Centre for Environment Fisheries & Aquaculture Science

Cefas

Radiological Habits Survey: Capenhurst, 2021

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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 foods from the aquatic survey area was not identified in 2021 or in the previous survey in 2008, since the Rivacre Brook was too shallow to support freshwater species that might be consumed.

- In both surveys, individuals were only identified spending small quantities of time on the banks of the Rivacre Brook.

- In 2021, there was a significant decrease in the consumption of milk. Conversely, the consumption rates significantly increased for cattle meat and sheep meat.

- The consumption of rabbits/hares had ceased since the previous survey and the consumption of pork was newly identified.

- A new housing development was being built to the north of the nuclear licensed site. Part of the development was complete at the time of the survey and many of these houses were occupied. This land was being farmed at the time of the previous habits survey in 2008.

- The highest indoor, outdoor and total occupancy rates in the direct radiation survey area in the 2021 were similar to those in 2008.

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 Urenco UK Limited (UUK) nuclear licenced site in Capenhurst. The site discharges gaseous wastes via vents to the atmosphere, liquid wastes to the Rivacre Brook, and contains 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 aquatic substrates
- The handling of fishing gear and sediment
- Activities and occupancy in and on water
- 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 319 individuals are presented and discussed. Rates of consumption and aquatic occupancy are identified using established methods comprising (a) a ‘cut off’ to define the high-rate group and (b) 97.5th 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) was from the Capenhurst site outfall to its confluence with the Rivacre Brook, to where the brook meets the Mersey Estuary.

The brook was narrow and shallow and commercially viable species were not present in the area. No commercial fisheries or angling were identified during the survey period. No aquatic foods were consumed from the brook.

During the survey no individuals were observed in the brook. However, during interviews, one family was identified paddling in the brook at the country park, and one individual spent a small amount of time collecting debris from the brook.

The terrestrial survey area

The terrestrial survey area (Figure 5) covered the land within 5 km of the UUK site centre. The land within the terrestrial survey area is mainly farmland but also includes the town of Ellesmere Port and a number of villages. Interviews were conducted at 15 working farms with land in the terrestrial survey area, where beef, cows' milk, lamb, pigs, dairy followers (young dairy cattle intended to replace older dairy cows), sheep (kept in the area over winter) and potatoes were produced for human consumption. One market garden produced fruit and vegetables. Grass (for silage), wheat, barley, peas and maize were produced for livestock feed. Wheat, barley and rapeseed oil were produced for the biofuel industry.

A total of 13 allotment sites were identified within the terrestrial survey area. Interviews were undertaken at four of the 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. Six 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 mallard being consumed by the farming families. Wild foods including blackberries, mushrooms, damsons and sloes were collected and consumed.

Foods from the terrestrial survey area were consumed from the following 15 food groups: green vegetables; other vegetables; root vegetables; potato; domestic fruit; milk; cattle meat; pig meat; sheep meat; poultry; eggs; wild/free foods; honey; wild fungi; freshwater plants. 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 ten food groups: green vegetables, other vegetables, root vegetables, potatoes, cattle meat, pig meat, sheep meat, poultry, eggs and wild fungi.

The human consumption of groundwater was not identified. Livestock were identified drinking mains water and some had access to water from a borehole.

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. The site did not undertake any routine wildlife 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 nuclear licensed site boundary. 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 area within 1 km of the nuclear licensed site was predominantly farmland with residential properties mostly located within the village of Capenhurst, the hamlet of Ledsham, and the Sutton Green housing estate on the outskirts of Ellesmere Port. A railway line bisected the survey area from north-west to south-east and passed along the eastern boundary of the site. To the north and east of the railway line, farmland separated the site from the densely populated Sutton Green housing estate. An electricity substation and water works were also located within this farmland. To the south of the site was the village of Capenhurst where both a school and nursing home were located. To the west of the site was the hamlet of Ledsham. A new housing development was being built to the north of the nuclear site. This land was farmed during the previous habits survey. Part of the development was complete at the time of the survey and many of these houses were occupied.

The occupancy rates were analysed in zones according to the distance from the nuclear licensed site boundary. The zones were 0 – 0.25 km, >0.25 – 0.5 km and >0.5 – 1.0 km. The highest indoor, outdoor and total occupancy rates were for residents in all three zones.

Gamma dose rates were measured outdoors at most of the properties where interviews were conducted in the direct radiation survey area. Background readings were taken over grass at distances beyond 5 km from the site centre. Twenty of the 29 measurements taken outdoors of the properties were higher than the background measurements, however these were all within or below the range at the nearest RIMNET station. Since gamma dose rates are influenced by the nature of building materials, the ground type (substrate) upon which measurements 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 Capenhurst habits survey in 2008. The comparisons are for adults. Reasons for changes in the consumption,

occupancy and handling rates were identified for certain pathways and these are presented in Section 10.

In 2008 and 2021, the consumption of foods from the aquatic survey area was not identified.

In both surveys individuals were identified spending small quantities of time on the banks of the Rivacre Brook, see Figure 1. In 2008 one individual walked their dog on sand and stones and in 2021 two individuals were spending time on mud, sand and stones by the brook.

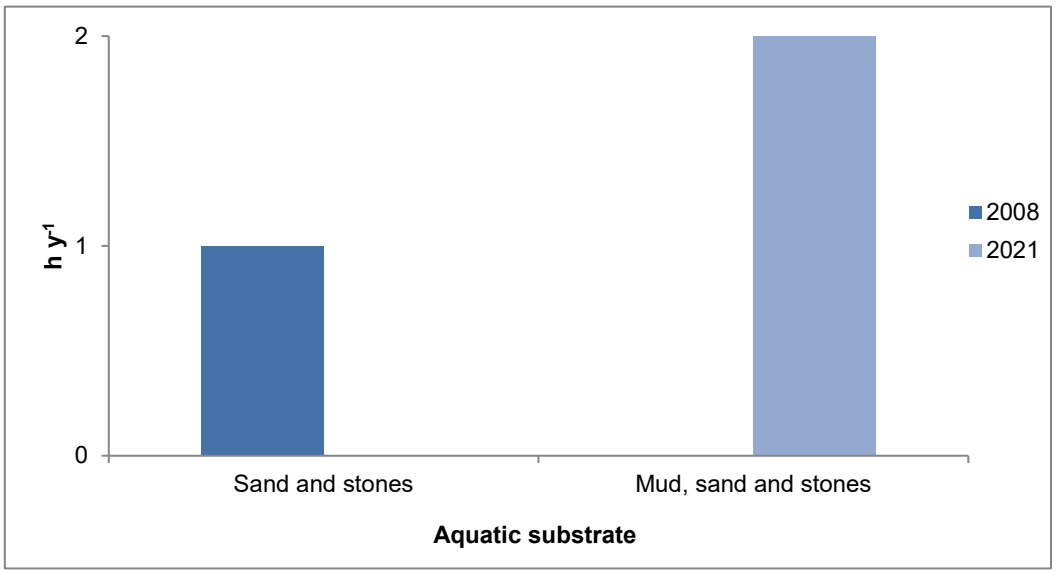

Figure 1. Comparison between 2008 and 2021 mean rates for the high-rate groups for aquatic substrate occupancy

The most notable changes in the terrestrial foods in 2021 were the significant decrease in the consumption rate of milk and the significant increase in cattle meat and sheep meat, compared with 2008. The consumption of rabbits/hares was not identified in 2021 and the consumption of pig meat was identified, see Figure 2.

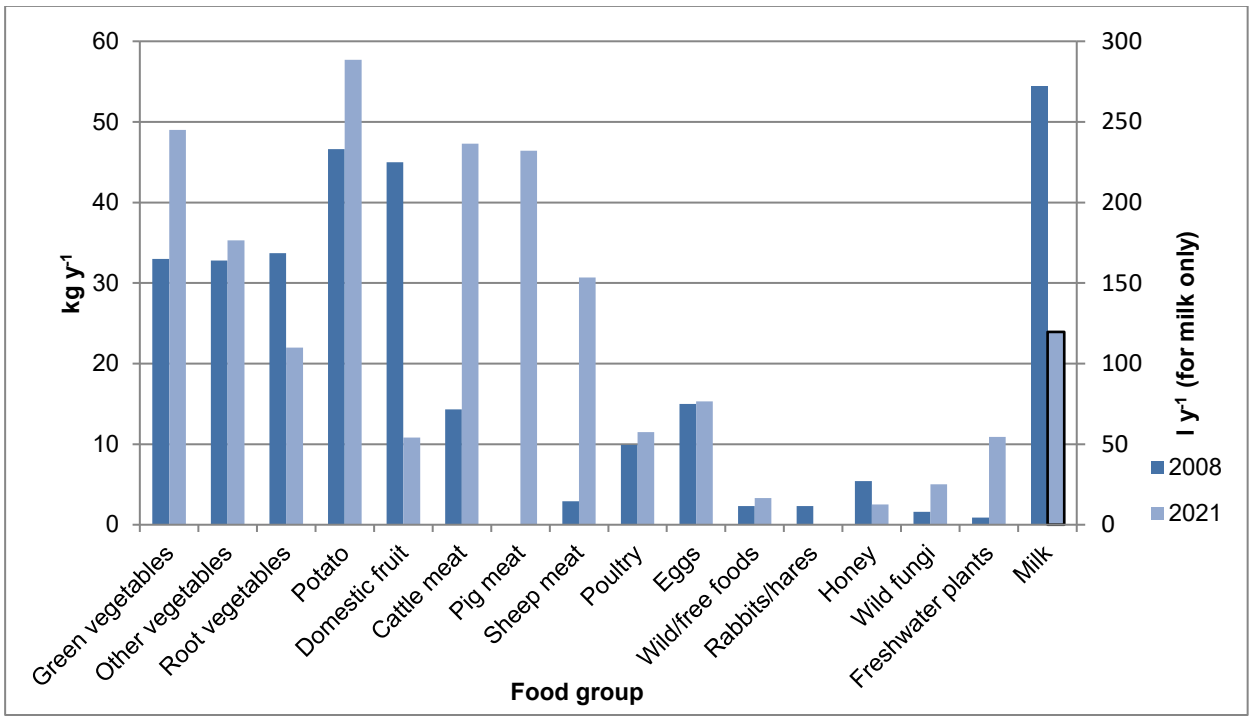

Figure 2. Comparison between 2008 and 2021 mean consumption rates for the high-rate groups for terrestrial foods

The occupancy rates in the direct radiation survey area in 2021 were broadly similar to those in 2008, see Figure 3. There was a large increase in the outdoor occupancy rate in the >0.5 - 1.0 km zone which was for a resident. The highest indoor, outdoor and total occupancy rates in all three zones were for residents.

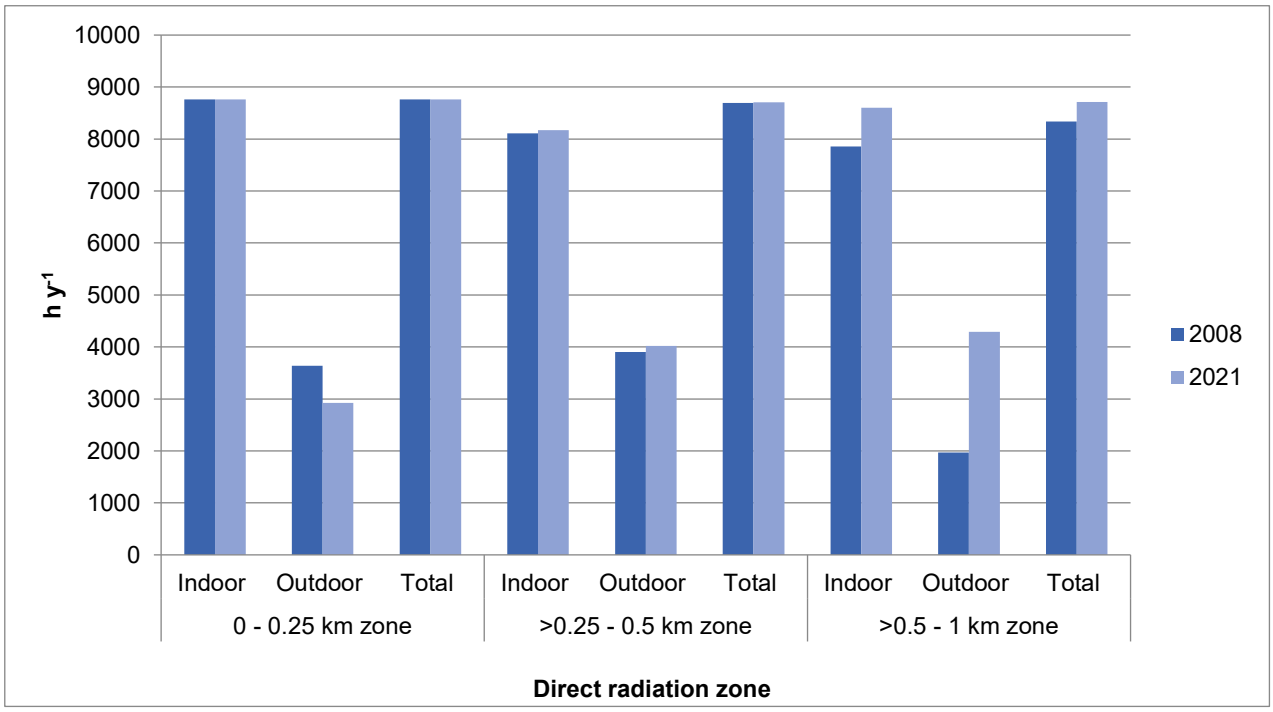

Figure 3. Comparison between 2008 and 2021 maximum direct radiation occupancy rates

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

The foods and aquatic locations identified in the 2021 Capenhurst 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 12.2 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 Capenhurst 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 UUK Capenhurst nuclear site, 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 UUK Capenhurst nuclear site, 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 UK 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 (i.e. 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 assessment 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 before that Health Protection Agency) 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 UUK nuclear site is located in the village of Capenhurst in Cheshire, approximately 8 km north-west of Chester.

The site is partly owned by UUK and partly by the Nuclear Decommissioning Authority. UUK, Urenco Nuclear Stewardship Limited (UNS) and Urenco ChemPlants Limited (UCP) are the operators at the site. UUK is the site license holder and operates three uranium enrichment plants which provides fuel for nuclear power stations. UNS manages legacy waste storage and decommissioning activities. At the time of the survey the newly built Tails Management Facility was undergoing active commissioning, this facility is operated by UCP. The facility converts depleted uranium hexafluoride (UF_6 or tails) to uranium oxide (U_3O_8) to allow the uranium to be stored in a more chemically stable oxide form for potential future reuse in the nuclear fuel cycle and will recover hydrofluoric acid for reuse in the chemical industry.

Under the radioactive substances provisions of Environmental Permitting (England and Wales) Regulations 2016 (UK Parliament, 2016), UUK, UNS and UCP are permitted to undertake radioactive substances activities at the nuclear site. This includes permission to discharge gaseous radioactive wastes to the atmosphere and liquid radioactive wastes to the Rivacre Brook either directly or by transfer to UUK. The sites are 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).

The Capenhurst site also discharge treated sewage waste to the Rivacre Brook via the outfall.

4.2. Survey objectives

The Centre for Environment, Fisheries & Aquaculture Science (Cefas) undertook the Capenhurst 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 UUK nuclear site.

Specifically, investigations were conducted into the following:

- The consumption of food from the aquatic survey area
- Activities and occupancy over aquatic substrates
- The handling of fishing gear and sediment
- Activities and occupancy in and on water
- 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 UUK Capenhurst nuclear site.

The aquatic survey area (Figure 4) covered the watercourse from the Capenhurst site outfall to its confluence with the Rivacre Brook, to where the brook meets the Mersey Estuary. This area was taken to represent the predominant area of mixing of radionuclides discharged into the river. There are various sources of the Rivacre Brook and several tributaries. The site outfall discharges into a tributary, which joins the Rivacre Brook at Ascot Drive, from a source in Capenhurst Village, which was not included in the aquatic survey area.

The terrestrial survey area (Figure 5) covered the land and waterways within 5 km of the site centre (National Grid Reference: SJ 365 745), to encompass the main areas of potential deposition from gaseous discharges.

The direct radiation survey area (Figure 6) covered the land within 1 km of the UUK nuclear licensed site boundary. 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, terrestrial and direct radiation survey areas were used in the previous habits survey conducted by Cefas in the Capenhurst area, in 2008 (Tipple and others, 2009).

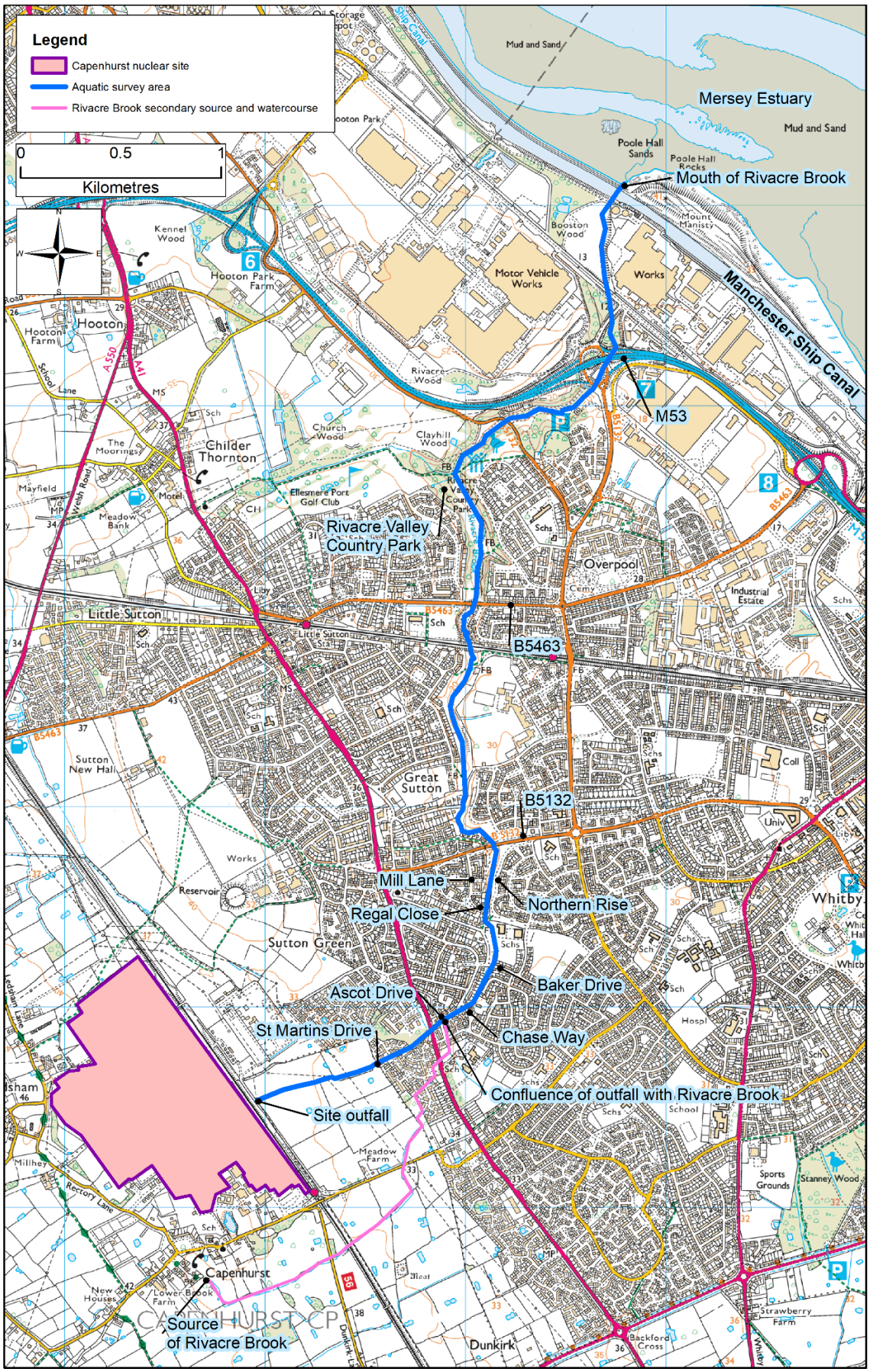

Figure 4. The Capenhurst aquatic survey area

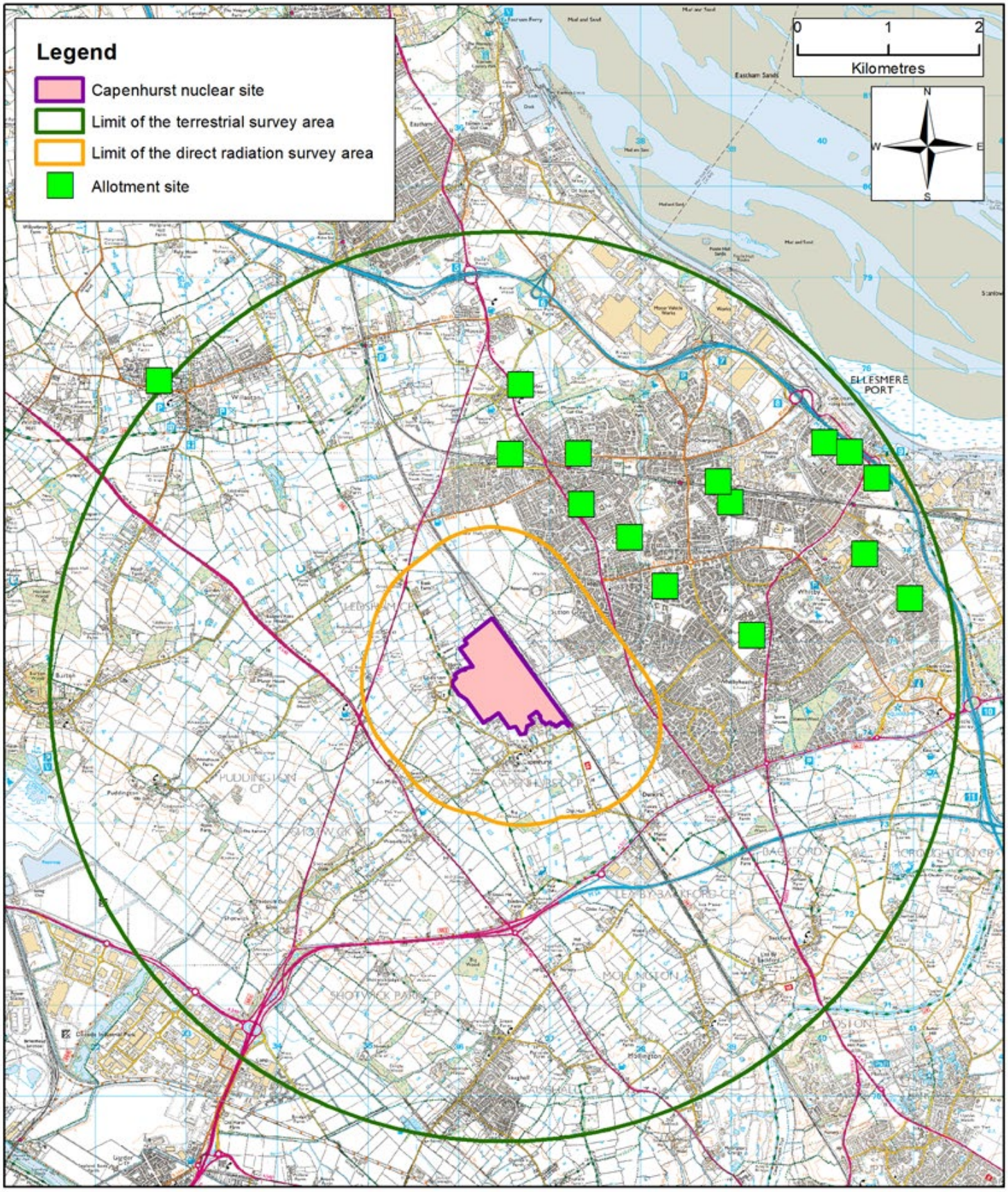

Figure 5. The Capenhurst terrestrial and direct radiation survey areas

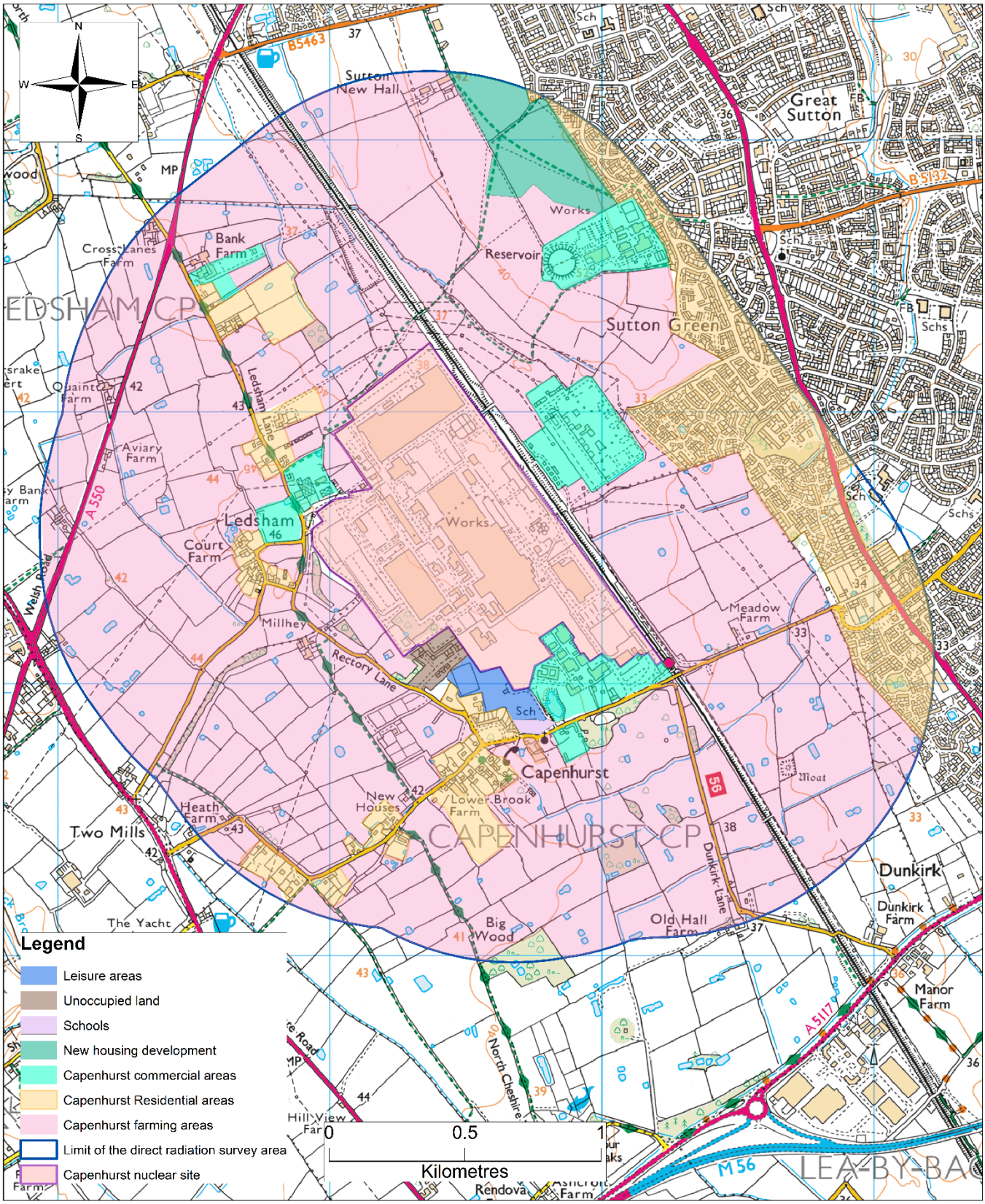

Figure 6. The Capenhurst direct radiation survey area

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 UUK nuclear site. People with local knowledge of the survey area were contacted for information relevant to the various exposure pathways. These included Cheshire West and Cheshire Council who provided information about local allotments, and the Rivacre Valley Country Park representative who provided information on the Rivacre Brook.

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 7th September to the 14th September 2021 using survey techniques consistent with the previous Capenhurst habits survey report (Tipple and others, 2009). Prior to commencing the fieldwork, a meeting was held between members of the survey team and representatives from UUK. 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 site was operating as usual.
- No changes had been made to the UUK site boundary, outfalls or locations of sources of direct radiation since 2008.
- An incinerator stack has been decomissioned and removed.
- The site do not carry out pest control, since the buildings are enclosed, and it is therefore highly unlikely that wildlife could enter controlled areas.
- Information about potential exposure pathways and activities in the area included local footpaths and activities in the direct radiation survey area.
- Treated liquid sewage waste is being discharged at the outfall.
- Changes to the area around the site included:
    - A new housing estate was being constructed on farmland.
    - UUK have purchased farmland to the west of the site.

- A property near the Technology Park was purchased by Urenco in 2018 and demolished. Another property on Rectory Lane was purchased by Urenco in 2007 and subsequently demolished.

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, people spending time on aquatic 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 aquatic substrates in the aquatic area. Due to interviews not being undertaken indoors at residences, 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 UUK Capenhurst nuclear site, 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 18. 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 people visiting the area, 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) there were approximately 65,600 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 97.5th 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. It was not necessary to estimate data for the Capenhurst survey, but Annex 4 is included in this report to maintain consistency of presentation through the series of reports.

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^{-1} for food and l y^{-1} 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^{th} percentiles), which are based on un-rounded data, to appear slightly erroneous. Consumption rates less than 0.05 kg y^{-1} are presented to two decimal places in order to avoid the value of 0.0 kg y^{-1}. 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 19 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 aquatic sediments, occupancies over the same substrate (for example: mud) are grouped together.

Data were structured into age groups because different dose coefficients (i.e. the factors which convert intakes of radioactivity into dose) can apply to different ages. The International Commission on Radiological Protection (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[a]	Age range in group used from 2010 onwards	Name of age group used prior to 2010	Age range in group used prior to 2010
Infant	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
Child	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
Adult	16-year-old and over	Adult	17-year-old and over

[a] 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, aquatic substrate and handling pathway identified in the survey. Secondly, the 97.5th 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 97.5th 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, aquatic occupancy 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 aquatic occupancy pathways, based on generic 97.5th 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).

For the direct radiation pathway, mean occupancy rates and 97.5th 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 (Figure 4) covered the watercourse from the Capenhurst site outfall to its confluence with the Rivacre Brook, to where the brook meets the Mersey Estuary. The same aquatic survey area was used in the previous survey in 2008.

The outfall discharges into a tributary of the Rivacre Brook, which cuts across farm fields until it reaches the Sutton Green housing estate, and subsequently the A41 road. At the A41, it is diverted underground and emerges at Ascot Drive where it joins the Rivacre Brook. The brook then flows under Chase Way (behind houses and their private gardens), through the residential area of Great Sutton, the Rivacre Valley Country Park, an industrial estate, under the Manchester Ship Canal and finally into the Mersey Estuary.

The aquatic survey area is described in detail from south to north.

The Capenhurst site outfall to Baker Drive

The Capenhurst site discharge outfall pit is located on the eastern boundary of the site. The outfall emerges from under a railway track and empties into a steep sided, man-made discharge pit and a tributary of the Rivacre Brook (Figure 7). The pit is located next to a private service road which runs adjacent to the east side of the site. The watercourse cuts across farm fields to St Martins Drive in the Sutton Green housing estate. Along this stretch, the watercourse was largely inaccessible due to dense vegetation along the banks. It is then diverted to an underground pipe which emerges into an easily accessible wooded area between Welshampton Close and Manor Park Drive. Here, the watercourse flows for approximately 100 metres and is then diverted under the A41 (Figure 8).

Figure 7.The Capenhurst site outfall

Figure 8. The Rivacre Brook is diverted under the A41 in a wooded area

The watercourse emerges to the north-east of the A41 at Ascot Drive (Figure 9). At this location the steep banks of the brook are lined with stones, and is accessible by a strip of grassland next to the road. The watercourse joins the Rivacre Brook, which has flowed from the south of Capenhurst Village. The brook flows under Chase Way (Figure 10) and emerges between fenced private gardens and continues until it flows under Baker Drive.

Figure 9. The brook emerges from under the A41 next to Ascot Drive

Figure 10. The brook at Ascot Drive flowing under Chase Way

Baker Drive to the Rivacre Valley Country Park

The tree-lined brook emerges between a fenced off school playing field and a grass recreational area. This area was used by local residents for dog walking. The brook has low banks and is easily accessible. Although nobody was observed on the banks of the brook, there were parts of the brook banks had worn vegetation and exposed sediment. The brook is approximately 0.5 metres deep here and it is possible this area could be used for paddling. The brook then flows under Regal Close and runs through directly infront of some houses on this street. The brook continues into an open grassy area that passes by Northern Rise (Figure 11). Here, the banks of the brook are inaccessible as they were overgrown with vegetation.

Figure 11. The grassy area running next to Northern Rise

After passing under the B5132 road, the brook flows through an area of woodland. Here the brook was difficult to access due to overgrown nettles and brambles. The brook continues under Mill Lane and enters into a grassy recreational strip of land. The brook here was also overgrown with vegetation and difficult to access. This area was popular with local residents and there was a BMX track which was well used. The brook then enters into a tunnel under the railway tracks (Figure 12) and emerges into another wooded area. Here the brook was inaccessible because it was lined with fencing. The brook then flows under the B5463 and into the Rivacre Valley Country Park.

Figure 12. The brook flowing under the railway line

Rivacre Valley Country Park to the Mersey Estuary

The brook flows through the Rivacre Valley Country Park which is a Local Nature Reserve. The park is located nearby to residential areas and is popular with walkers and dog walkers. The park also has a large car park. A footpath runs alongside the brook on both sides and there are several footbridges which cross the brook at regular intervals. The brook was easily accessible, particularly around the footbridges and on patches of low lying sand, stones and mud next to the brook (Figure 13) where aquatic gamma readings were taken. During the survey period, the brook was shallow at the country park. One family was identified paddling in the brook at the country park, and an individual spent a small amount of time collecting debris from the brook.

Figure 13. The brook passing under a road in the Rivacre Valley Country Park

From the country park, the brook flows under the M53 into an industrial area. Access to this area was restricted with fencing and a locked gate. After passing under another road, the brook enters another restricted area formerly used as a landfill site. After passing under the Manchester Ship Canal, the brook discharges into the Mersey Estuary.

6.2. Commercial fisheries

The brook was narrow and shallow and commercially viable species were not present in the area. No commercial fisheries were identified during the survey period.

6.3. Angling

Due to the nature of the brook, it was considered highly unlikely that anglers would fish in this area. No anglers were observed fishing in the aquatic survey area.

6.4. Wildfowling

There were no areas in the aquatic survey area were suitable for wildfowling.

6.5. Food consumption data

It was considered highly unlikely that there were commonly eaten species inhabiting the aquatic area. The consumption of aquatic foods originating from the Rivacre Brook was not identified at the time of the survey.

6.6. Occupancy over aquatic substrates

Occupancy rates over aquatic substrates for adults are presented in Table 20 and for children in Table 21. No infants were identified undertaking activities over aquatic substrates. 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 aquatic substrates

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

Table 2. Summary of adults' aquatic substrate occupancy rates

Aquatic substrate	Number of observations	Number of people in the high-rate group	Maximum of the high-rate group (h y^{-1})	Mean of the high-rate group (h y^{-1})	97.5th percentile (h y^{-1})
Mud, sand and stones	2	2	2	2	2

The activities undertaken by people in the adult high-rate groups for occupancy over the aquatic substrate were:

- For mud, sand and stones: collecting debris and playing near the Rivacre Brook in the country park

Children's and infants' aquatic substrate occupancy rates

Table 3 presents a summary of the children's occupancy rates over aquatic substrates in the aquatic survey area. The table includes the mean occupancy rates for the high-rate groups and the observed 97.5th percentile rates.

The activities undertaken by people in the child high-rate groups for occupancy over the aquatic substrate were:

- For mud, sand and stones: playing near the Rivacre Brook in the country park

No infants were identified undertaking activities in the aquatic survey area.

Table 3. Summary of children's aquatic substrate occupancy rates

Aquatic substrate	Number of observations	Number of people in the high-rate group	Maximum of the high-rate group (h y^{-1})	Mean of the high-rate group (h y^{-1})	97.5th percentile (h y^{-1})
Mud, sand and stones	2	2	1	1	1

6.7. Gamma dose rate measurements

Gamma dose rate measurements were taken over two aquatic substrates. All measurements were taken at a height of 1 metre above the substrate. The results are presented in Table 22 and are summarised in Table 4.

Table 4. Summary of gamma dose rate measurements taken over aquatic substrates

Aquatic substrate	Number of measurements taken	Minimum gamma dose rate at 1 metre[a] (µGy h^{-1})	Maximum gamma dose rate at 1 metre[a] (µGy h^{-1})
Mud, sand and stones	3	0.073	0.080
Mud and sand	2	0.072	0.078

Notes

[a] 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^{-1} over sandy substrates, 0.07 μGy h^{-1} over mud and over salt marsh, and 0.06 μGy h^{-1} 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 aquatic areas.

No handling of sediments or fishing gear was identified during the survey.

6.9. Water based activities

Occupancy rates taking place in or on water for adults are presented in Table 23 and for children in Table 24. 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'.

One family including two children spent a small amount of time (1 h y^{-1} paddling in the brook in the Rivacre Valley Country Park. One individual also spent a small amount of time (2 h y^{-1}) in the brook collecting debris in the Rivacre Valley Country Park.

7. Terrestrial radiation pathways

7.1. Terrestrial survey area

The terrestrial survey area (Figure 5) covered the land within 5 km of the site centre (National Grid Reference: SJ 365 745).

The town of Ellesmere Port occupied a large area of the north-eastern sector of the terrestrial survey area. Several villages were located elsewhere within the terrestrial survey area including: Mollington, Saughall, Capenhurst, Ledsham, Burton, Willaston, Hooton and Childer Thornton. The remainder of the terrestrial survey area was predominantly agricultural land.

Interviews were conducted at 15 working farms in the Capenhurst terrestrial survey area. Of these farms they produced:

- Cows' milk
- Dairy followers (young dairy cattle intended to replace older dairy cows)
- Beef cattle
- Pigs
- Lambs
- Arable crops

One market garden produced a range of fruit and vegetables.

The production of cabbage, squash, beetroot, potatoes, strawberries, watercress, rocket and edible flowers for human consumption was identified. Grass (for silage), wheat, barley, peas and maize were produced for animal feed. Wheat, barley and rapeseed oil were produced for the biofuel industry. Farmers/market gardeners and their families were consuming milk, beef, lamb, pork, potatoes, watercress, rocket, beetroot, squash and strawberries produced commercially on their own farm/market garden. One smallholding was self-sufficient in fruit and vegetables and also reared their own sheep, geese and ducks for their own consumption.

A total of 13 allotment sites were identified within the terrestrial survey area. Interviews were undertaken at four of the main allotment sites containing a total of approximately 100 lots; the other allotment sites were small in size or not well used. Many varieties of fruit and vegetables were grown on these plots and two beehives were located at one allotment site. A few houses within 5 km of the site centre were identified consuming chicken eggs, duck eggs, fruits and vegetables from their gardens.

Six beekeepers were identified with a total of 23 hives in the survey area. Nine hives were located to the south of the site, three hives to the west of the site, four hives to the north of the site, one hive to the east of the site, and six hives were located to the south-east of the site. The average production of honey per hive ranged from 1 kg y^{-1} to 23 kg y^{-1}. The honey was consumed by the apiarist's families and friends or was sold to the public.

Wild foods that were collected from within the survey area and consumed included blackberries, mushrooms, damsons and sloes. Game shooting for pheasant and mallard was identified as taking place within the 5 km terrestrial survey area with pheasant and

mallard being consumed by the farming families. One coarse fishing lake was located within the terrestrial area, but the consumption of freshwater fish was not identified.

Livestock were identified drinking mains water and some had access to water from a borehole. There was no human consumption of groundwater 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 Mold and Preston
- Sheep were sold at a livestock market in Mold and to an abattoir
- Dairy followers were sold at a livestock market near Chester
- Sheep were sold for breeding stock throughout the UK
- Pigs were sold for breeding stock throughout the UK
- Milk was sold to national dairy distributors. Milk was also processed into ice-cream and sold within the survey area
- Wheat, barley and rapeseed oil were sold to agencies for biofuel production
- Potatoes were sold to the crisp industry
- Produce from the market garden was sold directly to restaurants, independent greengrocers and secondary wholesalers.
- Wheat was sold as animal feed to a grain merchant
- Honey was sold to the public, sold privately and given away to friends and family.

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

The potential transfer of contamination off-site by wildlife was investigated as radionuclides could enter the food chain or contaminate the environment through this pathway. The site did not undertake any routine wildlife 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 in Table 25 to Table 39 for adults and Table 40 to

Table 54 for children and infants. The mean consumption rates for the high-rate groups and the observed 97.5th 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 55.

Adults' consumption rates

Consumption of locally produced foods was identified in the following 15 food groups: green vegetables; other vegetables; root vegetables; potato; domestic fruit; milk; cattle meat; pig meat; sheep meat; poultry; eggs; wild/free foods; honey; wild fungi; freshwater plants. No consumption was identified in the following food groups: rabbits/hares; venison; freshwater fish.

Table 5 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 97.5th percentile rates. For comparison, the table also includes mean consumption rates and 97.5th percentile consumption rates based on national data, which are referred to as 'generic' data in this report.

Table 5. 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^{-1} or l y^{-1})	Observed minimum for the high-rate group (kg y^{-1} or l y^{-1})	Observed mean for the high-rate group (kg y^{-1} or l y^{-1})	Observed 97.5th percentile (kg y^{-1} or l y^{-1})	Generic mean * ((kg y^{-1} or l y^{-1})	Generic 97.5th percentile* ((kg y^{-1} or l y^{-1})
Green vegetables	82	7	59.9	36.6	49.0	50.0	15.0	45.0
Other vegetables	86	13	52.1	21.3	35.3	50.6	20.0	50.0
Root vegetables	58	13	33.0	11.0	22.0	33.0	10.0	40.0
Potato	58	10	100.0	35.0	57.7	81.8	50.0	120.0
Domestic fruit	59	20	20.0	7.3	10.8	20.0	20.0	75.0
Milk	10	10	207.3	69.5	119.6	207.3	95.0	240.0
Cattle meat	12	11	47.3	46.9	47.3	47.3	15.0	45.0
Pig meat	5	5	50.6	40.1	46.4	50.6	15.0	40.0
Sheep meat	10	5	42.8	22.6	30.7	42.8	8.0	25.0
Poultry	6	2	11.5	11.5	11.5	11.5	10.0	30.0
Eggs	45	27	25.0	8.9	15.3	25.0	8.5	25.0
Wild/free foods	54	22	4.5	2.5	3.3	4.5	7.0	25.0
Honey	10	6	3.3	1.4	2.5	3.3	2.5	9.5
Wild fungi	13	3	5.0	5.0	5.0	5.0	3.0	10.0
Freshwater plants	4	2	10.9	10.9	10.9	10.9	Not determined	Not determined

(*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 97.5th percentile consumption rate for green vegetables, cattle meat, pig meat and sheep meat. Eleven 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, potatoes, milk, cattle meat, pig meat, sheep meat, poultry, eggs and wild fungi. Five of the observed 97.5th percentile consumption rates exceeded the generic 97.5th percentile consumption rates, which were for green vegetables, other vegetables, cattle meat, pig meat and sheep meat. No consumption was identified in the following food groups: rabbits/hares; venison; freshwater fish.

Children's and infants' consumption rates

Sixteen individuals in the child age group and three individuals in the infant age group were identified consuming foods from the terrestrial survey area.

Table 6 presents a summary of children's consumption rates. The table includes the mean consumption rates for the high-rate groups and the observed 97.5th percentile rates. No generic data have been determined for the child group. In the child age group, no consumption of foods from the following food groups was identified: milk; cattle meat; pig meat; sheep meat; poultry; rabbits/hares; venison; freshwater fish; freshwater plants.

Table 6. Summary of children's (6-15 years old) 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^{-1})	Observed minimum for the high-rate group (Kg y^{-1})	Observed mean for the high-rate group (Kg y^{-1})	Observed 97.5th percentile (Kg y^{-1})
Green vegetables	7	4	3.9	3.9	3.9	3.9
Other vegetables	7	4	12.2	5.1	8.7	12.2
Root vegetables	5	2	22.9	22.9	22.9	22.9
Potato	9	4	20.0	19.9	20.0	20.0
Domestic fruit	7	4	3.6	2.2	2.9	3.6
Eggs	9	5	25.0	8.9	16.4	25.0
Wild/free foods	6	6	0.6	0.4	0.5	0.6
Honey	1	1	0.9	0.9	0.9	Not applicable
Wild fungi	2	2	0.1	0.1	0.1	0.1

Table 7 presents a summary of infants' consumption rates. The table includes the mean consumption rates for the high-rate groups and the observed 97.5th percentile rates. In the infant age group, no consumption of foods from the following food groups was identified: milk; cattle meat; pig meat; sheep meat; poultry; eggs; rabbits/hares; honey; wild fungi; venison; freshwater fish; freshwater plants.

Table 7. Summary of infants' (0-5 years old) 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^{-1})	Observed minimum for the high-rate group (Kg y^{-1})	Observed mean for the high-rate group (Kg y^{-1})	Observed 97.5th percentile (Kg y^{-1})
Green vegetables	1	1	1.9	1.9	1.9	Not applicable
Other vegetables	1	1	6.1	6.1	6.1	Not applicable
Root vegetables	1	1	11.4	11.4	11.4	Not applicable
Potato	1	1	10.0	10.0	10.0	Not applicable
Domestic fruit	2	2	1.8	1.8	1.8	1.8
Wild/free foods	1	1	0.2	0.2	0.2	Not applicable

8. Direct radiation pathways

8.1. Direct radiation survey area

The direct radiation survey area (Figure 6) covered the land within 1 km of the Capenhurst nuclear licensed site boundary. 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 Capenhurst nuclear licensed site boundary. 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 area within 1 km of the nuclear licensed site was predominantly farmland with residential properties mostly located within the village of Capenhurst, the hamlet of Ledsham, and Sutton Green housing estate on the outskirts of Ellesmere Port. A railway line bisected the survey area from north-west to south-east and passed along the eastern boundary of the site. To the north and east of the railway line, farmland separated the site from the densely populated Sutton Green housing estate. An electricity substation and water works were also located within this farmland. To the south of the site was the village of Capenhurst where both a school and nursing home were located. To the west of the site was the hamlet of Ledsham. A new housing development was being built to the north of the nuclear site. This land was farmed during the previous habits survey. Part of the development was complete at the time of the survey and many of these houses were occupied.

8.2. Residential activities

The main residential areas were Capenhurst, Ledsham and Sutton Green. The village of Capenhurst was located to the south of the site and had approximately 50 residential properties and a nursing home. Since the last habits survey in 2008, UUK have purchased and demolished two houses in Capenhurst. The hamlet of Ledsham was located to the west of the site and had approximately 25 residential properties. The densely populated housing area of Sutton Green was located to the east of the site. Interviews were conducted at 40 residences, one of which was a farm, and one was a nursing home with full time residents. Interviews were undertaken at properties in all three zones, 11 of which were within the 0 – 0.25 km zone, 15 were in the >0.25 – 0.5 km zone and 14 were in the >0.5 – 1 km zone. Many residential interviewees were continuing to work from home due to the COVID-19 pandemic, and therefore had an increased occupancy time within the direct radiation survey area compared to previous years. There is an area of unoccupied land located to the south of the site where UUK owned properties have been demolished. At the time of the last habits survey in 2008, these properties were vacant and boarded up.

8.3. Leisure activities

There were few leisure activities taking place around the Capenhurst site. Dog walking, walking and jogging were undertaken by local residents in the area at the time of the survey. There was a footpath from Ledsham that followed the north perimeter fence for approximately 300 metres, went over a railway bridge and then cut across farm fields before splitting off to the Sutton Green housing estate and the newly built housing estate. The footpath was very overgrown at the Ledsham section. There was one well used footpath near the Sutton Green housing estate. Two areas were identified for dog walking, an old playing field at a demolished school on Berry Drive and an area of farmland at the end of Gerrard Avenue adjacent to Hawthorn Court. Capenhurst sports and social club is located to the south of the site and has grass cricket, football and rugby pitches.

8.4. Commercial activities

A small number of businesses were spread throughout the survey area. In the 0 – 0.25 km zone, a nursing home was located to the south of the site in Capenhurst Village. A garden centre was located in Ledsham. An unmanned train station is located to the west of Capenhurst Village in the 0 – 0.25 km zone. In the >0.5 – 1.0 km zone there was a waste water treatment plant at Sutton Hall which was operated by United Utilities. Capenhurst Technology Park, which is owned by UUK, is located adjacent to the south of the nuclear site and has three other companies present on the park.

8.5. Educational activities

A small primary school and pre-school are located in Capenhurst Village in the 0 – 0.25 km zone. The primary school educated pupils aged between five and 11. We were unable to collect data from the pre-school. The West Cheshire College was no longer located on the Capenhurst Technology Park in the 0 – 0.25 km zone.

8.6. Occupancy rates

Table 56 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 57. A summary of occupancy rates in the direct radiation survey area is presented in Table 8. 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 8. Summary of direct radiation occupancy rates

Zone	Number of observations	Highest indoor occupancy (h y^{-1})	Highest outdoor occupancy (h y^{-1})	Highest total occupancy (h y^{-1})
0 - 0.25 km	107	8760	2924	8760
>0.25 - 0.5 km	54	8169	4017	8708
>0.5 - 1.0 km	43	8604	4292	8712

0 - 0.25 km from the nuclear licensed site boundary

Occupancy data for 107 individuals in the 0 - 0.25 km zone were included in the analysis. The observations were for 37 residents, 56 employees and 14 primary school pupils. The highest indoor and total occupancy rates were for nursing home residents. The highest outdoor occupancy rate was shared by four residents.

>0.25 - 0.5 km from the nuclear licensed site boundary

Occupancy data for 54 individuals in the >0.25 - 0.5 km zone were included in the analysis. The observations were for 53 residents and one person dog walking. The highest indoor, outdoor and total occupancy rates were for residents. The highest indoor occupancy rate was for an elderly resident. The highest outdoor occupancy rate was for a resident. The highest total occupancy rate was shared by an elderly resident and the same resident with the highest outdoor occupancy rate.

>0.5 - 1.0 km from the nuclear licensed site boundary

Occupancy data for 43 people in the >0.5 - 1.0 km zone were included in the analysis. The observations were for 30 residents and 13 employees. The highest indoor, outdoor and total occupancy rates were for residents. The highest indoor occupancy rate was for an

elderly resident. The highest outdoor occupancy rate was for a resident. The highest total occupancy rate was for another elderly resident.

8.7. Gamma dose rate measurements

Gamma dose rates were measured outdoors at most properties where interviews were conducted in the Capenhurst direct radiation survey area. 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 59 and are summarised in Table 9.

Table 9. Summary of gamma dose rate measurements taken outdoors at properties in the direct radiation survey area

Substrate	Number of measurements taken	Minimum gamma dose rate at 1 metre (µGy h^{-1})	Maximum gamma dose rate at 1 metre (µGy h^{-1})
Outdoor measurements[a]			
Concrete	5	0.075	0.108
Stones	3	0.078	0.099
Grass	21	0.078	0.097
Background measurements			
Grass	4	0.065	0.083

Notes

[a] These measurements have not been adjusted for background dose rates.

Of the 29 measurements taken outdoors at properties, 20 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 90 fixed monitors and 100 mobile monitors distributed throughout the UK (www.gov.uk). The nearest RIMNET station to Capenhurst was at Rhyl, which was approximately 35 km away. The ambient (i.e. background) gamma dose rates at Rhyl from July to September, which is the most recent data at the time of reporting, ranged from 0.08 µGy h^{-1} to 0.13 µGy h^{-1}. All the outdoor readings taken during the Capenhurst 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 60. Each of the 10 combinations shown in Table 60 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 60 because they have fewer pathways and a dose assessment for them would be adequately covered by one of the 10 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 Capenhurst 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); 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 Capenhurst in 2008. The aquatic, terrestrial and direct radiation survey areas in the 2021 survey were the same as those in the 2008 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 2008 survey results. The main reduction in interviewees was for a small number of businesses in the direct radiation area.

10.1. Aquatic survey area

Activities observed in the aquatic survey area in 2021 were broadly similar to those identified in 2008. In both years the brook was shallow. Due to the nature of the brook, it was considered highly unlikely that fishing would take place in this area. No anglers were observed fishing in the aquatic survey area in either survey.

No interviewees were consuming foods from the aquatic survey area in either 2008 or 2021.

In 2008, aquatic occupancy for adults was recorded over sand and stones. In 2021, activities were recorded over mud, sand and stones. The substrate varied throughout the survey area.

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

- In 2008: dog walking.
- In 2021: collecting debris from the brook and playing.

A comparison between the 2008 and 2021 data for adult occupancy over aquatic substrates is shown in Table 10.

Table 10. Comparison between 2008 and 2021 aquatic occupancy rates for adults

	2008			2021		
Aquatic substrate	**Number in high-rate group**	**Maximum occupancy or handling rate (h y^{-1})**	**Mean occupancy or handling rate for the high-rate group (h y^{-1})**	**Number in high-rate group**	**Maximum occupancy or handling rate (h y^{-1})**	**Mean occupancy or handling rate for the high-rate group (h y^{-1})**
Sand and stones	1	1	Not applicable	Not identified		
Mud, sand and stones	Not identified			2	2	2

The aquatic substrate in 2021 where people were spending time was mud, sand and stones. In 2008 the aquatic substrate was sand and stones. This change may be due to mud being eroded from the banks during severe weather conditions.

The activities taking place in the aquatic survey area were only found at the Rivacre Valley Country Park in both 2021 and 2008. Dog walking on the brook banks was identified in 2008 but not in 2021. The newly identified activities found in 2021 were collecting debris from the brook and playing.

10.2. Terrestrial survey area

Activities in the terrestrial survey area in 2021 were broadly similar to those in 2008. Additionally in 2021 the production of pigs was identified. The principal types of farm produce within the area continued to be a mix of cows' milk, beef cattle and dairy followers (young dairy cattle intended to replace older dairy cows). The growing of fruit and vegetables in gardens, smallholdings and on allotment sites, beekeeping, shooting on farmland and the collection of wild foods were identified in both surveys. Game shooting on farmland was identified in 2008 for rabbits, pheasant, pigeon, goose and duck but this

had changed to pheasant and mallard in 2021. Several new beekeepers were identified in 2021 who gave honey to their family and friends.

The mean consumption rates for the adult high-rate groups for terrestrial food groups from the 2008 and 2021 surveys are shown in Table 11.

Table 11. Comparison between 2008 and 2021 mean consumption rates for the adult high-rate groups for terrestrial food groups (kg y^{-1} and l y^{-1})

Food group	2008	2021
Green vegetables	33.0	49.0
Other vegetables	32.8	35.3
Root vegetables	33.7	22.0
Potato	46.6	57.7
Domestic fruit	45.0	10.8
Milk	272.4	119.6
Cattle meat	14.3	47.3
Pig meat	Not identified	46.4
Sheep meat	2.9	30.7
Poultry	9.9	11.5
Eggs	15.0	15.3
Wild/free foods	2.3	3.3
Rabbits/hares	2.3	Not identified
Honey	5.4	2.5
Wild fungi	1.6	5.0
Freshwater plants	0.9	10.9

In 2021, compared to 2008, the mean consumption rates for the adult high-rate group increased in the following food groups: green vegetables; other vegetables; potato; cattle meat; sheep meat; poultry; eggs; wild/free foods; wild fungi; freshwater plants. In 2021 the mean consumption rates for the adult high-rate groups decreased in the following food groups: root vegetables; domestic fruit; milk; honey. The consumption of rabbits/hares was identified in 2008 but not in 2021. Conversely, the consumption of pig meat was identified in 2021, but not in 2008. The most significant increases in the consumption rates were for cattle meat, sheep meat and freshwater plants, whilst the most significant decreases were for milk and domestic fruit.

There were reports from beekeepers that honey production had decreased due to poor weather conditions. A newly identified smallholding reared their own sheep, geese and ducks for meat and kept chickens for their eggs which contributed to the increase in these food types. No specific reasons were identified for the other changes in consumption rates.

There was no human consumption of groundwater identified in both 2008 and 2021. In both surveys livestock were identified drinking mains water and some had access to water from a borehole.

10.3. Direct radiation survey area

Activities identified in the direct radiation survey area in 2008 and 2021 were similar and included people residing, working and undertaking recreational activities. Two houses in the direct radiation survey area had been purchased by the Capenhurst site and subsequently demolished. A comparison between the 2008 and 2021 direct radiation occupancy rates for all age groups combined, by zone, is presented in Table 12.

Table 12. Comparison between 2008 and 2021 direct radiation occupancy rates (h y^{-1}) for all age groups combined

	2008	2021
0 – 0.25 km zone		
Highest indoor occupancy	8760	8760
Highest outdoor occupancy	3640	2924
Highest total occupancy	8760	8760
>0.25 – 0.5 km zone		
Highest indoor occupancy	8110	8169
Highest outdoor occupancy	3902	4017
Highest total occupancy	8696	8708
>0.5 – 1.0 km zone		
Highest indoor occupancy	7856	8604
Highest outdoor occupancy	1969	4292
Highest total occupancy	8337	8712

The occupancy rates in the direct radiation survey area were similar in 2008 and 2021. The highest indoor, outdoor and total occupancy rates in all three zones in 2008 and 2021 were for residents. Nursing home residents had the highest indoor and total occupancy rates in both 2008. There was a large increase in the highest outdoor occupancy rate in the >0.5 – 1.0 km zone in 2021 which was due to a newly identified resident. The West Cheshire College which was located on the Capenhurst Technology Park in the 0 – 0.25 km zone in 2008 was no longer present in 2021.

In the Capenhurst direct radiation survey area, three sets of gamma dose measurements taken in 2021 can be compared with those taken at the same properties in 2008. These data are shown in Table 13.

Table 13. Comparison between 2008 and 2021 outdoor gamma dose rates (µGy h^{-1})

Location	2008	2021
Residence 3	0.083	0.078
Residence 16	0.077	0.089
Residence 18	0.083	0.090

Notes
These measurements have not been adjusted for background dose rates.
The locations correspond to those in Table 58.

There was no consistent pattern in the differences in the gamma dose rates between 2008 and 2021. Two of the outdoor readings were higher in 2021 than in 2008, and one was lower.

11. Main findings

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

- Discharges of liquid radioactive waste into the Rivacre Brook
- 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, people spending time on aquatic 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 319 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 2008 survey results. The main reduction in interviewees was for a small number of businesses in the direct radiation area.

11.1. Aquatic survey area

The consumption of aquatic foods originating from the Rivacre Brook was not identified at the time of the survey.

The mean consumption rates for the adult high-rate groups (as defined in Section 5.4) for the separate aquatic consumption pathways for foods potentially affected by liquid discharges were:

The mean occupancy rates for the adult high-rate groups over aquatic substrates were:

- 2 h y^{-1} for mud, sand and stones

Individuals in the child age group were recorded undertaking activities in the aquatic survey area.

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:

- 49 kg y^{-1} for green vegetables
- 35 kg y^{-1} for other vegetables
- 22 kg y^{-1} for root vegetables
- 58 kg y^{-1} for potato
- 11 kg y^{-1} for domestic fruit
- 120 l y^{-1} for milk
- 47 kg y^{-1} for cattle meat
- 46 kg y-1 for pig meat
- 31 kg y^{-1} for sheep meat
- 12 kg y^{-1} for poultry
- 15 kg y^{-1} for eggs
- 3.3 kg y^{-1} for wild/free foods
- 2.5 kg y^{-1} for honey
- 5.0 kg y^{-1} for wild fungi
- 11 kg y^{-1} for freshwater plants

The consumption of rabbits/hares, venison and freshwater fish was not identified from the survey area. 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 both the 2008 and 2021 surveys. In both years farmers supplied their livestock with mains water for drinking and some had access to water from a borehole.

11.3. Direct radiation survey area

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

0 - 0.25 km zone

- 8760 h y^{-1} for the indoor occupancy rate
- 2900 h y^{-1} for the outdoor occupancy rate
- 8760 h y^{-1} for the total occupancy rate

>0.25 - 0.5 km zone

- 8200 h y^{-1} for the indoor occupancy rate
- 4000 h y^{-1} for the outdoor occupancy rate
- 8700 h y^{-1} for the total occupancy rate

>0.5 - 1.0 km zone

- 8600 h y^{-1} for the indoor occupancy rate
- 4300 h y^{-1} for the outdoor occupancy rate
- 8700 h y^{-1} for the total occupancy rate

The highest indoor, outdoor and total occupancy rates in the 0 - 0.25 km zone, the 0.25 - 0.5 km zone and the >0.5 - 1.0 km zone were for residents.

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 Capenhurst

The 2020 monitoring programmes relevant to the Capenhurst area included the samples and measurements listed in Table 14, Table 15 and Table 16. 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 Capenhurst habits survey.

Table 14. Aquatic food and environmental samples used in the RIFE 26 monitoring programme

Sample	Location
Dab	Liverpool Bay
Shrimps	Wirral
Mussels	Liverpool Bay
Cockles	Dee Estuary
Sediment	Rivacre Brook
Sediment	Rivacre Brook (1.5km downstream)
Sediment	Rossmore (3.1km downstream)
Sediment	Rivacre Brook (4.3km downstream)
Freshwater	Rivacre Brook
Freshwater	Rivacre Brook (1.5km downstream)
Freshwater	Rossmore (3.1km downstream)
Freshwater	Rivacre Brook (4.3km downstream)

Table 15. Gamma dose rate measurements over aquatic sediments used in the RIFE 26 monitoring programme

Location	Ground type
East of railway station	Grass and herbage
Dunkirk Lane	Grass and herbage
Near Lower Brook Farm	Grass
Rivacre Brook Plant Outlet	Grass and herbage
Rivacre Brook (1.5 km downstream)	Grass
Rossmore Road West (3.1 km downstream)	Grass and herbage
Rivacre Brook (4.3 km downstream)	Pebbles
Rivacre Brook (4.3 km downstream)	Sand and stones
North of Ledsham	Grass and mud

Table 16. Terrestrial samples used in the RIFE 26 monitoring programme

Food group or environmental sample
Milk
Potato
Silage
Grass/herbage
Soil

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

Food Standards Agency monitoring

The following foods presented in Table 17 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 17. Foods considered for potentially selecting samples for the FSA monitoring programme

Food	Food Group
Broccoli	Green vegetables
Tomato	Other vegetables
Leek	Root vegetables
Potato	Potato
Apple/Pear	Domestic fruit
Cows' milk	Milk
Beef	Cattle meat
Pork	Pig meat
Lamb	Sheep meat
Duck	Poultry
Chicken egg	Egg
Blackberry	Wild/free foods
Honey	Honey
Mushroom	Wild fungi
Watercress	Freshwater plants

Environment Agency monitoring

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

13. Acknowledgements

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Table 18. Survey coverage

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
SUMMARY OF ALL PATHWAYS					
All potential interviewees in the Capenhurst 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)	64260[a]	114[b]	0.2%	The survey targeted individuals who were potentially the most exposed, mostly producers of local foods such as farmers and smallholders.
	Number of people resident in the direct radiation survey area (See (C) DIRECT RADIATION PATHWAYS)	1350	116[b]	8.7%	Interviews were conducted at 40 residences. This includes 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	88[b]	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	1[b]	U	
	Total for aquatic, terrestrial and direct radiation survey areas	U	319[b]	U	
(A) AQUATIC PATHWAYS					
People using aquatic substrates (for example: dog walkers, people playing, etc.)	Number of people undertaking activities on the brook bank in the aquatic survey area	U	4	U	

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
People undertaking activities in or on water (for example playing in the brook)	Number of people undertaking activities in or on water in the aquatic survey area	U	4	U	
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	
(B) TERRESTRIAL PATHWAYS					
Farmers and smallholders	Number of farmers, smallholders and their family members consuming food from the terrestrial survey area	150	58	39%	Interviews were conducted at 15 farms, one market garden and one smallholding out of an estimated 33 farms in the terrestrial survey area.
Gardeners	Number of gardeners and their family members consuming food from the terrestrial survey area	U	91	U	Including allotment holders.
Honey consumers	Number of people consuming honey produced in the survey area	U	10	U	Six beekeepers were identified who kept hives in the survey area.
(C) DIRECT RADIATION PATHWAYS					
Residents	Number of residents in the survey area	1350	116	9%	Interviews were conducted at 40 residences out of an estimated total of 450 permanent residences.
Employees	Number of people working in the survey area	U	69	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	19	U	Including school children.

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
BREAKDOWN OF AGE GROUPS FOR PEOPLE RESIDENT IN THE 5 km TERRESTRIAL SURVEY AREA					
	Adult	16-year-old and over	53218[a]	295	
	Child	6-year-old to 15-year-old	7845[a]	38	
	Infant	0 to 5-year-old	4547[a]	9	

Notes

[a] Estimate of the number of people resident in the 5 km terrestrial survey area based on data from www.ons.gov.uk.

[b] 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 shore angling and consumes the catch.

U – Unknown

Table 19. Typical food groups used in habits surveys

Food group	Examples of foods within the group
Green vegetables	Asparagus, broccoli, Brussels sprouts, cabbage, calabrese, cauliflower, chard, courgette, cucumber, gherkin, globe artichoke, herbs, kale, leaf beet, lettuce, marrow, spinach
Other vegetables	Aubergine, broad bean, chili pepper, French bean, kohl rabi, mangetout, pea, pepper, pumpkin, runner bean, sweetcorn, tomato
Root vegetables	Beetroot, carrot, celeriac, celery, chicory, fennel, garlic, Jerusalem artichoke, leek, onion, parsnip, radish, shallot, spring onion, swede, turnip
Potato	Potato
Domestic fruit	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
Milk	Cows' milk, cream, goats' milk, yoghurt
Cattle meat[a]	Beef
Pig meat[a]	Pork
Sheep meat[a]	Lamb, mutton
Poultry[b]	Chicken, duck, goose, grouse, guinea fowl, partridge, pheasant, pigeon, turkey, woodcock
Eggs	Chicken egg, duck egg, goose egg
Wild/free foods	Blackberry, chestnut, crab apple, damson, dandelion root, elderberry, nettle, rowanberry, sloe
Honey	Honey
Wild fungi	Mushrooms, other edible fungi
Rabbits/hares	Hare, rabbit
Venison[a]	Venison
Fish (sea)	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, squid[c]
Fish (freshwater)	Brown trout, eel (river), perch, pike, rainbow trout, salmon (river)
Crustaceans	Brown crab, common lobster, crawfish, Nephrops, prawn, shrimp, spider crab, squat lobster, velvet swimming crab
Molluscs	Cockles, limpets, mussels, oysters, razor clam, scallops, whelks, winkles
Wildfowl[b]	Canada goose, greylag goose, mallard, pink-footed goose, pintail, shoveler, teal, wigeon

Notes

[a] Including offal

[b] Domesticated ducks and geese are classified as poultry. Wild ducks and geese are classified as wildfowl.

[c] Although squid and cuttlefish are molluscs, radiologically they are more akin to fish.

Table 20. Adults' aquatic occupancy rates in the Capenhurst aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud, sand and stones
3241/1/1	**Rivacre Valley Country Park**	**Collecting debris from brook**	**2**
3240/2/1	Rivacre Valley Country Park	Playing	1

Notes

The emboldened observation is the high-rate individual

The mean aquatic occupancy rate over mud, sand and stones for adults based on the high-rate observation is 2 h y^{-1}

The observed 97.5th percentile rate based on 2 observations is 2 h y^{-1}

Table 21. Children's aquatic occupancy rates in the Capenhurst aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud, sand and stones
3240/1/1	**Rivacre Valley Country Park**	**Collecting debris from brook**	**1**
3240/2/1	**Rivacre Valley Country Park**	**Playing**	**1**

Notes

Emboldened observations are the high-rate individuals

The mean aquatic occupancy rate over mud, sand and stones for the child age group based on 2 high-rate observations is 1 h y^{-1}

The observed 97.5th percentile rate based on 2 observations is 1 h y^{-1}

Table 22. Gamma dose rate measurements over aquatic substrates in the Capenhurst aquatic survey area (µGy h^{-1})

Location	National Grid Reference	Substrate	Gamma dose rate at 1 metre[a]
Rivacre Valley Country Park	SJ 384 779	Mud, sand and stones	0.073
Rivacre Valley Country Park	SJ 382 779	Mud, sand and stones	0.080
Rivacre Valley Country Park	SJ 379 776	Mud, sand and stones	0.077
Off Baker Drive	SJ 381 752	Mud and sand	0.072
Off Baker Drive	SJ 381 753	Mud and sand	0.078

Notes

[a] These measurements have not been adjusted for background dose rates

Table 23. Adults' occupancy rates in and on water in the Capenhurst aquatic survey area (h y^{-1})

Person ID number	Location	Activity	In water	On water
3293/1/1	**Rivacre Valley Country Park**	**Collecting debris**	**-**	**2**
3240/2/1	Rivacre Valley Country Park	Paddling	-	1

Notes

The emboldened observation is the high-rate individual

The mean aquatic occupancy rate over mud, sand and stones for adults based on the high-rate observations is 2 h y^{-1}

The observed 97.5th percentile rate based on 2 observations is 2 h y^{-1}

Table 24. Children's occupancy rates in and on water in the Capenhurst aquatic survey area (h y^{-1})

Person ID number	Age	Location	Activity	In water	On water
3240/3/1	**9**	**Rivacre Valley Country Park**	**Paddling**	**-**	**1**
3240/4/1	**11**	**Rivacre Valley Country Park**	**Paddling**	**-**	**1**

Notes

Emboldened observations are the high-rate individuals

The mean aquatic occupancy rate over mud, sand and stones for the child age group based on 2 high-rate observations is 1 h y^{-1}

The observed 97.5th percentile rate based on 2 observations is 1 h y^{-1}

Table 25. Adults' consumption rates of green vegetables from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Asparagus	Broccoli	Brussels sprout	Cabbage	Cauliflower	Chard	Courgette	Cucumber	Gherkin	Herbs	Kale	Lettuce	Marrow	Rocket	Spinach	Total
3237/1/1	**-**	**28.5**	**9.1**	**8.5**	**6.8**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**7.0**	**-**	**59.9**
3237/2/1	**-**	**28.5**	**9.1**	**8.5**	**6.8**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**7.0**	**-**	**59.9**
3127/1/1	**-**	**-**	**-**	**16.7**	**16.7**	**-**	**-**	**-**	**-**	**-**	**16.7**	**-**	**-**	**-**	**-**	**50.0**
3127/2/1	**-**	**-**	**-**	**16.7**	**16.7**	**-**	**-**	**-**	**-**	**-**	**16.7**	**-**	**-**	**-**	**-**	**50.0**
3127/3/1	**-**	**-**	**-**	**16.7**	**16.7**	**-**	**-**	**-**	**-**	**-**	**16.7**	**-**	**-**	**-**	**-**	**50.0**
3136/1/1	**5.4**	**9.5**	**2.9**	**11.6**	**7.2**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**36.6**
3136/2/1	**5.4**	**9.5**	**2.9**	**11.6**	**7.2**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**36.6**
3148/1/1	-	0.9	4.1	1.3	0.3	1.0	5.5	4.3	-	-	-	-	-	-	-	17.3
3148/2/1	-	0.9	4.1	1.3	0.3	1.0	5.5	4.3	-	-	-	-	-	-	-	17.3
3166/1/1	-	-	-	12.8	-	-	-	-	-	-	-	-	0.1	-	-	12.9
3166/2/1	-	-	-	12.8	-	-	-	-	-	-	-	-	0.1	-	-	12.9
3167/1/1	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/2/1	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/3/1	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/4/1	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/5/1	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/5/2	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/5/3	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/5/4	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/5/5	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6

Person ID number	Asparagus	Broccoli	Brussels sprout	Cabbage	Cauliflower	Chard	Courgette	Cucumber	Gherkin	Herbs	Kale	Lettuce	Marrow	Rocket	Spinach	Total
3167/5/6	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/5/7	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/5/8	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/5/9	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/5/10	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3167/5/11	1.0	-	-	-	1.8	-	0.5	-	-	-	1.5	5.3	0.5	-	-	9.6
3133/1/1	-	1.2	-	1.7	3.1	-	0.6	1.2	-	-	-	0.8	-	-	0.8	9.4
3133/2/1	-	1.2	-	1.7	3.1	-	0.6	1.2	-	-	-	0.8	-	-	0.8	9.4
3192/1/1	-	0.9	6.1	-	1.8	-	-	-	-	0.1	-	-	-	-	-	9.0
3192/2/1	-	0.9	6.1	-	1.8	-	-	-	-	0.1	-	-	-	-	-	9.0
3191/1/1	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.5
3191/2/1	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.5
3237/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	7.0	-	7.0
3237/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	7.0	-	7.0
3132/1/1	-	-	-	-	-	-	2.9	1.7	-	0.2	-	0.5	-	-	0.2	5.5
3132/2/1	-	-	-	-	-	-	2.9	1.7	-	0.2	-	0.5	-	-	0.2	5.5
3132/3/1	-	-	-	-	-	-	2.9	1.7	-	0.2	-	0.5	-	-	0.2	5.5
3132/4/1	-	-	-	-	-	-	2.9	1.7	-	0.2	-	0.5	-	-	0.2	5.5
3132/5/1	-	-	-	-	-	-	2.9	1.7	-	0.2	-	0.5	-	-	0.2	5.5
3146/1/1	-	2.5	-	2.0	-	-	-	-	-	-	-	1.0	-	-	-	5.5
3146/2/1	-	2.5	-	2.0	-	-	-	-	-	-	-	1.0	-	-	-	5.5
3146/3/1	-	2.5	-	2.0	-	-	-	-	-	-	-	1.0	-	-	-	5.5

Person ID number	Asparagus	Broccoli	Brussels sprout	Cabbage	Cauliflower	Chard	Courgette	Cucumber	Gherkin	Herbs	Kale	Lettuce	Marrow	Rocket	Spinach	Total
3137/1/1	-	2.3	-	-	-	-	-	2.3	-	-	-	0.9	-	-	-	5.4
3174/1/1	-	0.5	-	-	-	0.3	-	1.4	-	-	-	1.6	-	-	-	3.9
3174/2/1	-	0.5	-	-	-	0.3	-	1.4	-	-	-	1.6	-	-	-	3.9
3174/3/1	-	0.5	-	-	-	0.3	-	1.4	-	-	-	1.6	-	-	-	3.9
3135/1/1	-	0.8	1.0	-	0.8	-	-	0.9	0.4	-	-	-	-	-	-	3.9
3135/2/1	-	0.8	1.0	-	0.8	-	-	0.9	0.4	-	-	-	-	-	-	3.9
3083/1/1	-	-	2.3	-	-	-	-	-	-	-	-	-	-	-	-	2.3
3083/2/1	-	-	2.3	-	-	-	-	-	-	-	-	-	-	-	-	2.3
3137/2/1	-	-	-	-	-	-	-	2.3	-	-	-	-	-	-	-	2.3
3137/3/1	-	-	-	-	-	-	-	2.3	-	-	-	-	-	-	-	2.3
3187/3/1	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0
3187/4/1	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0
3140/1/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8
3140/2/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8
3140/3/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8
3140/4/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8
3140/5/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8
3140/6/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8
3140/7/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8
3140/8/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8
3140/9/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8
3140/10/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8

Person ID number	Asparagus	Broccoli	Brussels sprout	Cabbage	Cauliflower	Chard	Courgette	Cucumber	Gherkin	Herbs	Kale	Lettuce	Marrow	Rocket	Spinach	Total
3140/11/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8
3140/12/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8
3140/13/1	-	-	-	-	-	0.5	0.8	-	-	-	-	-	0.5	-	-	1.8
3082/1/1	-	0.7	-	0.9	-	-	-	-	-	-	-	-	-	-	-	1.5
3082/3/1	-	0.7	-	0.9	-	-	-	-	-	-	-	-	-	-	-	1.5
3082/4/1	-	0.7	-	0.9	-	-	-	-	-	-	-	-	-	-	-	1.5
3082/5/1	-	0.7	-	0.9	-	-	-	-	-	-	-	-	-	-	-	1.5
3082/6/1	-	0.7	-	0.9	-	-	-	-	-	-	-	-	-	-	-	1.5
3082/7/1	-	0.7	-	0.9	-	-	-	-	-	-	-	-	-	-	-	1.5
3082/8/1	-	0.7	-	0.9	-	-	-	-	-	-	-	-	-	-	-	1.5
3082/9/1	-	0.7	-	0.9	-	-	-	-	-	-	-	-	-	-	-	1.5
3082/10/1	-	0.7	-	0.9	-	-	-	-	-	-	-	-	-	-	-	1.5
3082/11/1	-	0.7	-	0.9	-	-	-	-	-	-	-	-	-	-	-	1.5
3243/1/1	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	0.3
3243/2/1	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	0.3
3105/1/1	-	-	-	-	-	-	-	-	-	0.03	-	-	-	-	-	0.03
3105/2/1	-	-	-	-	-	-	-	-	-	0.03	-	-	-	-	-	0.03
3105/3/1	-	-	-	-	-	-	-	-	-	0.03	-	-	-	-	-	0.03

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables for adults based on the 7 high-rate consumers is 49 kg y^{-1}

The observed 97.5th percentile rate based on 82 observations is 50 kg y^{-1}

Table 26. Adults' consumption rates of other vegetables from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Aubergine	Broad bean	Chili pepper	French bean	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
3106/1/1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**52.1**	**52.1**
3106/2/1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**52.1**	**52.1**
3192/1/1	**-**	**-**	**2.0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**48.6**	**50.6**
3192/2/1	**-**	**-**	**2.0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**48.6**	**50.6**
3127/1/1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**33.3**	**33.3**
3127/2/1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**33.3**	**33.3**
3127/3/1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**33.3**	**33.3**
3237/1/1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**29.5**	**29.5**
3237/2/1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**29.5**	**29.5**
3084/1/1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**26.1**	**26.1**
3084/2/1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**26.1**	**26.1**
3136/1/1	**-**	**-**	**-**	**6.9**	**5.7**	**-**	**-**	**8.7**	**-**	**-**	**-**	**21.3**
3136/2/1	**-**	**-**	**-**	**6.9**	**5.7**	**-**	**-**	**8.7**	**-**	**-**	**-**	**21.3**
3238/1/1	-	-	-	-	-	-	-	-	-	-	16.2	16.2
3135/1/1	-	-	1.8	-	-	-	8.0	-	0.4	-	2.0	12.2
3135/2/1	-	-	1.8	-	-	-	8.0	-	0.4	-	2.0	12.2
3148/1/1	-	-	0.8	0.3	-	-	-	-	0.7	-	9.0	10.7
3148/2/1	-	-	0.8	0.3	-	-	-	-	0.7	-	9.0	10.7
3167/1/1	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/2/1	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1

Person ID number	Aubergine	Broad bean	Chili pepper	French bean	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
3167/3/1	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/4/1	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/5/1	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/5/2	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/5/3	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/5/4	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/5/5	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/5/6	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/5/7	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/5/8	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/5/9	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/5/10	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3167/5/11	-	-	0.2	0.4	-	1.3	-	-	0.5	-	6.7	9.1
3146/1/1	-	-	-	-	3.0	-	-	4.5	-	-	-	7.5
3146/2/1	-	-	-	-	3.0	-	-	4.5	-	-	-	7.5
3146/3/1	-	-	-	-	3.0	-	-	4.5	-	-	-	7.5
3137/1/1	-	-	-	-	-	0.5	-	2.3	-	-	4.5	7.3
3188/1/1	-	-	-	-	-	-	-	6.9	-	-	-	6.9
3188/2/1	-	-	-	-	-	-	-	6.9	-	-	-	6.9
3140/1/1	1.0	0.7	-	0.8	-	-	-	-	0.7	-	2.2	5.5
3140/2/1	1.0	0.7	-	0.8	-	-	-	-	0.7	-	2.2	5.5
3140/3/1	1.0	0.7	-	0.8	-	-	-	-	0.7	-	2.2	5.5
3140/4/1	1.0	0.7	-	0.8	-	-	-	-	0.7	-	2.2	5.5
3140/5/1	1.0	0.7	-	0.8	-	-	-	-	0.7	-	2.2	5.5

Person ID number	Aubergine	Broad bean	Chili pepper	French bean	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
3140/6/1	1.0	0.7	-	0.8	-	-	-	-	0.7	-	2.2	5.5
3082/1/1	-	-	-	-	-	-	-	0.3	-	-	5.0	5.3
3174/1/1	-	-	-	-	-	-	-	0.5	-	0.3	4.3	5.1
3174/2/1	-	-	-	-	-	-	-	0.5	-	0.3	4.3	5.1
3174/3/1	-	-	-	-	-	-	-	0.5	-	0.3	4.3	5.1
3154/1/1	-	-	-	-	-	-	-	-	-	-	4.5	4.5
3154/2/1	-	-	-	-	-	-	-	-	-	-	4.5	4.5
3140/7/1	-	0.7	-	0.8	-	-	-	-	0.7	-	2.2	4.4
3140/8/1	-	0.7	-	0.8	-	-	-	-	0.7	-	2.2	4.4
3140/9/1	-	0.7	-	0.8	-	-	-	-	0.7	-	2.2	4.4
3140/10/1	-	0.7	-	0.8	-	-	-	-	0.7	-	2.2	4.4
3140/11/1	-	0.7	-	0.8	-	-	-	-	0.7	-	2.2	4.4
3140/12/1	-	0.7	-	0.8	-	-	-	-	0.7	-	2.2	4.4
3140/13/1	-	0.7	-	0.8	-	-	-	-	0.7	-	2.2	4.4
3133/1/1	-	-	-	-	-	-	-	3.1	-	-	1.3	4.3
3083/1/1	-	-	-	-	-	-	-	1.4	-	-	2.5	3.9
3083/2/1	-	-	-	-	-	-	-	1.4	-	-	2.5	3.9
3132/1/1	-	-	0.1	0.2	0.05	-	-	-	-	-	2.9	3.2
3132/2/1	-	-	0.1	0.2	0.05	-	-	-	-	-	2.9	3.2
3132/3/1	-	-	0.1	0.2	0.05	-	-	-	-	-	2.9	3.2
3132/4/1	-	-	0.1	0.2	0.05	-	-	-	-	-	2.9	3.2
3132/5/1	-	-	0.1	0.2	0.05	-	-	-	-	-	2.9	3.2
3137/2/1	-	-	-	-	-	-	-	-	-	-	2.3	2.3
3137/3/1	-	-	-	-	-	-	-	-	-	-	2.3	2.3

Person ID number	Aubergine	Broad bean	Chili pepper	French bean	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
3133/2/1	-	-	-	-	1.0	-	-	-	-	-	1.3	2.3
3243/1/1	-	-	-	-	-	-	-	-	-	-	0.7	0.7
3243/2/1	-	-	-	-	-	-	-	-	-	-	0.7	0.7
3085/1/1	-	-	-	-	-	-	-	-	-	-	0.6	0.6
3166/1/1	-	0.02	-	-	-	-	-	0.1	0.3	0.1	-	0.6
3166/2/1	-	0.02	-	-	-	-	-	0.1	0.3	0.1	-	0.6
3082/3/1	-	-	-	-	-	-	-	0.3	-	-	-	0.3
3082/4/1	-	-	-	-	-	-	-	0.3	-	-	-	0.3
3082/5/1	-	-	-	-	-	-	-	0.3	-	-	-	0.3
3082/6/1	-	-	-	-	-	-	-	0.3	-	-	-	0.3
3082/7/1	-	-	-	-	-	-	-	0.3	-	-	-	0.3
3082/8/1	-	-	-	-	-	-	-	0.3	-	-	-	0.3
3082/9/1	-	-	-	-	-	-	-	0.3	-	-	-	0.3
3082/10/1	-	-	-	-	-	-	-	0.3	-	-	-	0.3
3082/11/1	-	-	-	-	-	-	-	0.3	-	-	-	0.3
3105/1/1	-	-	-	-	-	-	-	-	-	-	0.3	0.3
3105/2/1	-	-	-	-	-	-	-	-	-	-	0.3	0.3
3105/3/1	-	-	-	-	-	-	-	-	-	-	0.3	0.3

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of other vegetables for adults based on the 13 high-rate consumers is 35.3 kg y^{-1}

The observed 97.5th percentile rate based on 86 observations is 50.6 kg y^{-1}

Table 27. Adults' consumption rates of root vegetables from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Beetroot	Carrot	Celeriac	Celery	Leek	Onion	Parsnip	Spring onion	Swede	Turnip	Total
3127/1/1	**-**	**11.0**	**-**	**-**	**-**	**-**	**11.0**	**-**	**11.0**	**-**	**33.0**
3127/2/1	**-**	**11.0**	**-**	**-**	**-**	**-**	**11.0**	**-**	**11.0**	**-**	**33.0**
3127/3/1	**-**	**11.0**	**-**	**-**	**-**	**-**	**11.0**	**-**	**11.0**	**-**	**33.0**
3135/1/1	**-**	**5.9**	**-**	**-**	**-**	**12.2**	**4.7**	**-**	**-**	**-**	**22.9**
3135/2/1	**-**	**5.9**	**-**	**-**	**-**	**12.2**	**4.7**	**-**	**-**	**-**	**22.9**
3192/1/1	**2.7**	**-**	**-**	**-**	**13.5**	**0.1**	**1.6**	**-**	**4.1**	**-**	**22.0**
3192/2/1	**2.7**	**-**	**-**	**-**	**13.5**	**0.1**	**1.6**	**-**	**4.1**	**-**	**22.0**
3136/1/1	**5.7**	**5.7**	**-**	**-**	**5.7**	**4.6**	**-**	**-**	**-**	**-**	**21.8**
3136/2/1	**5.7**	**5.7**	**-**	**-**	**5.7**	**4.6**	**-**	**-**	**-**	**-**	**21.8**
3148/1/1	**1.4**	**0.9**	**-**	**-**	**-**	**3.3**	**0.5**	**-**	**6.8**	**3.2**	**16.0**
3148/2/1	**1.4**	**0.9**	**-**	**-**	**-**	**3.3**	**0.5**	**-**	**6.8**	**3.2**	**16.0**
3188/1/1	**-**	**11.0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**11.0**
3188/2/1	**-**	**11.0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**11.0**
3167/1/1	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/2/1	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/3/1	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/4/1	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/5/1	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/5/2	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/5/3	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/5/4	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/5/5	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/5/6	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/5/7	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/5/8	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/5/9	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/5/10	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3167/5/11	2.0	2.0	0.3	0.6	1.3	-	0.4	0.5	3.0	-	10.1
3141/1/1	-	3.5	-	-	3.5	-	2.8	-	-	-	9.7
3141/2/1	-	3.5	-	-	3.5	-	2.8	-	-	-	9.7
3238/1/1	-	2.0	-	-	4.0	-	-	-	-	-	6.0
3146/1/1	1.5	1.5	-	-	3.0	-	-	-	-	-	6.0
3146/2/1	1.5	1.5	-	-	3.0	-	-	-	-	-	6.0
3146/3/1	1.5	1.5	-	-	3.0	-	-	-	-	-	6.0
3237/1/1	4.4	-	-	-	-	-	-	-	-	-	4.4
3237/2/1	4.4	-	-	-	-	-	-	-	-	-	4.4

Person ID number	Beetroot	Carrot	Celeriac	Celery	Leek	Onion	Parsnip	Spring onion	Swede	Turnip	Total
3166/1/1	-	0.4	-	-	0.9	2.2	-	-	-	-	3.5
3166/2/1	-	0.4	-	-	0.9	2.2	-	-	-	-	3.5
3133/1/1	-	-	-	-	0.6	2.2	-	-	-	-	2.8
3133/2/1	-	-	-	-	0.6	2.2	-	-	-	-	2.8
3137/1/1	2.3	-	-	-	-	-	-	-	-	-	2.3
3140/1/1	0.3	0.4	-	-	1.0	-	0.3	-	-	-	2.0
3140/2/1	0.3	0.4	-	-	1.0	-	0.3	-	-	-	2.0
3140/3/1	0.3	0.4	-	-	1.0	-	0.3	-	-	-	2.0
3140/4/1	0.3	0.4	-	-	1.0	-	0.3	-	-	-	2.0
3140/5/1	0.3	0.4	-	-	1.0	-	0.3	-	-	-	2.0
3140/6/1	0.3	0.4	-	-	1.0	-	0.3	-	-	-	2.0
3083/1/1	1.5	-	-	-	-	-	-	-	-	-	1.5
3083/2/1	1.5	-	-	-	-	-	-	-	-	-	1.5
3137/2/1	1.2	-	-	-	-	-	-	-	-	-	1.2
3137/3/1	1.2	-	-	-	-	-	-	-	-	-	1.2
3140/7/1	0.3	0.4	-	-	-	-	0.3	-	-	-	1.0
3140/8/1	0.3	0.4	-	-	-	-	0.3	-	-	-	1.0
3140/9/1	0.3	0.4	-	-	-	-	0.3	-	-	-	1.0
3140/10/1	0.3	0.4	-	-	-	-	0.3	-	-	-	1.0
3140/11/1	0.3	0.4	-	-	-	-	0.3	-	-	-	1.0
3140/12/1	0.3	0.4	-	-	-	-	0.3	-	-	-	1.0
3140/13/1	0.3	0.4	-	-	-	-	0.3	-	-	-	1.0

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables for adults based on the 13 high-rate consumers is 22 kg y^{-1}

The observed 97.5th percentile rate based on 58 observations is 33 kg y^{-1}

Table 28. Adults' consumption rates of potato from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Potato
3237/1/1	**100.0**
3237/2/1	**100.0**
3192/1/1	**57.1**
3192/2/1	**57.1**
3166/1/1	**50.0**
3166/2/1	**50.0**
3136/1/1	**46.4**
3136/2/1	**46.4**
3188/1/1	**35.0**
3188/2/1	**35.0**
3127/1/1	33.3
3127/2/1	33.3
3127/3/1	33.3
3191/1/1	25.0
3191/2/1	25.0
3174/1/1	20.0
3174/2/1	20.0
3174/3/1	20.0
3135/1/1	19.9
3135/2/1	19.9
3141/1/1	14.0
3141/2/1	14.0
3167/1/1	13.3
3167/2/1	13.3
3167/3/1	13.3
3167/4/1	13.3
3167/5/1	13.3
3167/5/2	13.3
3167/5/3	13.3
3167/5/4	13.3
3167/5/5	13.3
3167/5/6	13.3
3167/5/7	13.3
3167/5/8	13.3
3167/5/9	13.3
3167/5/10	13.3

Person ID number	Potato
3167/5/11	13.3
3148/1/1	5.0
3148/2/1	5.0
3137/1/1	4.5
3140/1/1	2.8
3140/2/1	2.8
3140/3/1	2.8
3140/4/1	2.8
3140/5/1	2.8
3140/6/1	2.8
3140/7/1	2.8
3140/8/1	2.8
3140/9/1	2.8
3140/10/1	2.8
3140/11/1	2.8
3140/12/1	2.8
3140/13/1	2.8
3187/1/1	1.7
3187/2/1	1.7
3187/3/1	1.7
3187/4/1	1.7
3085/1/1	0.9

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of potato for adults based on the 10 high-rate consumers is 57.7 kg y^{-1}

The observed 97.5th percentile rate based on 58 observations is 81.8 kg y^{-1}

Table 29. Adults' consumption rates of domestic fruit from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Apple	Blackcurrant	Damson	Gooseberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
3127/1/1	10.0	-	-	-	-	10.0	-	-	-	-	-	20.0
3127/2/1	10.0	-	-	-	-	10.0	-	-	-	-	-	20.0
3127/3/1	10.0	-	-	-	-	10.0	-	-	-	-	-	20.0
3083/1/1	10.0	-	2.5	-	-	-	4.0	0.5	-	-	-	17.0
3083/2/1	10.0	-	2.5	-	-	-	4.0	0.5	-	-	-	17.0
3137/1/1	1.8	0.9	-	0.9	-	-	1.8	1.4	0.9	1.4	1.4	10.4
3149/1/1	7.8	-	1.7	-	-	-	0.9	-	-	-	-	10.4
3149/2/1	7.8	-	1.7	-	-	-	0.9	-	-	-	-	10.4
3237/1/1	-	-	-	-	-	-	-	-	-	-	8.4	8.4
3237/2/1	-	-	-	-	-	-	-	-	-	-	8.4	8.4
3148/1/1	0.5	2.4	-	0.2	-	-	0.1	-	0.5	2.0	2.3	7.9
3148/2/1	0.5	2.4	-	0.2	-	-	0.1	-	0.5	2.0	2.3	7.9
3188/1/1	6.7	-	1.0	-	-	-	-	-	-	-	-	7.7
3188/2/1	6.7	-	1.0	-	-	-	-	-	-	-	-	7.7
3140/1/1	0.5	0.8	-	-	-	0.9	0.8	-	0.8	3.5	-	7.3
3140/2/1	0.5	0.8	-	-	-	0.9	0.8	-	0.8	3.5	-	7.3
3140/3/1	0.5	0.8	-	-	-	0.9	0.8	-	0.8	3.5	-	7.3
3140/4/1	0.5	0.8	-	-	-	0.9	0.8	-	0.8	3.5	-	7.3
3140/5/1	0.5	0.8	-	-	-	0.9	0.8	-	0.8	3.5	-	7.3
3140/6/1	0.5	0.8	-	-	-	0.9	0.8	-	0.8	3.5	-	7.3

Person ID number	Apple	Blackcurrant	Damson	Gooseberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
3191/1/1	-	1.0	-	1.0	-	-	-	-	-	-	4.5	6.5
3191/2/1	-	1.0	-	1.0	-	-	-	-	-	-	4.5	6.5
3132/1/1	2.0	-	-	-	-	-	2.0	-	-	-	1.4	5.4
3132/2/1	2.0	-	-	-	-	-	2.0	-	-	-	1.4	5.4
3132/3/1	2.0	-	-	-	-	-	2.0	-	-	-	1.4	5.4
3132/4/1	2.0	-	-	-	-	-	2.0	-	-	-	1.4	5.4
3132/5/1	2.0	-	-	-	-	-	2.0	-	-	-	1.4	5.4
3140/7/1	0.5	-	-	-	-	-	-	-	-	3.5	-	4.1
3140/8/1	0.5	-	-	-	-	-	-	-	-	3.5	-	4.1
3140/9/1	0.5	-	-	-	-	-	-	-	-	3.5	-	4.1
3140/10/1	0.5	-	-	-	-	-	-	-	-	3.5	-	4.1
3140/11/1	0.5	-	-	-	-	-	-	-	-	3.5	-	4.1
3140/12/1	0.5	-	-	-	-	-	-	-	-	3.5	-	4.1
3140/13/1	0.5	-	-	-	-	-	-	-	-	3.5	-	4.1
3146/1/1	1.5	-	-	-	-	-	-	-	-	2.3	-	3.8
3146/2/1	1.5	-	-	-	-	-	-	-	-	2.3	-	3.8
3146/3/1	1.5	-	-	-	-	-	-	-	-	2.3	-	3.8
3174/1/1	2.0	-	-	-	-	-	-	-	-	-	1.6	3.6
3174/2/1	2.0	-	-	-	-	-	-	-	-	-	1.6	3.6
3174/3/1	2.0	-	-	-	-	-	-	-	-	-	1.6	3.6
3158/1/1	0.8	-	-	-	-	0.8	-	2.0	-	-	-	3.5
3158/2/1	0.8	-	-	-	-	0.8	-	2.0	-	-	-	3.5

Person ID number	Apple	Blackcurrant	Damson	Gooseberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
3133/1/1	0.2	-	-	-	-	-	-	-	-	0.3	1.7	2.2
3133/2/1	0.2	-	-	-	-	-	-	-	-	0.3	1.7	2.2
3192/1/1	1.4	-	-	-	0.1	-	-	-	-	-	0.5	2.0
3192/2/1	1.4	-	-	-	0.1	-	-	-	-	-	0.5	2.0
3154/1/1	-	-	-	-	-	-	-	1.3	-	-	-	1.3
3154/2/1	-	-	-	-	-	-	-	1.3	-	-	-	1.3
3137/2/1	-	-	-	-	-	-	-	-	-	1.2	-	1.2
3137/3/1	-	-	-	-	-	-	-	-	-	1.2	-	1.2
3153/1/1	0.9	-	-	-	-	-	-	-	-	-	-	0.9
3153/2/1	0.9	-	-	-	-	-	-	-	-	-	-	0.9
3141/1/1	-	0.8	-	-	-	-	-	-	-	-	-	0.8
3141/2/1	-	0.8	-	-	-	-	-	-	-	-	-	0.8
3202/1/1	-	-	-	-	-	-	-	0.3	-	-	0.3	0.7
3202/2/1	-	-	-	-	-	-	-	0.3	-	-	0.3	0.7
3202/3/1	-	-	-	-	-	-	-	0.3	-	-	0.3	0.7
3166/1/1	0.1	-	-	0.4	-	0.05	-	-	-	-	0.05	0.6
3166/2/1	0.1	-	-	0.4	-	0.05	-	-	-	-	0.05	0.6

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit for adults based on the 20 high-rate consumers is 10.8 kg y^{-1}

The observed 97.5th percentile rate based on 59 observations is 20 kg y^{-1}

Table 30. Adults' consumption rates of milk from the Capenhurst terrestrial survey area (l y^{-1})

Person ID number	Cows' milk
3242/1/1	207.3
3242/2/1	207.3
3242/3/1	207.3
3130/1/1	91.3
3130/2/1	91.3
3130/3/1	91.3
3130/4/1	91.3
3132/1/1	69.5
3132/2/1	69.5
3132/3/1	69.5

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of milk for adults based on the 10 high-rate consumers is 119.6 l y^{-1}

The observed 97.5th percentile rate based on 10 observations is 207.3 l y^{-1}

Table 31. Adults' consumption rates of cattle meat from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Beef
3151/1/1	**47.3**
3151/1/2	**47.3**
3151/1/3	**47.3**
3151/1/4	**47.3**
3151/2/1	**47.3**
3151/2/2	**47.3**
3151/2/3	**47.3**
3151/2/4	**47.3**
3151/2/5	**47.3**
3151/2/6	**47.3**
3202/3/1	**46.9**
3202/1/1	10.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of cattle meat for adults based on the 11 high-rate consumers is 47.3 kg y^{-1}

The observed 97.5th percentile rate based on 12 observations is 47.3 kg y^{-1}

Table 32. Adults' consumption rates of pig meat from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Pork
3127/1/1	**50.6**
3127/2/1	**50.6**
3127/3/1	**50.6**
3202/2/1	**40.1**
3202/3/1	**40.1**

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of pig meat for adults based on the 5 high-rate consumers is 46.4 kg y^{-1}

The observed 97.5th percentile rate based on 5 observations is 50.6 kg y^{-1}

Table 33. Adults' consumption rates of sheep meat from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Lamb	Mutton	Total
3192/1/1	**39.9**	**2.9**	**42.8**
3192/2/1	**39.9**	**2.9**	**42.8**
3127/1/1	**22.6**	**-**	**22.6**
3127/2/1	**22.6**	**-**	**22.6**
3127/3/1	**22.6**	**-**	**22.6**
3188/1/1	6.0	-	6.0
3188/2/1	6.0	-	6.0
3202/1/1	0.9	-	0.9
3202/2/1	0.9	-	0.9
3202/3/1	0.9	-	0.9

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 30.7 kg y^{-1}

The observed 97.5th percentile rate based on 10 observations is 42.8 kg y^{-1}

Table 34. Adults' consumption rates of poultry from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Chicken	Duck	Goose	Mallard	Pheasant	Total
3192/1/1	**4.7**	**6.3**	**0.5**	**-**	**-**	**11.5**
3192/2/1	**4.7**	**6.3**	**0.5**	**-**	**-**	**11.5**
3194/1/1	-	-	-	0.3	2.2	2.6
3194/2/1	-	-	-	0.3	2.2	2.6
3194/3/1	-	-	-	0.3	2.2	2.6
3194/4/1	-	-	-	0.3	2.2	2.6

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of poultry for adults based on the 2 high-rate consumers is 11.5 kg y^{-1}

The observed 97.5th percentile rate based on 6 observations is 11.5 kg y^{-1}

Table 35. Adults' consumption rates of eggs from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Chicken egg	Duck egg	Total
3174/1/1	**25.0**	**-**	**25.0**
3174/2/1	**25.0**	**-**	**25.0**
3174/3/1	**25.0**	**-**	**25.0**
3192/1/1	**8.0**	**15.8**	**23.7**
3192/2/1	**8.0**	**15.8**	**23.7**
3083/1/1	**23.5**	**-**	**23.5**
3083/2/1	**23.5**	**-**	**23.5**
3202/1/1	**17.8**	**-**	**17.8**
3202/2/1	**17.8**	**-**	**17.8**
3194/1/1	**14.9**	**-**	**14.9**
3194/2/1	**14.9**	**-**	**14.9**
3194/3/1	**14.9**	**-**	**14.9**
3194/4/1	**14.9**	**-**	**14.9**
3243/1/1	**11.9**	**-**	**11.9**
3243/2/1	**11.9**	**-**	**11.9**
3181/1/1	**11.9**	**-**	**11.9**
3181/2/1	**11.9**	**-**	**11.9**
3181/3/1	**11.9**	**-**	**11.9**
3161/1/1	**11.2**	**-**	**11.2**
3082/8/1	**10.3**	**-**	**10.3**
3082/9/1	**10.3**	**-**	**10.3**
3082/10/1	**10.3**	**-**	**10.3**
3082/11/1	**10.3**	**-**	**10.3**
3187/1/1	**8.9**	**-**	**8.9**
3187/2/1	**8.9**	**-**	**8.9**
3187/3/1	**8.9**	**-**	**8.9**
3187/4/1	**8.9**	**-**	**8.9**
3240/1/1	7.1	-	7.1
3240/2/1	7.1	-	7.1
3082/1/1	5.9	-	5.9
3110/1/1	5.9	-	5.9
3110/2/1	5.9	-	5.9
3110/3/1	5.9	-	5.9
3131/1/1	5.9	-	5.9
3131/2/1	5.9	-	5.9
3131/3/1	5.9	-	5.9
3131/4/1	5.9	-	5.9
3131/5/1	5.9	-	5.9
3131/6/1	5.9	-	5.9

Person ID number	Chicken egg	Duck egg	Total
3082/3/1	4.1	-	4.1
3082/4/1	4.1	-	4.1
3082/5/1	4.1	-	4.1
3082/6/1	4.1	-	4.1
3082/7/1	4.1	-	4.1
3161/2/1	3.7	-	3.7

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of eggs for adults based on the 27 high-rate consumers is 15.3 kg y^{-1}

The observed 97.5th percentile rate based on 45 observations is 25 kg y^{-1}

Table 36. Adults' consumption rates of wild/free foods from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Blackberry	Damson	Sloe	Total
3127/1/1	**1.5**	**1.5**	**1.5**	**4.5**
3127/2/1	**1.5**	**1.5**	**1.5**	**4.5**
3127/3/1	**1.5**	**1.5**	**1.5**	**4.5**
3149/1/1	**3.4**	**-**	**0.5**	**3.9**
3149/2/1	**3.4**	**-**	**0.5**	**3.9**
3167/1/1	**3.0**	**-**	**-**	**3.0**
3167/2/1	**3.0**	**-**	**-**	**3.0**
3167/3/1	**3.0**	**-**	**-**	**3.0**
3167/4/1	**3.0**	**-**	**-**	**3.0**
3167/5/1	**3.0**	**-**	**-**	**3.0**
3167/5/2	**3.0**	**-**	**-**	**3.0**
3167/5/3	**3.0**	**-**	**-**	**3.0**
3167/5/4	**3.0**	**-**	**-**	**3.0**
3167/5/5	**3.0**	**-**	**-**	**3.0**
3167/5/6	**3.0**	**-**	**-**	**3.0**
3167/5/7	**3.0**	**-**	**-**	**3.0**
3167/5/8	**3.0**	**-**	**-**	**3.0**
3167/5/9	**3.0**	**-**	**-**	**3.0**
3167/5/10	**3.0**	**-**	**-**	**3.0**
3167/5/11	**3.0**	**-**	**-**	**3.0**
3237/1/1	**2.0**	**-**	**0.5**	**2.5**
3237/2/1	**2.0**	**-**	**0.5**	**2.5**
3083/1/1	1.3	-	-	1.3

Person ID number	Blackberry	Damson	Sloe	Total
3083/2/1	1.3	-	-	1.3
3137/1/1	1.2	-	-	1.2
3137/4/1	1.2	-	-	1.2
3148/1/1	1.1	-	-	1.1
3148/2/1	1.1	-	-	1.1
3132/1/1	0.4	0.4	-	0.8
3132/2/1	0.4	0.4	-	0.8
3132/3/1	0.4	0.4	-	0.8
3132/4/1	0.4	0.4	-	0.8
3132/5/1	0.4	0.4	-	0.8
3174/1/1	0.1	-	0.5	0.6
3174/2/1	0.1	-	0.5	0.6
3174/3/1	0.1	-	0.5	0.6
3133/1/1	0.5	-	-	0.5
3133/2/1	0.5	-	-	0.5
3135/1/1	0.4	-	-	0.4
3135/2/1	0.4	-	-	0.4
3140/1/1	0.4	-	-	0.4
3140/2/1	0.4	-	-	0.4
3140/3/1	0.4	-	-	0.4
3140/4/1	0.4	-	-	0.4
3140/5/1	0.4	-	-	0.4
3140/6/1	0.4	-	-	0.4
3105/1/1	0.3	-	-	0.3
3105/2/1	0.3	-	-	0.3
3105/3/1	0.3	-	-	0.3
3202/1/1	0.2	-	-	0.2
3202/2/1	0.2	-	-	0.2
3202/3/1	0.2	-	-	0.2
3166/1/1	0.05	-	-	0.05
3166/2/1	0.05	-	-	0.05

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild/free foods for adults based on the 22 high-rate consumers is 3.3 kg y^{-1}

The observed 97.5th percentile rate based on 54 observations is 4.5 kg y^{-1}

Table 37. Adults' consumption rates of honey from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Honey
3127/1/1	**3.3**
3127/2/1	**3.3**
3127/3/1	**3.3**
3237/1/1	**2.3**
3149/1/1	**1.4**
3149/2/1	**1.4**
3082/1/1	0.9
3174/1/1	0.9
3083/1/1	0.5
3083/2/1	0.5

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of honey for adults based on the 6 high-rate consumers is 2.5 kg y^{-1}

The observed 97.5th percentile rate based on 10 observations is 3.3 kg y^{-1}

Table 38. Adults' consumption rates of wild fungi from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Mushrooms
3127/1/1	**5.0**
3127/2/1	**5.0**
3127/3/1	**5.0**
3137/1/1	0.9
3137/4/1	0.9
3149/1/1	0.5
3149/2/1	0.5
3202/1/1	0.2
3202/2/1	0.2
3202/3/1	0.2
3174/1/1	0.1
3174/2/1	0.1
3174/3/1	0.1

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild fungi for adults based on the 3 high-rate consumers is 5 kg y^{-1}

The observed 97.5th percentile rate based on 13 observations is 5 kg y^{-1}

Table 39. Adults' consumption rates of freshwater plants from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Watercress
3237/1/1	**10.9**
3237/2/1	**10.9**
3237/3/1	1.7
3237/4/1	1.7

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of freshwater plants for adults based on the 2 high-rate consumers is 10.9 kg y^{-1}

The observed 97.5th percentile rate based on 4 observations is 10.9 kg y^{-1}

Table 40. Children's consumption rates of green vegetables from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Broccoli	Brussels sprout	Cauliflower	Chard	Courgette	Cucumber	Gherkin	Lettuce	Total
3174/4/1	**14**	**0.5**	**-**	**-**	**0.3**	**-**	**1.4**	**-**	**1.6**	**3.9**
3174/5/1	**11**	**0.5**	**-**	**-**	**0.3**	**-**	**1.4**	**-**	**1.6**	**3.9**
3135/3/1	**11**	**0.8**	**1.0**	**0.8**	**-**	**-**	**0.9**	**0.4**	**-**	**3.9**
3135/4/1	**9**	**0.8**	**1.0**	**0.8**	**-**	**-**	**0.9**	**0.4**	**-**	**3.9**
3133/3/1	14	1.2	-	-	-	-	-	-	-	1.2
3133/4/1	12	1.2	-	-	-	-	-	-	-	1.2
3243/3/1	13	-	-	-	-	0.3	-	-	-	0.3

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables for the child age group based on the 4 high-rate consumers is 3.9 kg y^{-1}

The observed 97.5th percentile rate based on 7 observations is 3.9 kg y^{-1}

Table 41. Infants' consumption rates of green vegetables from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Broccoli	Brussels sprout	Cauliflower	Chard	Courgette	Cucumber	Gherkin	Lettuce	Total
3135/5/1	**2**	**0.4**	**0.5**	**0.4**	**-**	**-**	**0.4**	**0.2**	**-**	**1.9**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of green vegetables for the infant age group based on the high-rate consumer is 1.9 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Table 42. Children's consumption rates of other vegetables from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Chili pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
3135/3/1	**11**	**1.8**	**8.0**	**-**	**0.4**	**-**	**2.0**	**12.2**
3135/4/1	**9**	**1.8**	**8.0**	**-**	**0.4**	**-**	**2.0**	**12.2**
3174/4/1	**14**	**-**	**-**	**0.5**	**-**	**0.3**	**4.3**	**5.1**
3174/5/1	**11**	**-**	**-**	**0.5**	**-**	**0.3**	**4.3**	**5.1**
3133/3/1	14	-	-	-	-	-	1.3	1.3
3133/4/1	12	-	-	-	-	-	1.3	1.3
3243/3/1	13	-	-	-	-	-	0.7	0.7

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of other vegetables for the child age group based on the 4 high-rate consumers is 8.7 kg y^{-1}

The observed 97.5th percentile rate based on 7 observations is 12.2 kg y^{-1}

Table 43. Infants' consumption rates of other vegetables from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Chili pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
3135/5/1	**2**	**0.9**	**4.0**	-	**0.2**	-	**1.0**	**6.1**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of other vegetables for the infant age group based on the high-rate consumer is 6.1 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Table 44. Children's consumption rates of root vegetables from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Carrot	Leek	Onion	Parsnip	Total
3135/3/1	**11**	**5.9**	**-**	**12.2**	**4.7**	**22.9**
3135/4/1	**9**	**5.9**	**-**	**12.2**	**4.7**	**22.9**
3141/3/1	6	1.1	1.1	-	0.9	3.2
3141/4/1	6	1.1	1.1	-	0.9	3.2
3141/5/1	6	1.1	1.1	-	0.9	3.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables for the child age group based on the 2 high-rate consumers is 22.9 kg y^{-1}

The observed 97.5th percentile rate based on 5 observations is 22.9 kg y^{-1}

Table 45. Infants' consumption rates of root vegetables from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Carrot	Leek	Onion	Parsnip	Total
3135/5/1	**2**	**3.0**	**-**	**6.1**	**2.4**	**11.4**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of root vegetables for the infant age group based on the high-rate consumer is 11.4 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Table 46. Children's consumption rates of potato from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Potato
3174/4/1	**14**	**20.0**
3174/5/1	**11**	**20.0**
3135/3/1	**11**	**19.9**
3135/4/1	**9**	**19.9**
3141/3/1	6	4.6
3141/4/1	6	4.6
3141/5/1	6	4.6
3187/5/1	11	1.7
3187/6/1	9	1.3

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of potato for the child age group based on the 4 high-rate consumers is 20 kg y^{-1}

The observed 97.5th percentile rate based on 9 observations is 20 kg y^{-1}

Table 47. Infants' consumption rates of potato from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Potato
3135/5/1	**2**	**10.0**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of potato for the infant age group based on the high-rate consumer is 10 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Table 48. Children's consumption rates of domestic fruit from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Apple	Blackcurrant	Pear	Raspberry	Rhubarb	Strawberry	Total
3174/4/1	**14**	**2.0**	**-**	**-**	**-**	**-**	**1.6**	**3.6**
3174/5/1	**11**	**2.0**	**-**	**-**	**-**	**-**	**1.6**	**3.6**
3133/3/1	**14**	**0.2**	**-**	**-**	**-**	**0.3**	**1.7**	**2.2**
3133/4/1	**12**	**0.2**	**-**	**-**	**-**	**0.3**	**1.7**	**2.2**
3141/3/1	6	-	0.3	-	-	-	-	0.3
3141/4/1	6	-	0.3	-	-	-	-	0.3
3141/5/1	6	-	0.3	-	-	-	-	0.3

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit for the child age group based on the 4 high-rate consumers is 2.9 kg y^{-1}

The observed 97.5th percentile rate based on 7 observations is 3.6 kg y^{-1}

Table 49. Infants' consumption rates of domestic fruit from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Apple	Blackcurrant	Pear	Raspberry	Rhubarb	Strawberry	Total
3158/3/1	**5**	**0.4**	**-**	**0.4**	**1.0**	**-**	**-**	**1.8**
3158/4/1	**3**	**0.4**	**-**	**0.4**	**1.0**	**-**	**-**	**1.8**

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 1.8 kg y^{-1}

The observed 97.5th percentile rate based on 2 observations is 1.8 kg y^{-1}

Table 50. Children's consumption rates of eggs from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Chicken egg
3174/4/1	**14**	**25.0**
3174/5/1	**11**	**25.0**
3243/3/1	**13**	**11.9**
3161/3/1	**13**	**11.2**
3187/5/1	**11**	**8.9**
3240/4/1	11	7.1
3187/6/1	9	6.7
3240/3/1	9	5.3
3161/4/1	10	3.7

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of eggs for the child age group based on the 5 high-rate consumers is 16.4 kg y^{-1}

The observed 97.5th percentile rate based on 9 observations is 25 kg y^{-1}

Table 51. Children's consumption rates of wild/free foods from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Blackberry	Sloe	Total
3158/3/1	**5**	**0.4**	**-**	**0.4**
3158/4/1	**3**	**0.4**	**-**	**0.4**

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild/free foods for the child age group based on the 6 high-rate consumers is 0.5 kg y^{-1}

The observed 97.5th percentile rate based on 6 observations is 0.6 kg y^{-1}

Table 52. Infants' consumption rates of wild/free foods from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Blackberry	Sloe	Total
3135/5/1	2	0.2	-	0.2

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of wild/free foods for the infant age group based on the high-rate consumer is 0.2 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Table 53. Children's consumption rates of honey from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Honey
3174/4/1	14	0.9

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of honey for the child age group based on the high-rate consumer is 0.9 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Table 54. Children's consumption rates of wild fungi from the Capenhurst terrestrial survey area (kg y^{-1})

Person ID number	Age	Mushrooms
3174/4/1	14	0.1
3174/5/1	11	0.1

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of wild fungi for the child age group based on the 2 high-rate consumers is 0.1 kg y^{-1}

The observed 97.5th percentile rate based on 2 observations is 0.1 kg y^{-1}

Table 55. Percentage contribution each food type makes to its terrestrial food group for adults

Green vegetable		Root vegetables		Pig meat	
Cabbage	18.5%	Carrot	24.9%	Pork	100.0%
Cauliflower	15.9%	Swede	19.2%	**Sheep meat**	
Broccoli	14.4%	Leek	16.8%	Lamb	96.5%
Lettuce	12.6%	Beetroot	12.7%	Mutton	3.5%
Kale	9.8%	Parsnip	11.8%	**Poultry**	
Brussels sprout	6.9%	Onion	9.4%	Duck	37.8%
Courgette	6.3%	Celery	1.6%	Chicken	28.4%
Cucumber	4.4%	Spring Onion	1.4%	Pheasant	27.0%
Rocket	3.8%	Turnip	1.2%	Mallard	4.1%
Asparagus	3.6%	Celeriac	0.3%	Goose	2.7%
Marrow	1.9%	**Potato**		**Eggs**	
Chard	1.3%	Potato	100.0%	Chicken egg	93.8%
Spinach	0.4%	**Domestic fruit**		Duck egg	6.2%
Herbs	0.2%	Apple	34.7%	**Wild/free foods**	
Gherkin	0.1%	Rhubarb	18.4%	Blackberry	84.1%
Other vegetables		Strawberry	14.6%	Sloe	8.7%
Tomato	76.7%	Pear	11.1%	Damson	7.2%
Runner bean	6.9%	Plum	7.9%	**Honey**	
French bean	3.8%	Blackcurrant	4.1%	Honey	100.0%
Pea	2.6%	Damson	3.1%	**Wild fungi**	
Pepper	2.4%	Raspberry	2.9%	Mushrooms	100.0%
Squash	2.3%	Redcurrant	1.9%	**Freshwater plants**	
Pumpkin	1.9%	Gooseberry	1.2%	Watercress	100.0%
Chilli pepper	1.5%	Melon	0.1%		
Broad bean	1.1%	**Milk**			
Aubergine	0.7%	Cows' milk	100.0%		
Sweetcorn	0.1%	**Cattle meat**			
		Beef	100.0%		

Notes

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

Table 56. Direct radiation occupancy rates for adults, children and infants' in the Capenhurst area (h y^{-1})

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
0 to 0.25 km zone				
3198/1/1	Residing in a nursing home	8760	0	8760
3198/3/1	Residing in a nursing home	8656	104	8760
3198/1/2	Residing in a nursing home	8760	0	8760
3198/3/2	Residing in a nursing home	8656	104	8760
3198/1/3	Residing in a nursing home	8760	0	8760
3198/1/4	Residing in a nursing home	8760	0	8760
3198/1/5	Residing in a nursing home	8760	0	8760
3198/1/6	Residing in a nursing home	8760	0	8760
3198/2/1	Residing in a nursing home	8632	104	8736
3104/1/1	Residing	8656	26	8682
3159/1/1	Residing	7558	1098	8656
3198/4/1	Residing	8551	104	8656
3149/1/1	Residing	6612	1826	8438
3147/1/1	Residing	5471	2924	8395
3147/2/1	Residing	5471	2924	8395
3105/2/1	Residing	7549	823	8371
3158/2/1	Residing	6980	1174	8154
3158/3/1	Residing	6980	1174	8154
3158/4/1	Residing	6980	1174	8154
3158/1/1	Residing	6904	1174	8078
3105/1/1	Residing	7201	823	8024
3243/1/1	Residing	7877	91	7968
3105/3/1	Residing	7120	823	7943
3160/1/1	Residing	7364	457	7821

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
3106/1/1	Residing	7208	457	7665
3106/2/1	Residing	7208	457	7665
3147/3/1	Residing	4741	2924	7665
3147/4/1	Residing	4741	2924	7665
3243/2/1	Residing	7446	91	7538
3174/1/1	Residing	5547	1097	6644
3149/2/1	Residing	5689	822	6511
3174/2/1	Residing	5764	640	6403
3243/3/1	Residing	5490	91	5582
3160/2/1	Residing	5266	209	5475
3174/3/1	Residing	5023	337	5360
3174/4/1	Residing	4969	391	5360
3174/5/1	Residing	5086	274	5360
3198/6/1	Working	2019	65	2084
3198/6/2	Working	2019	65	2084
3198/6/3	Working	2019	65	2084
3198/6/4	Working	2019	65	2084
3198/6/5	Working	2019	65	2084
3198/6/6	Working	2019	65	2084
3198/6/7	Working	2019	65	2084
3198/5/1	Working	1737	65	1802
3198/5/2	Working	1737	65	1802
3198/5/3	Working	1737	65	1802
3185/4/1	At school	1067	618	1685
3185/5/1	At school	1067	618	1685
3185/6/1	At school	1067	618	1685
3185/7/1	At school	1067	618	1685
3185/8/1	At school	1179	505	1685
3185/9/1	At school	1179	505	1685
3185/10/1	At school	1179	505	1685
3185/11/1	At school	1179	505	1685
3185/12/1	At school	1179	505	1685
3185/13/1	At school	1179	505	1685
3185/14/1	At school	1179	505	1685
3185/15/1	At school	1179	505	1685
3185/16/1	At school	1179	505	1685
3185/17/1	At school	1179	505	1685
3199/1/1	Working	619	1032	1651

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
3199/2/1	Working	619	1032	1651
3199/1/2	Working	619	1032	1651
3199/2/2	Working	619	1032	1651
3199/1/3	Working	619	1032	1651
3199/2/3	Working	619	1032	1651
3199/1/4	Working	619	1032	1651
3199/2/4	Working	619	1032	1651
3199/1/5	Working	619	1032	1651
3199/2/5	Working	619	1032	1651
3199/2/6	Working	619	1032	1651
3199/2/7	Working	619	1032	1651
3199/2/8	Working	619	1032	1651
3199/2/9	Working	619	1032	1651
3199/2/10	Working	619	1032	1651
3199/2/11	Working	619	1032	1651
3199/2/12	Working	619	1032	1651
3199/2/13	Working	619	1032	1651
3199/2/14	Working	619	1032	1651
3199/2/15	Working	619	1032	1651
3199/2/16	Working	619	1032	1651
3199/2/17	Working	619	1032	1651
3199/2/18	Working	619	1032	1651
3199/2/19	Working	619	1032	1651
3199/2/20	Working	619	1032	1651
3185/1/1	Working	200	1404	1604
3185/2/1	Working	481	1123	1604
3185/2/2	Working	481	1123	1604
3185/2/3	Working	481	1123	1604
3185/2/4	Working	481	1123	1604
3185/2/5	Working	481	1123	1604
3147/5/1	Working	261	1303	1563
3147/5/2	Working	261	1303	1563
3185/3/1	Working	241	562	802
3185/3/2	Working	241	562	802
3185/3/3	Working	241	562	802
3185/3/4	Working	241	562	802
3185/3/5	Working	241	562	802
3185/3/6	Working	241	562	802

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
3185/3/7	Working	241	562	802
3185/3/8	Working	241	562	802
3185/3/9	Working	241	562	802
3185/3/10	Working	241	562	802
3185/3/11	Working	241	562	802
3185/3/12	Working	241	562	802
3185/3/13	Working	241	562	802
>0.25 to 0.5 km zone				
3201/1/1	Residing	7978	730	8708
3202/1/1	Residing	4691	4017	8708
3238/2/1	Residing	7926	730	8656
3157/1/1	Residing	7167	1124	8291
3203/1/1	Residing	7324	915	8239
3084/1/1	Residing	8147	65	8213
3084/2/1	Residing	8147	65	8213
3200/2/1	Residing	7756	457	8213
3112/4/1	Residing	8169	17	8186
3161/4/1	Residing	7466	688	8154
3110/2/1	Residing	7429	705	8134
3161/1/1	Residing	6677	1376	8052
3161/2/1	Residing	6677	1376	8052
3154/1/1	Residing	7321	702	8023
3178/4/1	Residing	7173	674	7847
3200/3/1	Residing	7339	457	7795
3110/3/1	Residing	6762	939	7701
3085/1/1	Residing	7300	365	7665
3203/2/1	Residing	6722	915	7637
3178/1/1	Residing	7414	144	7558
3154/2/1	Residing	6844	702	7546
3113/4/1	Residing	7235	274	7509
3238/1/1	Residing	6570	730	7300
3181/1/1	Residing	6900	183	7083
3162/1/1	Residing	5772	1043	6814
3162/2/1	Residing	5772	1043	6814
3110/1/1	Residing	5740	939	6680
3200/1/1	Residing	6101	574	6674

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
3162/5/1	Residing	6554	104	6658
3112/3/1	Residing	6466	26	6492
3182/1/1	Residing	5922	457	6379
3112/2/1	Residing	6257	104	6361
3162/3/1	Residing	6113	104	6217
3162/4/1	Residing	6113	104	6217
3161/3/1	Residing	5501	688	6189
3202/3/1	Residing	2748	3340	6088
3181/2/1	Residing	5741	313	6054
3181/3/1	Residing	5835	183	6017
3113/1/1	Residing	4786	349	5135
3238/4/1	Residing	5006	104	5110
3112/1/1	Residing	4841	104	4945
3238/3/1	Residing	4641	104	4745
3178/3/1	Residing	3876	674	4550
3113/3/1	Residing	4100	313	4413
3202/2/1	Residing	3650	730	4380
3200/4/1	Visiting family	2998	130	3128
3200/5/1	Visiting family	2998	130	3128
3178/2/1	Residing	2757	120	2877
3203/3/1	Visiting family	1694	154	1848
3113/2/1	Residing	1517	43	1560
3201/4/1	Visiting family	678	52	730
3201/2/1	Visiting family	60	12	72
3201/3/1	Visiting family	60	12	72
3145/1/1	Dog walking	0	50	50
>0.5 to 1.0 km zone				
3111/2/1	Residing	7876	836	8712
3168/1/1	Residing	6880	1828	8708
3168/2/1	Residing	6880	1828	8708
3111/1/1	Residing	7819	836	8656
3175/1/1	Residing	7613	1043	8656
3175/2/1	Residing	8604	52	8656
3188/1/1	Residing	4316	4292	8608
3192/1/1	Residing	5677	2922	8599
3083/1/1	Residing	7091	1460	8551

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
3083/2/1	Residing	7091	1460	8551
3188/2/1	Residing	6862	1642	8505
3171/2/1	Residing	8395	104	8499
3170/2/1	Residing	8387	102	8490
3240/1/1	Residing	8258	78	8336
3171/1/1	Residing	7574	143	7717
3240/3/1	Residing	6395	78	6473
3240/4/1	Residing	6395	78	6473
3240/2/1	Residing	6342	78	6421
3170/1/1	Residing	6214	102	6316
3170/3/1	Residing	6180	26	6205
3170/4/1	Residing	6180	26	6205
3169/1/1	Residing	5248	951	6199
3244/1/1	Residing	6039	78	6117
3192/2/1	Residing	5257	678	5935
3119/1/1	Residing	5425	248	5673
3244/2/1	Residing	5438	52	5491
3169/2/1	Residing	4897	238	5134
3244/3/1	Residing	4712	52	4765
3244/4/1	Residing	4341	52	4393
3119/2/1	Residing	3896	78	3974
3245/2/1	Working	1174	503	1676
3245/2/2	Working	1174	503	1676
3245/2/3	Working	1174	503	1676
3245/2/4	Working	1174	503	1676
3245/2/5	Working	1174	503	1676
3245/2/6	Working	1174	503	1676
3245/2/7	Working	1174	503	1676
3245/1/1	Working	782	335	1118
3245/3/1	Working	782	335	1118
3245/4/1	Working	782	335	1118
3245/4/2	Working	782	335	1118
3245/4/3	Working	782	335	1118
3245/4/4	Working	782	335	1118

Table 57. Analysis of direct radiation occupancy rates for adults, children and infants' in the Capenhurst area (h y^{-1})

Number of hours	Number of observations
0 to 0.25 km zone	
>8000 to 8760	21
>7000 to 8000	9
>6000 to 7000	3
>5000 to 6000	4
>4000 to 5000	0
>3000 to 4000	0
>2000 to 3000	7
>1000 to 2000	50
0 to 1000	13
0 to 8760	107
>0.25 to 0.5 km zone	
>8000 to 8760	15
>7000 to 8000	10
>6000 to 7000	14
>5000 to 6000	1
>4000 to 5000	5
>3000 to 4000	2
>2000 to 3000	1
>1000 to 2000	2
0 to 1000	4
0 to 8760	54
>0.5 to 1.0 km zone	
>8000 to 8760	14
>7000 to 8000	2
>6000 to 7000	9
>5000 to 6000	4
>4000 to 5000	0
>3000 to 4000	1
>2000 to 3000	0
>1000 to 2000	13
0 to 1000	0
0 to 8760	43

Table 58. Gamma dose rate measurements for the Capenhurst direct radiation survey area (μGy h^{-1})

Residence number	Outdoor substrate	Outdoor gamma dose at 1 metre[a]
Residence 1	Concrete	0.075
Residence 2	Concrete	0.075
Residence 3	Stones	0.078
Residence 4	Grass	0.078
Residence 5	Grass	0.078
Residence 6	Grass	0.079
Residence 7	Grass	0.082
Residence 8	Grass	0.082
Residence 9	Grass	0.082
Residence 10	Grass	0.085
Residence 11	Grass	0.085
Residence 12	Stones	0.086
Residence 13	Grass	0.086
Residence 14	Grass	0.087
Residence 15	Grass	0.088
Residence 16	Grass	0.089
Residence 17	Grass	0.090
Residence 18	Grass	0.090
Residence 19	Grass	0.092
Residence 20	Grass	0.093
Residence 21	Grass	0.094
Residence 22	Grass	0.095
Residence 23	Grass	0.095
Residence 24	Grass	0.096
Residence 25	Grass	0.097
Residence 26	Concrete	0.098
Residence 27	Stones	0.099
Residence 28	Concrete	0.108
Residence 29	Concrete	0.108

Notes

[a] These measurements have not been adjusted for background dose rates

Table 59. Background gamma dose rate measurements for the Capenhurst survey area (μGy h^{-1})

	Location	National Grid Reference	Substrate	Gamma dose rate at 1 metre
Background 1	Wimbolds Trafford	SJ 449 728	Grass	0.083
Background 2	Near Sealand	SJ 353 684	Grass	0.071
Background 3	Eastham Country Park	SJ 363 819	Grass	0.073
Background 4	Little Neston	SJ 290 759	Grass	0.065

Table 60. Combinations of adult pathways for consideration in dose assessments in the Capenhurst area

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
1											X					X	X	X	X
2	X	X	X	X	X				X	X	X							X	X
3	X	X			X	X						X							
4	X	X	X		X						X	X	X					X	X
5	X	X	X	X	X							X	X		X				
6	X	X		X	X						X	X	X	X				X	X
7					X		X		X		X	X		X				X	X
8					X		X	X	X			X		X				X	X
9					X			X	X		X	X		X				X	X
10	X	X	X	X	X			X	X			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: eggs, aquatic occupancy over mud, sand and stones, occupancy on water, 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^{-1} and l y^{-1}) and occupancy rates (h y^{-1}) in the Capenhurst area

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3082/1/1	1.5	5.3	-	-	-	-	-	-	-	-	5.9	-	0.9	-	-	-	-	-	-
3082/3/1	1.5	0.3	-	-	-	-	-	-	-	-	4.1	-	-	-	-	-	-	-	-
3082/4/1	1.5	0.3	-	-	-	-	-	-	-	-	4.1	-	-	-	-	-	-	-	-
3082/5/1	1.5	0.3	-	-	-	-	-	-	-	-	4.1	-	-	-	-	-	-	-	-
3082/6/1	1.5	0.3	-	-	-	-	-	-	-	-	4.1	-	-	-	-	-	-	-	-
3082/7/1	1.5	0.3	-	-	-	-	-	-	-	-	4.1	-	-	-	-	-	-	-	-
3082/8/1	1.5	0.3	-	-	-	-	-	-	-	-	**10.3**	-	-	-	-	-	-	-	-
3082/9/1	1.5	0.3	-	-	-	-	-	-	-	-	**10.3**	-	-	-	-	-	-	-	-
3082/10/1	1.5	0.3	-	-	-	-	-	-	-	-	**10.3**	-	-	-	-	-	-	-	-
3082/11/1	1.5	0.3	-	-	-	-	-	-	-	-	**10.3**	-	-	-	-	-	-	-	-
3083/1/1	2.3	3.9	1.5	-	**17.0**	-	-	-	-	-	**23.5**	1.3	0.5	-	-	-	-	7091	1460
3083/2/1	2.3	3.9	1.5	-	**17.0**	-	-	-	-	-	**23.5**	1.3	0.5	-	-	-	-	7091	1460
3084/1/1	-	**26.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8147	65
3084/2/1	-	**26.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8147	65
3085/1/1	-	0.6	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	7300	365

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3104/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8656	26
3105/1/1	0.03	0.3	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	7201	823
3105/2/1	0.03	0.3	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	7549	823
3105/3/1	0.03	0.3	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	7120	823
3106/1/1	-	**52.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7208	457
3106/2/1	-	**52.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7208	457
3110/1/1	-	-	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-	5740	939
3110/2/1	-	-	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-	7429	705
3110/3/1	-	-	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-	6762	939
3111/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7819	836
3111/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7876	836
3112/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4841	104
3112/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6257	104
3112/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6466	26
3112/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8169	17
3113/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4786	349
3113/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1517	43

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3113/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4100	313
3113/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7235	274
3119/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5425	248
3119/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3896	78
3127/1/1	**50.0**	**33.3**	**33.0**	33.3	**20.0**	-	-	**50.6**	**22.6**	-	-	**4.5**	**3.3**	**5.0**	-	-	-	-	-
3127/2/1	**50.0**	**33.3**	**33.0**	33.3	**20.0**	-	-	**50.6**	**22.6**	-	-	**4.5**	**3.3**	**5.0**	-	-	-	-	-
3127/3/1	**50.0**	**33.3**	**33.0**	33.3	**20.0**	-	-	**50.6**	**22.6**	-	-	**4.5**	**3.3**	**5.0**	-	-	-	-	-
3130/1/1	-	-	-	-	-	**91.3**	-	-	-	-	-	-	-	-	-	-	-	-	-
3130/2/1	-	-	-	-	-	**91.3**	-	-	-	-	-	-	-	-	-	-	-	-	-
3130/3/1	-	-	-	-	-	**91.3**	-	-	-	-	-	-	-	-	-	-	-	-	-
3130/4/1	-	-	-	-	-	**91.3**	-	-	-	-	-	-	-	-	-	-	-	-	-
3131/1/1	-	-	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-	-	-
3131/2/1	-	-	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-	-	-
3131/3/1	-	-	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-	-	-
3131/4/1	-	-	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-	-	-
3131/5/1	-	-	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-	-	-
3131/6/1	-	-	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-	-	-

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3132/1/1	5.5	3.2	-	-	5.4	**69.5**	-	-	-	-	-	0.8	-	-	-	-	-	-	-
3132/2/1	5.5	3.2	-	-	5.4	**69.5**	-	-	-	-	-	0.8	-	-	-	-	-	-	-
3132/3/1	5.5	3.2	-	-	5.4	**69.5**	-	-	-	-	-	0.8	-	-	-	-	-	-	-
3132/4/1	5.5	3.2	-	-	5.4	-	-	-	-	-	-	0.8	-	-	-	-	-	-	-
3132/5/1	5.5	3.2	-	-	5.4	-	-	-	-	-	-	0.8	-	-	-	-	-	-	-
3133/1/1	9.4	4.3	2.8	-	2.2	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-
3133/2/1	9.4	2.3	2.8	-	2.2	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-
3135/1/1	3.9	12.2	**22.9**	19.9	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-
3135/2/1	3.9	12.2	**22.9**	19.9	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-
3136/1/1	**36.6**	**21.3**	**21.8**	**46.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3136/2/1	**36.6**	**21.3**	**21.8**	**46.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3137/1/1	5.4	7.3	2.3	4.5	**10.4**	-	-	-	-	-	-	1.2	-	0.9	-	-	-	-	-
3137/2/1	2.3	2.3	1.2	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3137/3/1	2.3	2.3	1.2	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3137/4/1	-	-	-	-	-	-	-	-	-	-	-	1.2	-	0.9	-	-	-	-	-
3140/1/1	1.8	5.5	2.0	2.8	**7.3**	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-
3140/2/1	1.8	5.5	2.0	2.8	**7.3**	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3140/3/1	1.8	5.5	2.0	2.8	**7.3**	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-
3140/4/1	1.8	5.5	2.0	2.8	**7.3**	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-
3140/5/1	1.8	5.5	2.0	2.8	**7.3**	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-
3140/6/1	1.8	5.5	2.0	2.8	**7.3**	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-
3140/7/1	1.8	4.4	1.0	2.8	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3140/8/1	1.8	4.4	1.0	2.8	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3140/9/1	1.8	4.4	1.0	2.8	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3140/10/1	1.8	4.4	1.0	2.8	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3140/11/1	1.8	4.4	1.0	2.8	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3140/12/1	1.8	4.4	1.0	2.8	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3140/13/1	1.8	4.4	1.0	2.8	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3141/1/1	-	-	9.7	14.0	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3141/2/1	-	-	9.7	14.0	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3145/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	50
3146/1/1	5.5	7.5	6.0	-	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3146/2/1	5.5	7.5	6.0	-	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3146/3/1	5.5	7.5	6.0	-	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3147/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5471	2924
3147/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5471	2924
3147/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4741	2924
3147/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4741	2924
3147/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	1303
3147/5/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	1303
3148/1/1	17.3	10.7	**16.0**	5.0	**7.9**	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-
3148/2/1	17.3	10.7	**16.0**	5.0	**7.9**	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-
3149/1/1	-	-	-	-	**10.4**	-	-	-	-	-	-	**3.9**	**1.4**	0.5	-	-	-	6612	1826
3149/2/1	-	-	-	-	**10.4**	-	-	-	-	-	-	**3.9**	**1.4**	0.5	-	-	-	5689	822
3151/1/1	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-
3151/1/2	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-
3151/1/3	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-
3151/1/4	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-
3151/2/1	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-
3151/2/2	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-
3151/2/3	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3151/2/4	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-
3151/2/5	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-
3151/2/6	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-
3153/1/1	-	-	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3153/2/1	-	-	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3154/1/1	-	4.5	-	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	7321	702
3154/2/1	-	4.5	-	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	6844	702
3157/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7167	1124
3158/1/1	-	-	-	-	3.5	-	-	-	-	-	-	-	-	-	-	-	-	6904	1174
3158/2/1	-	-	-	-	3.5	-	-	-	-	-	-	-	-	-	-	-	-	6980	1174
3159/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7558	1098
3160/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7364	457
3160/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5266	209
3161/1/1	-	-	-	-	-	-	-	-	-	-	**11.2**	-	-	-	-	-	-	6677	1376
3161/2/1	-	-	-	-	-	-	-	-	-	-	3.7	-	-	-	-	-	-	6677	1376
3162/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5772	1043
3162/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5772	1043

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3162/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6554	104
3166/1/1	12.9	0.6	3.5	**50.0**	0.6	-	-	-	-	-	-	0.05	-	-	-	-	-	-	-
3166/2/1	12.9	0.6	3.5	**50.0**	0.6	-	-	-	-	-	-	0.05	-	-	-	-	-	-	-
3167/1/1	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/2/1	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/3/1	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/4/1	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/5/1	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/5/2	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/5/3	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/5/4	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/5/5	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/5/6	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/5/7	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/5/8	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/5/9	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3167/5/10	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3167/5/11	9.6	9.1	10.1	13.3	-	-	-	-	-	-	-	**3.0**	-	-	-	-	-	-	-
3168/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6880	1828
3168/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6880	1828
3169/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5248	951
3169/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4897	238
3170/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6214	102
3170/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8387	102
3170/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6180	26
3171/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7574	143
3171/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8395	104
3174/1/1	3.9	5.1	-	20.0	3.6	-	-	-	-	-	**25.0**	0.6	0.9	0.1	-	-	-	5547	1097
3174/2/1	3.9	5.1	-	20.0	3.6	-	-	-	-	-	**25.0**	0.6	-	0.1	-	-	-	5764	640
3174/3/1	3.9	5.1	-	20.0	3.6	-	-	-	-	-	**25.0**	0.6	-	0.1	-	-	-	5023	337
3175/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7613	1043
3175/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8604	52
3178/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7414	144
3178/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2757	120

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3181/1/1	-	-	-	-	-	-	-	-	-	-	**11.9**	-	-	-	-	-	-	6900	183
3181/2/1	-	-	-	-	-	-	-	-	-	-	**11.9**	-	-	-	-	-	-	5741	313
3181/3/1	-	-	-	-	-	-	-	-	-	-	**11.9**	-	-	-	-	-	-	5835	183
3182/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5922	457
3185/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	1404
3185/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3185/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3185/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3185/2/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3185/2/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3185/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3185/3/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3187/1/1	-	-	-	1.7	-	-	-	-	-	-	**8.9**	-	-	-	-	-	-	-	-
3187/2/1	-	-	-	1.7	-	-	-	-	-	-	**8.9**	-	-	-	-	-	-	-	-
3187/3/1	2.0	-	-	1.7	-	-	-	-	-	-	**8.9**	-	-	-	-	-	-	-	-
3187/4/1	2.0	-	-	1.7	-	-	-	-	-	-	**8.9**	-	-	-	-	-	-	-	-
3188/1/1	-	6.9	**11.0**	**35.0**	**7.7**	-	-	-	6.0	-	-	-	-	-	-	-	-	4316	4292
3188/2/1	-	6.9	**11.0**	**35.0**	**7.7**	-	-	-	6.0	-	-	-	-	-	-	-	-	6862	1642
3191/1/1	7.5	-	-	25.0	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3191/2/1	7.5	-	-	25.0	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3192/1/1	9.0	**50.6**	**22.0**	**57.1**	2.0	-	-	-	**42.8**	**11.5**	**23.7**	-	-	-	-	-	-	5677	2922
3192/2/1	9.0	**50.6**	**22.0**	**57.1**	2.0	-	-	-	**42.8**	**11.5**	**23.7**	-	-	-	-	-	-	5257	678
3194/1/1	-	-	-	-	-	-	-	-	-	2.6	**14.9**	-	-	-	-	-	-	-	-

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3194/2/1	-	-	-	-	-	-	-	-	-	2.6	**14.9**	-	-	-	-	-	-	-	-
3194/3/1	-	-	-	-	-	-	-	-	-	2.6	**14.9**	-	-	-	-	-	-	-	-
3194/4/1	-	-	-	-	-	-	-	-	-	2.6	**14.9**	-	-	-	-	-	-	-	-
3198/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8760	0
3198/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8760	0
3198/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8760	0
3198/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8760	0
3198/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8760	0
3198/1/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8760	0
3198/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8632	104
3198/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8656	104
3198/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8656	104
3198/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8551	104
3198/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1737	65
3198/5/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1737	65
3198/5/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1737	65
3198/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3198/6/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65
3198/6/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65
3198/6/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65
3198/6/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65
3198/6/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65
3198/6/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65
3199/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3199/2/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/2/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3200/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6101	574
3200/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7756	457
3200/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2998	130

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3201/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7978	730
3202/1/1	-	-	-	-	0.7	-	10.4	-	0.9	-	**17.8**	0.2	-	0.2	-	-	-	4691	4017
3202/2/1	-	-	-	-	0.7	-	-	**40.1**	0.9	-	**17.8**	0.2	-	0.2	-	-	-	3650	730
3202/3/1	-	-	-	-	0.7	-	**46.9**	**40.1**	0.9	-	-	0.2	-	0.2	-	-	-	2748	3340
3203/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7324	915
3203/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6722	915
3203/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1694	154
3237/1/1	**59.9**	**29.5**	4.4	**100.0**	**8.4**	-	-	-	-	-	-	**2.5**	**2.3**	-	**10.9**	-	-	-	-
3237/2/1	**59.9**	**29.5**	4.4	**100.0**	**8.4**	-	-	-	-	-	-	**2.5**	-	-	**10.9**	-	-	-	-
3237/3/1	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-
3237/4/1	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-
3238/1/1	-	16.2	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6570	730
3238/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7926	730
3238/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8291	104
3238/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5006	104
3240/1/1	-	-	-	-	-	-	-	-	-	-	7.1	-	-	-	-	-	-	4641	104
3240/2/1	-	-	-	-	-	-	-	-	-	-	7.1	-	-	-	-	1	1	6342	78

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3241/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2**	**2**	-	-
3242/1/1	-	-	-	-	-	**207.3**	-	-	-	-	-	-	-	-	-	-	-	-	-
3242/2/1	-	-	-	-	-	**207.3**	-	-	-	-	-	-	-	-	-	-	-	-	-
3242/3/1	-	-	-	-	-	**207.3**	-	-	-	-	-	-	-	-	-	-	-	-	-
3243/1/1	0.3	0.7	-	-	-	-	-	-	-	-	**11.9**	-	-	-	-	-	-	7877	91
3243/2/1	0.3	0.7	-	-	-	-	-	-	-	-	**11.9**	-	-	-	-	-	-	7446	91
3244/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6039	78
3244/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5438	52
3245/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	782	335
3245/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1174	503
3245/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1174	503
3245/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1174	503
3245/2/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1174	503
3245/2/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1174	503
3245/2/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1174	503
3245/2/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1174	503
3245/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	782	335

Combination number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3245/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	782	335
3245/4/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	782	335
3245/4/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	782	335
3245/4/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	782	335

Notes

U = Unknown

Emboldened observations are the high-rate individuals

Annex 2. Children's consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) in the Capenhurst area

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Eggs	Wild/free foods	Honey	Wild fungi	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3133/3/1	1.2	1.3	-	-	**2.2**	-	**0.5**	-	-	-	-	-	-
3133/4/1	1.2	1.3	-	-	**2.2**	-	**0.5**	-	-	-	-	-	-
3135/3/1	**3.9**	**12.2**	**22.9**	**19.9**	-	-	**0.4**	-	-	-	-	-	-
3135/4/1	**3.9**	**12.2**	**22.9**	**19.9**	-	-	**0.4**	-	-	-	-	-	-
3141/3/1	-	-	3.2	4.6	0.3	-	-	-	-	-	-	-	-
3141/4/1	-	-	3.2	4.6	0.3	-	-	-	-	-	-	-	-
3141/5/1	-	-	3.2	4.6	0.3	-	-	-	-	-	-	-	-
3161/3/1	-	-	-	-	-	**11.2**	-	-	-	-	-	5501	688
3161/4/1	-	-	-	-	-	3.7	-	-	-	-	-	7466	688
3162/3/1	-	-	-	-	-	-	-	-	-	-	-	6113	104
3162/4/1	-	-	-	-	-	-	-	-	-	-	-	6113	104
3170/4/1	-	-	-	-	-	-	-	-	-	-	-	6180	26
3174/4/1	**3.9**	**5.1**	-	**20.0**	**3.6**	**25.0**	**0.6**	**0.9**	**0.1**	-	-	4969	391
3174/5/1	**3.9**	**5.1**	-	**20.0**	**3.6**	**25.0**	**0.6**	-	**0.1**	-	-	5086	274
3178/3/1	-	-	-	-	-	-	-	-	-	-	-	3876	674
3178/4/1	-	-	-	-	-	-	-	-	-	-	-	7173	674
3185/6/1	-	-	-	-	-	-	-	-	-	-	-	1067	618
3185/7/1	-	-	-	-	-	-	-	-	-	-	-	1067	618

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Eggs	Wild/free foods	Honey	Wild fungi	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3185/8/1	-	-	-	-	-	-	-	-	-	-	-	1179	505
3185/9/1	-	-	-	-	-	-	-	-	-	-	-	1179	505
3185/10/1	-	-	-	-	-	-	-	-	-	-	-	1179	505
3185/11/1	-	-	-	-	-	-	-	-	-	-	-	1179	505
3185/12/1	-	-	-	-	-	-	-	-	-	-	-	1179	505
3185/13/1	-	-	-	-	-	-	-	-	-	-	-	1179	505
3185/14/1	-	-	-	-	-	-	-	-	-	-	-	1179	505
3185/15/1	-	-	-	-	-	-	-	-	-	-	-	1179	505
3185/16/1	-	-	-	-	-	-	-	-	-	-	-	1179	505
3185/17/1	-	-	-	-	-	-	-	-	-	-	-	1179	505
3187/5/1	-	-	-	1.7	-	**8.9**	-	-	-	-	-	-	-
3187/6/1	-	-	-	1.3	-	6.7	-	-	-	-	-	-	-
3200/4/1	-	-	-	-	-	-	-	-	-	-	-	2998	130
3201/2/1	-	-	-	-	-	-	-	-	-	-	-	60	12
3201/3/1	-	-	-	-	-	-	-	-	-	-	-	60	12
3240/3/1	-	-	-	-	-	5.3	-	-	-	**1**	1	6395	78
3240/4/1	-	-	-	-	-	7.1	-	-	-	**1**	1	6395	78
3243/3/1	0.3	0.7	-	-	-	**11.9**	-	-	-	-	-	5582	91
3244/3/1	-	-	-	-	-	-	-	-	-	-	-	4712	52
3244/4/1	-	-	-	-	-	-	-	-	-	-	-	4341	52

Notes for Annex 2

Emboldened observations are the high-rate individuals

Annex 3. Infants' consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) in the Capenhurst area

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Eggs	Wild/free foods	Honey	Wild fungi	Aquatic occupancy over mud, sand and stones	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3135/5/1	**1.9**	**6.1**	**11.4**	**10.0**	-	-	**0.2**	-	-	-	-	-	-
3158/3/1	-	-	-	-	**1.8**	-	-	-	-	-	-	6980	1174
3158/4/1	-	-	-	-	**1.8**	-	-	-	-	-	-	6980	1174
3185/4/1	-	-	-	-	-	-	-	-	-	-	-	1067	618
3185/5/1	-	-	-	-	-	-	-	-	-	-	-	1067	618
3185/4/1	-	-	-	-	-	-	-	-	-	-	-	1067	618
3185/5/1	-	-	-	-	-	-	-	-	-	-	-	1067	618
3200/3/1	-	-	-	-	-	-	-	-	-	-	-	7339	457
3201/4/1	-	-	-	-	-	-	-	-	-	-	-	678	52

Notes

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
None identified	None identified	Not applicable

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

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

Notes

[a]Excepting notes b and c, 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.

[b]Ratios were derived from Smith and Jones (2003) which presented data for infants and children of unspecified ages.

[c]Ratios were derived from FSA data for wild fruit and nuts for infants and 10-year-old children.

[d]Game includes rabbits/hares and venison.

[e]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^{-1} and l y^{-1}) and occupancy rates (h y^{-1}) for women of childbearing age[a] in the Capenhurst area

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Pig meat	Sheep meat	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3082/5/1	1.5	0.3	-	-	-	-	-	-	4.1	-	-	-	-	-	-
3082/10/1	1.5	0.3	-	-	-	-	-	-	**10.3**	-	-	-	-	-	-
3082/11/1	1.5	0.3	-	-	-	-	-	-	**10.3**	-	-	-	-	-	-
3105/3/1	0.0	0.3	-	-	-	-	-	-	-	0.3	-	-	-	7120	823
3113/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	4786	349
3113/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	1517	43
3119/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	5425	248
3127/3/1	**50.0**	**33.3**	**33.0**	33.3	**20.0**	-	**50.6**	**22.6**	-	**4.5**	**3.3**	**5.0**	-	-	-
3131/4/1	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-
3131/6/1	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-
3135/2/1	3.9	12.2	**22.9**	19.9	-	-	-	-	-	0.4	-	-	-	-	-
3137/3/1	2.3	2.3	1.2	-	1.2	-	-	-	-	-	-	-	-	-	-
3141/2/1	-	-	9.7	14.0	0.8	-	-	-	-	-	-	-	-	-	-
3147/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	4741	2924
3147/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	4741	2924
3148/2/1	17.3	10.7	**16.0**	5.0	**7.9**	-	-	-	-	1.1	-	-	-	-	-
3151/1/1	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Pig meat	Sheep meat	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3151/1/2	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-
3151/1/3	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-
3151/1/4	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-
3158/2/1	-	-	-	-	3.5	-	-	-	-	-	-	-	-	6980	1174
3162/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	6113	104
3174/2/1	3.9	5.1	-	20.0	3.6	-	-	-	**25.0**	0.6	-	0.1	-	5764	640
3174/3/1	3.9	5.1	-	20.0	3.6	-	-	-	**25.0**	0.6	-	0.1	-	5023	337
3178/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	7414	144
3182/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	5922	457
3184/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3184/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3184/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3184/2/4	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3184/2/5	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3184/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3184/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3184/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3184/3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3184/3/5	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Pig meat	Sheep meat	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3184/3/6	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3184/3/7	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3184/3/8	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3184/3/9	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3184/3/10	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3184/3/11	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3184/3/12	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3184/3/13	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3185/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3185/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3185/2/4	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3185/2/5	-	-	-	-	-	-	-	-	-	-	-	-	-	481	1123
3185/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/5	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/6	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Pig meat	Sheep meat	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3185/3/7	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/8	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/9	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/10	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/11	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/12	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3185/3/13	-	-	-	-	-	-	-	-	-	-	-	-	-	241	562
3187/1/1	-	-	-	1.7	-	-	-	-	**8.9**	-	-	-	-	-	-
3198/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	8760	0
3198/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	8760	0
3198/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	8760	0
3198/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	8760	0
3198/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	8760	0
3198/1/6	-	-	-	-	-	-	-	-	-	-	-	-	-	8760	0
3198/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	8632	104
3198/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65
3198/6/2	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65
3198/6/3	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65
3198/6/4	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65

Person ID number	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Pig meat	Sheep meat	Eggs	Wild/free foods	Honey	Wild fungi	Freshwater plants	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
3198/6/5	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65
3198/6/6	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65
3198/6/7	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	65
3199/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3199/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	619	1032
3200/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	7756	457
3200/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	2998	130
3202/2/1	-	-	-	-	0.7	-	**40.1**	0.9	**17.8**	0.2	-	0.2	-	3650	730
3237/4/1	7.0	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-
3240/1/1	-	-	-	-	-	-	-	-	7.1	-	-	-	-	8258	78
3244/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	5438	52

Notes

U = Unknown

[a] 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 Capenhurst area for use in the assessment of total dose

Profile Name	*Pathway Name*	*Number of Individuals*		Direct	Eggs	Freshwater Plants	Fruit - Domestic	Fruit and nuts - Wild	Gamma ext - Sediments	Honey	Meat - Cow	Meat - Pig	Meat - Poultry	Meat - Sheep	Milk	Mushrooms	Occupancy ON water	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
			Notes	1					2									3	3	3				
			Units	-	kg	kg	kg	kg	h	kg	kg	kg	kg	kg	l	kg	h	h	h	h	kg	kg	kg	kg
Occupants for Direct Radiation		169		**1.00**	1.8	-	0.57	0.08	<1	0.03	0.34	0.47	0.14	0.59	-	0.01	<1	2100	1560	1210	0.21	1.9	1.5	0.44
Egg Consumers		27		0.56	**15.3**	-	1.9	0.17	-	0.07	0.39	1.5	1.2	3.2	-	0.02	-	1550	1190	1170	1.7	4.7	6.7	1.7
Freshwater Plant Consumers		2		-	-	**10.9**	8.4	2.5	-	1.1	-	-	-	-	-	-	-	-	-	-	59.9	29.5	100.0	4.4
Domestic Fruit Consumers		20		0.30	2.4	1.1	**10.8**	1.7	-	0.79	-	7.6	-	4.0	-	0.85	-	750	-	1710	16.3	12.1	20.1	9.0
Wild Fruit and Nut Consumers		22		0.09	-	0.99	4.4	**3.3**	-	0.68	-	6.9	-	3.1	-	0.73	-	680	-	-	18.8	13.4	22.7	11.8
Occupants over Sediment		2		0.50	3.6	-	-	-	**2**	-	-	-	-	-	-	-	2	-	-	3210	-	-	-	-
Honey Consumers		6		0.33	-	1.8	14.9	4.0	-	**2.5**	-	25.3	-	11.3	-	2.7	-	2490	-	-	35.0	21.6	33.3	17.2
Cattle Meat Consumers		11		0.09	-	-	0.06	0.02	-	-	**47.3**	3.6	-	0.08	-	0.02	-	-	550	-	-	-	-	-
Pig Meat Consumers		5		0.40	3.6	-	12.3	2.8	-	2.0	9.4	**46.4**	-	13.9	-	3.1	-	-	2090	-	30.0	20.0	20.0	19.8
Poultry Meat Consumers		2		1.00	23.7	-	2.0	-	-	-	-	-	**11.5**	42.8	-	-	-	-	-	7270	9.0	50.6	57.1	22.0
Sheep Meat Consumers		5		0.40	9.5	-	12.8	2.7	-	2.0	-	30.4	4.6	**30.7**	-	3.0	-	-	-	2910	33.6	40.2	42.9	28.6
Milk Consumers		10		-	-	-	1.6	0.24	-	-	-	-	-	-	**119.6**	-	-	-	-	-	1.7	0.96	-	-
Mushroom Consumers		3		-	-	-	20.0	4.5	-	3.3	-	50.6	-	22.6	-	**5.0**	-	-	-	-	50.0	33.3	33.3	33.0
Occupants On Water		2		0.50	3.6	-	-	-	2	-	-	-	-	-	-	-	**2**	-	-	3210	-	-	-	-
Local Inhabitants (0 - 0.25 km)		34		1.00	3.3	-	1.1	0.31	-	0.11	-	-	-	-	-	0.04	-	**7970**	-	-	0.36	3.6	1.8	-
Local Inhabitants (0.25 - 0.5 km)		37		1.00	2.4	-	0.12	0.01	-	-	1.6	2.2	-	0.07	-	0.01	-	-	**6980**	-	-	2.1	0.02	0.16
Local Inhabitants (0.5 - 1 km)		25		1.00	4.3	-	2.1	0.10	<1	0.04	-	-	0.92	3.9	-	-	<1	-	-	**7420**	0.90	4.9	7.4	2.8
Green Vegetable Consumers		7		-	-	3.1	11.0	2.6	-	1.8	-	21.7	-	9.7	-	2.1	-	-	-	-	**49.0**	28.8	56.1	21.6
Other Domestic Vegetable Consumers		13		0.46	3.7	1.7	6.2	1.4	-	0.94	-	11.7	1.8	11.8	-	1.2	-	1180	1260	1120	27.8	**35.3**	39.0	15.0
Potato Consumers		13		0.31	3.7	1.7	7.5	1.4	-	0.94	-	11.7	1.8	12.7	-	1.2	-	-	-	2430	29.7	24.4	**52.1**	17.3
Root Vegetable Consumers		13		0.31	3.7	-	7.3	1.3	-	0.77	-	11.7	1.8	12.7	-	1.2	-	-	-	2430	21.8	23.3	32.8	**22.0**

Notes

1. Direct radiation is expressed as proportion of group who are present within 1 km of site perimeter
2. Gamma ext - Sediments represents occupancy over mud, sand and stones
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

Annex 8. Summary of profiles for children in the Capenhurst area for use in the assessment of total dose

Profile Name	*Pathway Name*	*Number of Individuals*		Direct	Eggs	Fruit - Domestic	Fruit and nuts - Wild	Honey	Mushrooms	Occupancy ON water	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
			Notes	1							2	2	2				
			Units	-	kg	kg	kg	kg	kg	h	h	h	h	kg	kg	kg	kg
Occupants for Direct Radiation		29		**1.00**	3.1	0.25	0.04	0.03	<0.01	<1	1750	970	980	0.28	0.38	1.4	-
Egg Consumers		5		0.80	**16.4**	1.4	0.22	0.18	0.04	-	4500	-	-	1.6	2.2	8.3	-
Domestic Fruit Consumers		4		0.50	12.5	**2.9**	0.50	0.23	0.05	-	2680	-	-	2.5	3.2	10.0	-
Wild Fruit and Nut Consumers		6		0.33	8.3	1.9	**0.48**	0.15	0.03	-	1790	-	-	3.0	6.2	13.3	7.6
Honey Consumers		1		1.00	25.0	3.6	0.55	**0.91**	0.10	-	5360	-	-	3.9	5.1	20.0	-
Mushroom Consumers		2		1.00	25.0	3.6	0.55	0.45	**0.10**	-	5360	-	-	3.9	5.1	20.0	-
Occupants On Water		2		1.00	6.2	-	-	-	-	**1**	-	-	6470	-	-	-	-
Local Inhabitants (0 - 0.25 km)		5		1.00	15.3	1.4	0.22	0.18	0.04	-	**6130**	-	-	1.6	2.2	8.0	-
Local Inhabitants (0.25 - 0.5 km)		5		1.00	-	-	-	-	-	-	-	**5590**	-	-	-	-	-
Local Inhabitants (0.5 - 1 km)		5		1.00	2.5	-	-	-	-	<1	-	-	**5660**	-	-	-	-
Green Vegetable Consumers		4		0.50	12.5	1.8	0.50	0.23	0.05	-	2680	-	-	**3.9**	8.7	20.0	11.4
Other Domestic Vegetable Consumers		4		0.50	12.5	1.8	0.50	0.23	0.05	-	2680	-	-	3.9	**8.7**	20.0	11.4
Potato Consumers		4		0.50	12.5	1.8	0.50	0.23	0.05	-	2680	-	-	3.9	8.7	**20.0**	11.4
Root Vegetable Consumers		2		-	-	-	0.44	-	-	-	-	-	-	3.9	12.2	19.9	**22.9**

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 9. Summary of profiles for infants' in the Capenhurst area for use in the assessment of total dose

Profile Name	*Pathway Name*	*Number of Individuals*		Direct	Fruit - Domestic	Fruit and nuts - Wild	Plume (IN; 0-0.25 km)	Plume (MID; 0.25-0.5 km)	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root
			Notes	1			2	2				
			Units	-	kg	kg	h	h	kg	kg	kg	kg
Direct		6		**1**	0.59	-	3280	1420	-	-	-	-
Fruit - Domestic		2		1	**1.8**	-	8150	-	-	-	-	-
Fruit and nuts - Wild		1		-	-	**0.22**	-	-	1.9	6.1	10	11.4
Plume (IN; 0-0.25 km)		2		1	1.8	-	**8150**	-	-	-	-	-
Plume (MID; 0.25-0.5 km)		1		1	-	-	-	**7800**	-	-	-	-
Vegetables - Green		1		-	-	0.22	-	-	**1.9**	6.1	10	11.4
Vegetables - Other Domestic		1		-	-	0.22	-	-	1.9	**6.1**	10	11.4
Vegetables - Potatoes		1		-	-	0.22	-	-	1.9	6.1	**10**	11.4
Vegetables - Root		1		-	-	0.22	-	-	1.9	6.1	10	**11.4**

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 Capenhurst area, for use in assessments of total dose to prenatal children

Profile Name	*Pathway Name* / *Number of Individuals*		Direct	Eggs	Freshwater Plants	Fruit - Domestic	Fruit and nuts - Wild	Honey	Meat - Cow	Meat - Pig	Meat - Sheep	Mushrooms	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
		Notes	1										2	2	2				
		Units	-	kg	kg	kg	kg	kg	kg	kg	kg	kg	h	h	h	kg	kg	kg	kg
Occupants for Direct Radiation	54		**1.00**	1.4	-	0.21	0.03	-	-	0.74	0.02	<0.01	2700	790	360	0.14	0.19	0.74	-
Egg Consumers	6		0.50	**16.2**	-	1.3	0.21	-	-	6.7	0.15	0.06	1960	730	-	1.8	1.8	7.0	-
Freshwater Plant Consumers	1		-	-	**1.7**	-	-	-	-	-	-	-	-	-	-	7.0	-	-	-
Domestic Fruit Consumers	2		-	-	-	**13.9**	2.8	1.7	-	25.3	11.3	2.5	-	-	-	33.6	22.0	19.2	24.5
Wild Fruit and Nut Consumers	1		-	-	-	20.0	**4.5**	3.3	-	50.6	22.6	5.0	-	-	-	50.0	33.3	33.3	33.0
Honey Consumers	1		-	-	-	20.0	4.5	**3.3**	-	50.6	22.6	5.0	-	-	-	50.0	33.3	33.3	33.0
Cattle Meat Consumers	4		-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-
Pig Meat Consumers	2		0.50	8.9	-	10.3	2.3	1.7	-	**45.3**	11.8	2.6	-	2190	-	25.0	16.7	16.7	16.5
Sheep Meat Consumers	1		-	-	-	20.0	4.5	3.3	-	50.6	**22.6**	5.0	-	-	-	50.0	33.3	33.3	33.0
Mushroom Consumers	1		-	-	-	20.0	4.5	3.3	-	50.6	22.6	**5.0**	-	-	-	50.0	33.3	33.3	33.0
Local Inhabitants (0 - 0.25 km)	13		1.00	3.8	-	0.82	0.11	-	-	-	-	0.02	**8040**	-	-	0.60	0.81	3.1	-
Local Inhabitants (0.25 - 0.5 km)	7		1.00	2.5	-	0.10	0.02	-	-	5.7	0.13	0.02	-	**5860**	-	-	-	-	-
Local Inhabitants (0.5 - 1 km)	3		1.00	2.4	-	-	-	-	-	-	-	-	-	-	**6500**	-	-	-	-
Green Vegetable Consumers	2		-	-	-	13.9	2.8	1.7	-	25.3	11.3	2.5	-	-	-	**33.6**	22.0	19.2	24.5
Other Domestic Vegetable Consumers	2		-	-	-	10.0	2.5	1.7	-	25.3	11.3	2.5	-	-	-	26.9	**22.8**	26.6	27.9
Potato Consumers	5		0.40	10.0	-	5.6	1.2	0.67	-	10.1	4.5	1.0	2350	-	-	12.3	11.2	**21.4**	13.1
Root Vegetable Consumers	3		-	-	-	9.3	2.0	1.1	-	16.9	7.5	1.7	-	-	-	23.7	18.8	19.4	**24.0**

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

Centre for Environment Fisheries & Aquaculture Science

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We work in partnership with our colleagues in Defra and across UK government, and with international governments, business, maritime and fishing industry, non-governmental organisations, research institutes, universities, civil society and schools to collate and share knowledge. Together we can understand and value our seas to secure a sustainable blue future for us all, and help create a greater place for living.

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