-	-	-	-	6612	548
3062/5/1	1.6	4.3	3.8	1.3	0.8	-	-	-	-	-	-
3081/5/1	13.6	23.2	2.6	3.3	1.9	-	-	-	-	-	-
3081/6/1	13.6	23.2	2.6	3.3	1.9	-	-	-	-	-	-
3081/8/1	13.6	23.2	2.6	3.3	1.9	-	-	-	-	-	-
3099/7/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-
3099/9/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-
3099/14/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-
3099/15/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-
3099/16/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-

**Notes**

U = Unknown

Emboldened observations are the high-rate individuals

**Annex 3. Infants' consumption rates (kg y<sup>-1</sup>) and occupancy rates (h y<sup>-1</sup>) in the Derby area**

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2916/11/1	-	-	-	-	-	-	-	12
<b>2917/5/1</b>	0.8	0.7	<b>5.8</b>	-	0.1	-	-	-
<b>2927/3/1</b>	1.0	1.5	0.8	<b>6.0</b>	0.3	-	-	-
<b>2927/4/1</b>	1.0	1.5	0.8	<b>6.0</b>	0.3	-	-	-
<b>2927/5/1</b>	1.0	1.5	0.8	<b>6.0</b>	0.3	-	-	-
2941/2/1	-	-	-	-	-	-	-	209
<b>2955/5/1</b>	<b>8.5</b>	<b>9.8</b>	<b>5.8</b>	<b>10.5</b>	<b>1.2</b>	-	-	-
2968/12/1	-	-	-	-	-	-	1074	358
2968/12/2	-	-	-	-	-	-	1074	358
2968/13/1	-	-	-	-	-	-	1074	358
2968/13/2	-	-	-	-	-	-	1074	358
2968/14/1	-	-	-	-	-	-	1074	358
2968/14/2	-	-	-	-	-	-	1074	358
2968/14/3	-	-	-	-	-	-	1074	358
2968/15/1	-	-	-	-	-	-	1074	358
2968/15/2	-	-	-	-	-	-	1074	358
2968/15/3	-	-	-	-	-	-	1074	358
<b>3052/4/1</b>	-	-	-	-	-	<b>6.3</b>	-	-
<b>3099/10/1</b>	1.3	1.6	1.0	<b>4.8</b>	0.3	-	-	-
<b>3197/3/1</b>	<b>12.6</b>	<b>10.6</b>	<b>3.5</b>	-	<b>0.5</b>	-	7424	488

**Notes**

U = Unknown

Emboldened observations are the high-rate individuals

#### Annex 4. Qualitative and estimated data for use in dose assessments

Details of activity	Exposure pathways involved	Estimated rate
Consumption of food originating from the aquatic survey area	Consumption of pike	1 kg y <sup>-1</sup>
Consumption of food originating from the aquatic survey area	Consumption of signal crayfish	1 kg y <sup>-1</sup>

#### Annex 5. Ratios for determining consumption and occupancy rates for children and infants

Group	Ratio <sup>a</sup>	
	Child <sup>e</sup> /adult	Infant <sup>e</sup> /adult
<b>Fish<sup>b</sup></b>	0.200	0.050
<b>Crustaceans<sup>b</sup></b>	0.250	0.050
<b>Molluscs<sup>b</sup></b>	0.250	0.050
<b>Green vegetables</b>	0.444	0.222
<b>Other vegetables</b>	0.500	0.200
<b>Root vegetables</b>	0.500	0.375
<b>Potatoes</b>	0.708	0.292
<b>Domestic fruit</b>	0.667	0.467
<b>Milk</b>	1.000	1.333
<b>Cattle meat</b>	0.667	0.222
<b>Pig meat</b>	0.625	0.138
<b>Sheep meat</b>	0.400	0.120
<b>Poultry</b>	0.500	0.183
<b>Eggs</b>	0.800	0.600
<b>Wild/free foods<sup>c</sup></b>	0.490	0.110
<b>Game<sup>d</sup></b>	0.500	0.140
<b>Honey</b>	0.789	0.789
<b>Wild fungi</b>	0.450	0.150
<b>Freshwater fish<sup>b</sup></b>	0.250	0.050
<b>External exposure over intertidal substrates<sup>b</sup></b>	0.500	0.030

#### Notes

<sup>a</sup>Excepting notes <sup>b</sup> and <sup>c</sup>, consumption ratios were derived from Byrom and others (1995) which presented data for infants aged 6 to 12 months and children aged 10 to 11 years.

<sup>b</sup>Ratios were derived from Smith and Jones, (2003) which presented data for infants and children of unspecified ages.

<sup>c</sup>Ratios were derived from FSA data for wild fruit and nuts for infants and 10-year-old children.

<sup>d</sup>Game includes rabbits/hares and venison.

<sup>e</sup>Note that the age ranges within the age groups in this table do not correspond exactly with the age ranges within the age groups used throughout the rest of this report.

**Annex 6. Consumption rates (kg y<sup>-1</sup> and l y<sup>-1</sup>) and occupancy rates (h y<sup>-1</sup>) for women of childbearing age in the Derby area**

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Occupancy over river washed substrates: mud and grass	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2916/3/1	-	2.9	8.6	-	4.0	-	-	-	-	-	0.1	-	-	-	-	-
2916/4/1	-	2.9	8.6	-	4.0	-	-	-	-	-	0.1	-	-	-	-	-
2916/5/1	-	2.9	8.6	-	4.0	-	-	-	-	-	0.1	-	-	-	-	-
2917/4/1	1.2	1.1	8.6	-	0.2	-	-	-	-	-	-	-	-	-	-	-
2927/6/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-
2927/7/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-
2927/8/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-
2927/12/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-
2927/13/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-
2927/14/1	1.0	1.5	0.8	6.0	0.3	-	-	-	-	-	-	-	-	-	-	-
2931/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365
2933/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
2939/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
2939/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
2947/4/1	8.1	2.4	9.1	14.4	-	-	-	-	-	-	-	-	-	-	-	-
2954/4/1	2.2	3.8	5.1	4.0	-	-	-	-	-	-	-	-	-	-	-	-
2955/3/1	8.5	9.8	5.8	10.5	1.2	-	-	-	-	-	-	-	-	-	-	-
2957/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Occupancy over river washed substrates: mud and grass	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2965/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/2/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8368	392
2965/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	986	49
2965/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	986	49
2965/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	986	49
2965/3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	986	49
2965/3/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	986	49
2965/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2021	49
2965/4/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2021	49
2965/4/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2021	49
2987/2/1	47.8	-	27.9	-	3.4	-	-	-	-	-	-	-	-	-	-	-
2991/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	32	-	1251
3004/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	54	-	54
3022/3/1	3.3	2.2	3.0	5.0	2.0	-	-	-	-	-	-	-	-	-	-	-
3022/4/1	3.3	2.2	3.0	5.0	2.0	-	-	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Occupancy over river washed substrates: mud and grass	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3023/4/1	10.3	10.5	18.6	9.1	1.8	-	-	-	-	-	0.5	-	-	-	-	-
3023/5/1	10.3	10.5	18.6	9.1	1.8	-	-	-	-	-	0.5	-	-	-	-	-
3028/1/1	10.2	15.1	10.4	10.1	1.0	-	-	-	-	-	0.2	-	-	-	-	-
3034/1/1	12.6	31.9	5.2	-	0.2	-	-	-	-	-	1.3	-	-	-	-	11
3044/6/1	-	-	-	-	-	-	-	2.9	-	3.5	0.9	-	-	-	-	-
3054/5/1	7.1	35.5	6.6	0.7	3.3	-	-	-	-	-	-	-	-	-	-	-
3062/4/1	1.6	4.3	3.8	1.3	0.8	-	-	-	-	-	-	-	-	-	-	-
3062/5/1	1.6	4.3	3.8	1.3	0.8	-	-	-	-	-	-	-	-	-	-	-
3062/6/1	1.6	4.3	3.8	1.3	0.8	-	-	-	-	-	-	-	-	-	-	-
3062/7/1	1.6	4.3	3.8	1.3	0.8	-	-	-	-	-	-	-	-	-	-	-
3067/1/1	16.5	46.0	0.3	20.2	2.3	-	-	-	-	-	-	-	-	-	-	-
3068/3/1	27.7	40.1	21.6	74.6	5.7	-	-	-	-	-	-	-	-	-	-	-
3069/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	350	7717	365
3071/3/1	9.8	15.3	10.0	23.9	-	-	-	-	-	-	-	-	-	-	-	-
3071/7/1	2.3	3.7	2.4	5.7	-	-	-	-	-	-	-	-	0.9	-	-	-
3081/3/1	13.6	23.2	2.6	3.3	1.9	-	-	-	-	-	-	-	-	-	-	-
3081/9/1	13.6	23.2	2.6	3.3	1.9	-	-	-	-	-	-	-	-	-	-	-
3092/3/1	-	26.9	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-
3092/4/1	-	26.9	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-
3098/4/1	3.1	1.3	3.7	-	1.2	-	-	-	-	-	-	-	-	-	-	-
3098/6/1	3.1	1.3	3.7	-	1.2	-	-	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Occupancy over river washed substrates: mud and grass	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3099/5/1	5.0	6.5	4.1	19.2	1.1	-	-	-	-	-	-	-	-	-	-	-
3100/3/1	-	-	-	-	-	182.5	-	-	0.3	17.8	-	0.3	0.2	-	-	-
3196/3/1	-	-	-	-	-	-	37.8	-	-	-	-	-	-	-	-	-
3197/1/1	25.2	21.2	7.0	-	0.9	-	-	-	-	-	-	-	-	-	6736	1176
3204/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1926	481
3204/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1926	481
3204/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1926	481
3205/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1725	123
3205/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1725	123
3205/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1725	123
3208/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5209	167
3216/2/1	34.4	26.6	8.1	4.5	0.7	-	-	-	-	-	-	-	-	-	-	-
3217/2/1	22.2	70.6	1.7	68.3	8.9	-	-	-	-	-	-	-	-	-	4931	731
3222/2/1	13.8	8.6	20.7	-	-	-	-	-	-	-	-	-	-	-	-	-
3231/2/1	24.7	16.5	5.0	2.1	1.6	-	-	-	-	-	-	-	-	-	-	-

### **Notes**

U = Unknown

<sup>a</sup> Based on National Statistics guidelines, women were deemed to be of childbearing age if they were between 15 and 44 years old. Women of unknown age were included as they were potentially women of childbearing age



## Annex 7. Summary of profiles for adults in the Derby area for use in the assessment of total dose

Profile Name	Pathway Name	Number of Individuals	Notes	Crustacea - Freshwater		Eggs	Fish - River	Fruit - Domestic	Fruit and nuts - Wild	Gamma ext - Riverbank	Honey	Meat - Cow	Meat - Game	Meat - Poultry	Meat - Sheep	Milk	Mushrooms	Occupancy in proximity to sewage sludge	Occupancy in proximity to sewage cake biosolids	Plume (IN; 0-0.25 km)	Plume (MID; 0.25-0.5 km)	Plume (OUT; 0.5-1 km)	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root	
				1	2																						Units
Freshwater Crustacean Consumers		<b>0</b>		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Occupants for Direct Radiation		<b>161</b>		-	<b>1.00</b>	-	-	0.72	0.02	10	-	-	-	-	-	-	-	<b>8</b>	<b>1</b>	120	180	2130	1.0	2.2	2.3	0.79	
Egg Consumers		<b>12</b>		-	-	<b>13.9</b>	-	12.4	-	-	0.53	-	0.56	0.56	-	102.2	0.17	-	-	-	-	-	13.6	20.4	29.5	13.7	
Consumers of Fish - River		<b>0</b>		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Domestic Fruit Consumers		<b>11</b>		-	0.18	3.2	-	<b>39.3</b>	0.08	-	-	-	-	-	26.9	-	-	-	-	-	-	1420	17.4	31.3	57.8	18.4	
Wild Fruit and Nut Consumers		<b>5</b>		-	-	0.12	-	3.3	<b>3.0</b>	-	0.09	5.0	-	-	52.8	-	-	-	-	-	-	-	5.3	3.9	1.4	3.5	
Occupants over Riverbank		<b>6</b>		-	0.83	-	-	-	-	<b>250</b>	-	-	-	-	-	-	-	-	-	83	4	2690	-	-	-	-	
Honey Consumers		<b>3</b>		-	-	3.0	-	1.3	-	-	<b>5.6</b>	-	-	-	16.7	0.17	-	-	-	-	-	3.7	6.0	8.3	4.0		
Cattle Meat Consumers		<b>14</b>		-	-	-	-	-	0.36	-	0.03	<b>18.0</b>	-	-	18.9	-	-	-	-	-	-	-	-	-	-	-	
Game Meat Consumers		<b>1</b>		-	-	8.9	-	3.8	-	-	-	-	<b>5.4</b>	5.4	50.0	0.50	-	-	-	-	-	-	1.0	2.0	-	1.5	
Poultry Meat Consumers		<b>1</b>		-	-	8.9	-	3.8	-	-	-	-	<b>5.4</b>	<b>5.4</b>	50.0	0.50	-	-	-	-	-	-	1.0	2.0	-	1.5	
Sheep Meat Consumers		<b>5</b>		-	-	3.0	-	-	0.68	-	-	-	-	<b>2.9</b>	-	-	-	-	-	-	-	-	-	-	-	-	
Milk Consumers		<b>8</b>		-	-	13.4	-	13.3	0.63	-	0.17	3.2	0.17	0.17	<b>161.3</b>	-	-	-	-	-	-	10.0	18.2	27.3	6.3		
Mushroom Consumers		<b>4</b>		-	-	8.9	-	3.8	-	-	1.4	-	1.3	1.3	50.0	<b>0.50</b>	-	-	-	-	-	-	1.0	2.0	-	1.5	
Occupancy in Proximity to Sewage Sludge		<b>3</b>		-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	<b>300</b>	70	-	-	1720	-	-	-	-	
Occupancy in Proximity to Sewage Cake Biosolids		<b>3</b>		-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	<b>300</b>	<b>70</b>	-	-	1720	-	-	-	-	
Local Inhabitants (0 - 0.25 km)		<b>6</b>		-	1.00	-	-	-	-	11	-	-	-	-	-	-	-	-	-	<b>1700</b>	-	-	-	-	-	-	
Local Inhabitants (0.25 - 0.5 km)		<b>2</b>		-	1.00	-	-	8.9	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>6480</b>	-	22.2	70.6	68.3	1.7
Local Inhabitants (0.5 - 1 km)		<b>34</b>		-	1.00	-	-	2.1	-	21	-	-	-	-	-	-	-	-	-	-	-	<b>7730</b>	2.4	3.4	3.0	1.7	
Green Vegetable Consumers		<b>27</b>		-	-	2.2	-	9.4	-	-	-	-	-	-	11.0	-	-	-	-	-	-	<b>40.8</b>	34.0	42.8	31.5		
Other Domestic Vegetable Consumers		<b>47</b>		-	0.09	1.3	-	10.7	0.09	-	-	-	-	-	6.3	-	-	-	-	-	280	<1	26.5	<b>37.6</b>	34.1	19.2	
Potato Consumers		<b>21</b>		-	0.29	2.8	-	14.7	0.01	-	-	-	-	-	14.1	-	-	-	-	-	620	750	24.8	36.6	<b>74.2</b>	22.7	
Root Vegetable Consumers		<b>17</b>		-	-	3.5	-	13.1	0.03	-	-	-	-	-	17.4	-	-	-	-	-	-	46.0	32.1	44.2	<b>41.9</b>		

### Notes

- 1) 1kg of freshwater crustacean and fish consumption is assumed for theoretical river occupants to account for uncertainty in habits survey methodology (Annex 4)
- 2) Direct radiation is expressed as proportion of group who are present within 1 km of site perimeter
- 3) Gamma ext - Riverbank represents occupancy over river washed substrates along the River Derwent
- 4) Meat - Game includes consumption of rabbits/hares
- 5) Workers at the Sewage Treatment Works
- 6) Plume times are the sum of individuals' indoor and outdoor times

The means of the high-rate groups are determined by the 'cut-off' method and are emboldened on the diagonal

**Annex 8. Summary of profiles for the child age group (6 - 15 years old) in the Derby area for use in the assessment of total dose**

Profile Name	Pathway Name	Number of individuals	Notes Units	Direct	Eggs	Fruit - Domestic	Fruit and nuts - Wild	Meat - Cow	Meat - Sheep	Plume (IN; 0-0.25 km)	Plume (MID; 0.25-0.5 km)	Plume (OUT; 0.5-1 km)	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root
				1	kg	kg	kg	kg	kg	h	h	h	kg	kg	kg	kg
<b>Occupants for Direct Radiation</b>		<b>22</b>		<b>1</b>	-	0.26	-	-	-	85	12	330	0.29	0.68	0.3	0.22
<b>Eggs Consumers</b>		<b>3</b>		-	<b>3.2</b>	-	0.87	-	2.7	-	-	-	-	-	-	-
<b>Domestic Fruit Consumers</b>		<b>1</b>		1	-	<b>5.6</b>	-	-	-	-	-	7160	6.3	15.1	6.7	4.9
<b>Wild Fruit and Nut Consumers</b>		<b>3</b>		-	3.2	-	<b>0.87</b>	-	2.7	-	-	-	-	-	-	-
<b>Cattle Meat Consumers</b>		<b>4</b>		-	-	-	-	<b>11</b>	-	-	-	-	-	-	-	-
<b>Sheep Meat Consumers</b>		<b>3</b>		-	3.2	-	0.87	-	<b>2.7</b>	-	-	-	-	-	-	-
<b>Local Inhabitants (0-0.25 km)</b>		<b>1</b>		1	-	-	-	-	-	<b>1230</b>	-	-	-	-	-	-
<b>Local Inhabitants (0.25-0.5 km)</b>		<b>1</b>		1	-	-	-	-	-	-	<b>210</b>	-	-	-	-	-
<b>Local Inhabitants (0.5-1 km)</b>		<b>1</b>		1	-	5.6	-	-	-	-	-	<b>7160</b>	6.3	15.1	6.7	4.9
<b>Green Vegetable Consumers</b>		<b>15</b>		0.07	-	1.4	0.03	-	-	-	-	480	<b>8.2</b>	12.5	11	4.5
<b>Other Domestic Vegetable Consumers</b>		<b>10</b>		0.1	-	1.6	0.04	-	-	-	-	720	9.8	<b>15.5</b>	6.9	4.7
<b>Potato Consumers</b>		<b>10</b>		0.1	-	1.6	0.04	-	-	-	-	720	6.9	9.7	<b>14.4</b>	5.8
<b>Root Vegetable Consumers</b>		<b>11</b>		0.09	-	1.5	0.04	-	-	-	-	650	6.4	9.2	13.2	<b>5.6</b>

**Notes**

- 1) Direct radiation is expressed as proportion of group who are present within 1 km of site boundary
- 2) Plume times are the sum of individuals' indoor and outdoor times

The means of the high-rate groups are determined by the 'cut-off' method and are emboldened on the diagonal

## Annex 9. Summary of profiles for the infant age group (0 - 5 years old) in the Derby area for use in the assessment of total dose

Profile Name	Pathway Name	Number of Individuals	Notes	1	Fruit - Domestic	Meat - Cow	2 Plume (MID; 0.25-0.5 km)	2 Plume (OUT; 0.5-1 km)	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root
				Direct	kg	kg	h	h	kg	kg	kg	kg
			Units	-	kg	kg	h	h	kg	kg	kg	kg
Occupants for Direct Radiation		<b>13</b>		<b>1.00</b>	0.04	-	17	1710	0.97	0.82	-	0.27
Domestic Fruit Consumers		<b>2</b>		0.50	<b>0.85</b>	-	-	3960	10.5	10.2	5.3	4.7
Cattle Meat Consumers		<b>1</b>		-	-	<b>6.3</b>	-	-	-	-	-	-
Local Inhabitants (0.25 - 0.5 km)		<b>1</b>		1.00	-	-	<b>210</b>	-	-	-	-	-
Local Inhabitants (0.5 - 1 km)		<b>1</b>		1.00	0.46	-	-	<b>7910</b>	12.6	10.6	-	3.5
Green Vegetable Consumers		<b>2</b>		0.50	0.85	-	-	3960	<b>10.5</b>	10.2	5.3	4.7
Other Domestic Vegetable Consumers		<b>2</b>		0.50	0.85	-	-	3960	10.5	<b>10.2</b>	5.3	4.7
Potato Consumers		<b>5</b>		-	0.51	-	-	-	2.5	3.2	<b>6.7</b>	1.8
Root Vegetable Consumers		<b>3</b>		0.33	0.61	-	-	2640	7.3	7.0	3.5	<b>5.0</b>

### Notes

1) Direct radiation is expressed as proportion of group who are present within 1 km of site perimeter

2) Plume times are the sum of individuals' indoor and outdoor times

The means of the high-rate groups are determined by the 'cut-off' method and are emboldened on the diagonal

## Annex 10. Summary of profiles for women of childbearing age in the Derby area, for use in assessments of total dose to prenatal children

Profile Name	Pathway Name	Number of Individuals	Notes	Direct	Eggs	Fruit - Domestic	Fruit and nuts - Wild	Gamma ext - Riverbank	Honey	Meat - Cow	Meat - Game	Meat - Poultry	Meat - Sheep	Milk	Plume (IN; 0-0.25 km)	Plume (MID; 0.25-0.5 km)	Plume (OUT; 0.5-1 km)	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root		
				1	kg	kg	kg	h	kg	kg	kg	kg	kg	kg	kg	l	h	h	h	kg	kg	kg	kg
				Units	-	kg	kg	h	kg	kg	kg	kg	kg	kg	kg	kg	l	h	h	h	kg	kg	kg
Occupants for Direct Radiation		37		1.00	-	0.60	0.04	12	-	-	-	-	-	-	38	310	2970	1.6	3.6	1.8	1.1		
Egg Consumers		1		-	17.8	-	-	-	0.23	-	0.34	0.34	-	182.5	-	-	-	-	-	-	-		
Domestic Fruit Consumers		4		0.25	-	10.7	-	-	-	-	-	-	-	-	-	1420	-	12.5	41.1	35.7	5.8		
Wild Fruit and Nut Consumers		4		0.25	0.86	0.97	0.82	-	-	-	-	-	0.73	-	-	-	3	8.3	13.2	4.6	10.6		
Occupants over Riverbank		1		1.00	-	-	-	350	-	-	-	-	-	-	-	-	8080	-	-	-	-		
Honey Consumers		1		-	-	-	-	-	0.91	-	-	-	-	-	-	-	-	2.3	3.7	5.7	2.4		
Cattle Meat Consumers		1		-	-	-	-	-	-	37.8	-	-	-	-	-	-	-	-	-	-	-		
Game Meat Consumers		1		-	17.8	-	-	-	0.23	-	0.34	0.34	-	182.5	-	-	-	-	-	-	-		
Poultry Meat Consumers		1		-	17.8	-	-	-	0.23	-	0.34	0.34	-	182.5	-	-	-	-	-	-	-		
Sheep Meat Consumers		1		-	3.5	-	0.95	-	-	-	-	-	2.9	-	-	-	-	-	-	-	-		
Milk Consumers		1		-	17.8	-	-	-	0.23	-	0.34	0.34	-	182.5	-	-	-	-	-	-	-		
Local Inhabitants (0 - 0.25 km)		1		1.00	-	-	-	32	-	-	-	-	-	-	1250	-	-	-	-	-	-		
Local Inhabitants (0.25 - 0.5 km)		1		1.00	-	8.9	-	-	-	-	-	-	-	-	-	5660	-	22.2	70.6	68.3	1.7		
Local Inhabitants (0.5 - 1 km)		11		1.00	-	0.08	-	32	-	-	-	-	-	-	-	-	8310	2.3	1.9	-	0.64		
Green Vegetable Consumers		7		0.29	-	3.4	-	-	-	-	-	-	-	-	-	810	1130	28.4	31.6	24.2	10.2		
Other Domestic Vegetable Consumers		8		0.25	-	6.2	0.17	-	-	-	-	-	-	-	-	710	1	15.1	38.0	21.0	5.4		
Potato Consumers		2		0.50	-	7.3	-	-	-	-	-	-	-	-	-	2830	-	24.9	55.4	71.4	11.6		
Root Vegetable Consumers		7		-	-	2.0	0.17	-	-	-	-	-	-	-	-	-	-	18.6	14.3	18.1	18.3		

### Notes

- 1) Direct radiation is expressed as proportion of group who are present within 1 km of site perimeter
- 2) Gamma ext - Riverbank represents occupancy over river washed substrates along the River Derwent
- 3) Plume times are the sum of individuals' indoor and outdoor times

The means of the high-rate groups are determined by the 'cut-off' method and are emboldened on the diagonal



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