Cefas contract report C7325

Radiological Habits Survey: Sellafield, 2018

Environment Report RL 09/19

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Radiological Habits Survey: Sellafield, 2018

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Radiological Habits Survey: Sellafield, 2018

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Key Points

- The consumption of fish decreased in the 2018 Sellafield habits survey compared with the previous full Sellafield habits survey in 2013. This was due to a reduction in the quantity of fish consumed by a hobby fisherman and their family, and the cessation of fish consumption by another high-rate consumer due to ill health.

- One classified shellfish bed was identified at Ravenglass in the 2013 Sellafield habits survey, where the commercial collection of mussels was permitted. In 2018, this fishery was reported to have closed.

- There was a significant decrease in the consumption of *Nephrops* in 2018 due to the steady decline in the *Nephrops* fishery off the Cumbrian coast and the variability in fishing trips due to poor weather.

- A new pathway identified in 2018 was the consumption of mushrooms collected from salt marsh.

- The collection of *Porphyra* from the boulder scars at St Bees, Braystones and Sellafield was identified in 2018, which was being sold to make laverbread.

- There were significant decreases in the consumption rates of venison and of other vegetables. Conversely, the consumption of honey, freshwater fish and sheep meat increased in 2018.

- The consumption of pork had ceased since the previous full habits survey because a farm was no longer producing pigs.

- The highest indoor, outdoor and total occupancy rates in the direct radiation survey area were similar in 2013 and 2018.

- The proposed NuGeneration Moorside new nuclear site, located next to the Sellafield site to the north and north-west, was manned at the time of the survey and the land in this area continued to be farmed. However, since the habits survey, Toshiba, who own NuGeneration, have announced that they are withdrawing from the project and are taking steps to close NuGeneration.

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SUMMARY

This report presents the results of a survey conducted in 2018 to determine the habits and consumption patterns of people living, working and pursuing recreational activities in the vicinity of the Sellafield nuclear licensed site in Cumbria. The site discharges gaseous wastes via stacks to the atmosphere, liquid wastes via outfalls into the Irish Sea 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 is also applicable to inhalation and external exposure arising from gaseous releases from the site. The Low Level Waste Repository (LLWR) site is located south-east of the Sellafield site (approximately 5 km between the centre of both sites). Due to the proximity, the aquatic survey area is the same for both sites and the terrestrial survey areas of both sites overlap.

The following potential exposure pathways were investigated:

- The consumption of food from the aquatic survey area
- Activities and occupancy over intertidal substrates
- The handling of fishing gear and sediment
- Activities and occupancy in and on water
- The use of seaweed as a fertiliser or animal feed
- 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
- A range of leisure activities and railway maintenance taking place in the Ravenglass Estuary, which were raised with the Environment Agency by a member of the public at an open meeting of the West Cumbria Sites Stakeholder Group (WCSSG) (www.wcssg.co.uk).

Information was collected from members of the public by means of interviews and the data obtained for 895 individuals are presented and discussed. High rates of consumption, intertidal occupancy and handling 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 (shown in Figure 1, page 22) covered all tidal waters and intertidal areas from Parton (in the north) to Tarn Bay (in the south) and extended 11 km offshore. The Ravenglass Estuary and tidal stretches of the rivers Calder, Ehen, Irt, Mite and Esk were also included.

The main commercial fisheries in the area were potting for crab and lobster, and trawling for *Nephrops* and mixed fish species. However, it was reported that the *Nephrops* fishery has been poor in recent years. A commercial mussel bed at Ravenglass was reported to have closed. Hobby fishing including setting nets from the shore and potting were popular, as were boat angling and shore angling. The collection of molluscs from the shore has continued to decline.

The mean consumption rates for the adult high-rate groups (as defined in Section 3.4) for the separate aquatic consumption pathways for foods potentially affected by liquid discharges were:

- 41 kg y^{-1} for fish
- 35 kg y^{-1} for crustaceans
- 12 kg y^{-1} for molluscs
- 28 kg y^{-1} for wildfowl
- 0.5 kg y^{-1} for marine plants/algae
- 1.1 kg y^{-1} for wild fungi growing on salt marsh

The predominant foods consumed by the people in the adult high-rate groups were:

- For fish: cod, thornback ray and plaice
- For crustaceans: common lobster, brown crab and brown shrimp
- For molluscs: winkle, mussel and limpet
- For wildfowl: goose (unspecified species) and mallard
- For marine plants/algae: sea lettuce
- For wild fungi growing on salt marsh: mushrooms

Seaweed from the aquatic survey area was used as a fertiliser on allotment plots and vegetable gardens, where fruit and vegetables were grown. The use of seaweed as an animal feed was not identified. *Porphyra* was collected from the boulder scars at St Bees, Braystones and Sellafield, and was being sold to processors in Wales to make laverbread.

The activities undertaken by adults in the high-rate groups for intertidal occupancy included wildfowling, bait digging, dog walking, collecting seaweed, bait digging, collecting peeler crabs for bait, horse riding, angling, hooking for crab and lobster, practising golf; setting nets; monitoring for radioactive particles, walking, beachcombing, playing, potting from the shore, collecting seaweed, and boat maintenance.

The following activities in the Ravenglass Estuary were also investigated at the request of the Environment Agency and WCSSG:

- An obstacle course race, which takes place annually around the Ravenglass Estuary and the River Esk. Participants in the race spent approximately 20 mins in the mud and 20 minutes in water.
- A sea kayak orienteering event, which takes place annually on the rivers Esk, Irt and Mite and the Ravenglass Estuary. Competitors, including adults and children, take part for no longer than 3 hours.
- A fell racing event, which took place on hills that are outside of the survey areas used in the Sellafield habits survey.
- Railway maintenance in the Ravenglass Estuary, which was undertaken for approximately 4 weeks in 2016 and is planned for 7 weeks in 2019. This is part of a maintenance programme to bolster the Cumbrian coastline in order to protect the railway.

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

- 62 h y^{-1} for mud
- 100 h y^{-1} for mud and sand
- 410 h y^{-1} for mud, sand and stones
- 270 h y^{-1} for rock
- 210 h y^{-1} for salt marsh
- 660 h y^{-1} for sand
- 400 h y^{-1} for sand and stones
- 4.0 h y^{-1} for stones
- 130 h y^{-1} for boat on mud

The mean rates for the adult high-rate groups for handling were:

- 1400 h y^{-1} for handling fishing gear (nets and pots)
- 510 h y^{-1} for handling sediment

The maximum adult occupancy rates for water based activities were:

- 960 h y^{-1} for ‘in water’
- 1900 h y^{-1} for ‘on water’

Individuals in the child and infant age groups were recorded consuming aquatic foods and undertaking activities in the aquatic survey area.

The terrestrial survey area

The terrestrial survey area (see Figure 2, page 23) covered the land within 5 km of the Sellafield site centre. Thirty-six working farms were identified in the terrestrial survey area, producing milk (from dairy cattle), beef cattle, lambs, pigs, chickens and arable crops for animal feed. Grass (for silage and haylage), barley, turnips and oats were grown and used for animal feed on the farms where they were produced, and in one case, were sold to another farm as animal feed. Farmers and their families were consuming beef, milk and lamb produced on their own farms.

One allotment site and many private gardens were located in the survey area. A wide variety of fruit and vegetables were grown on the allotments and in the gardens. Three people used small amounts of seaweed as a fertiliser on their fruit and vegetables. Four beekeepers were interviewed who kept hives in the survey area and the consumption and sale of honey was recorded. Shooting took place on farmland in the area and pheasant, pigeon, duck (unspecified species), mallard, partridge, woodcock, rabbit, hare and venison were consumed. Wild foods such as blackberries, crab apples, elderberries and mushrooms were collected and consumed. Rainbow trout from a stocked freshwater pond and brown trout from the River Calder were being caught and consumed.

Foods from the terrestrial survey area were consumed from the following 16 food groups: green vegetables; other vegetables; root vegetables; potato; domestic fruit; milk; cattle meat; sheep meat; poultry; eggs; wild/free foods; rabbits/hares; honey; wild fungi; venison; freshwater fish. No consumption of locally produced pig meat was identified. 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, potato, domestic fruit, milk, cattle meat, sheep meat, poultry and eggs.

In the 2013 Sellafield habits survey, three households used spring water and one household used well water as their domestic supply. These households were unavailable for an interview during the 2018 survey. Livestock were consuming spring water, well water and had access to ditches and streams for drinking water.

The potential transfer of contamination off-site by wildlife was investigated, since radionuclides could enter the food chain or contaminate the environment through this pathway. Routine pest control was undertaken on site, including actively managing the seagull and pigeon populations on site by culling, egg pricking and discouraging nesting with netting.

The direct radiation survey area

The direct radiation survey area (see Figure 2, page 23) covered the land and sea 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 occupancy rates were analysed in zones according to the distance from the Sellafield 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 in all three zones were for residents, except for the highest outdoor occupancy rate in the >0.5 – 1.0 km zone which was for a farm worker.

Gamma dose rates were measured indoors and 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 Sellafield site centre. The measurements taken outdoors at the properties were not notably different from the background measurements but several of the indoor measurements were notably higher than the background readings. Since gamma dose rates are influenced by the nature of building materials, the substrate over which they are taken, and many other factors, the measurements taken inside properties are expected to be higher than those taken outdoors.

Comparisons with the previous survey

Comparisons were made with the results from the previous full Sellafield habits survey in 2013. For the consumption rates of foods from the aquatic survey area, the main differences in 2018 were that the mean consumption rate increased for crustaceans and wildfowl, and decreased for fish. The consumption of salt marsh grazed lamb was not identified. However, a new pathway was identified from the consumption of wild mushrooms growing on salt marsh in the Ravenglass Estuary (see Figure i, page 14).

The most notable change in intertidal occupancy was an increase in occupancy over rock (see Figure ii, page 14). The occupancy on a boat resting on mud was identified, for a person undertaking boat maintenance in the Ravenglass Estuary.

The most notable changes in the consumption rates of terrestrial foods were that pig meat was no longer consumed, the consumption of other vegetables, potatoes and venison decreased, and the consumption of sheep meat increased (see Figure iii, page 15).

The occupancy rates in the direct radiation survey area in 2018 were broadly similar to those in 2013 (see Figure iv, page 15). The highest indoor, outdoor and total occupancy rates in all three zones was

for residents, with the exception of the highest outdoor occupancy rate in the >0.5 – 1.0 km zone which was for a farm worker in both 2013 and 2018.

Figure i. Mean consumption rates for the high-rate groups for aquatic foods

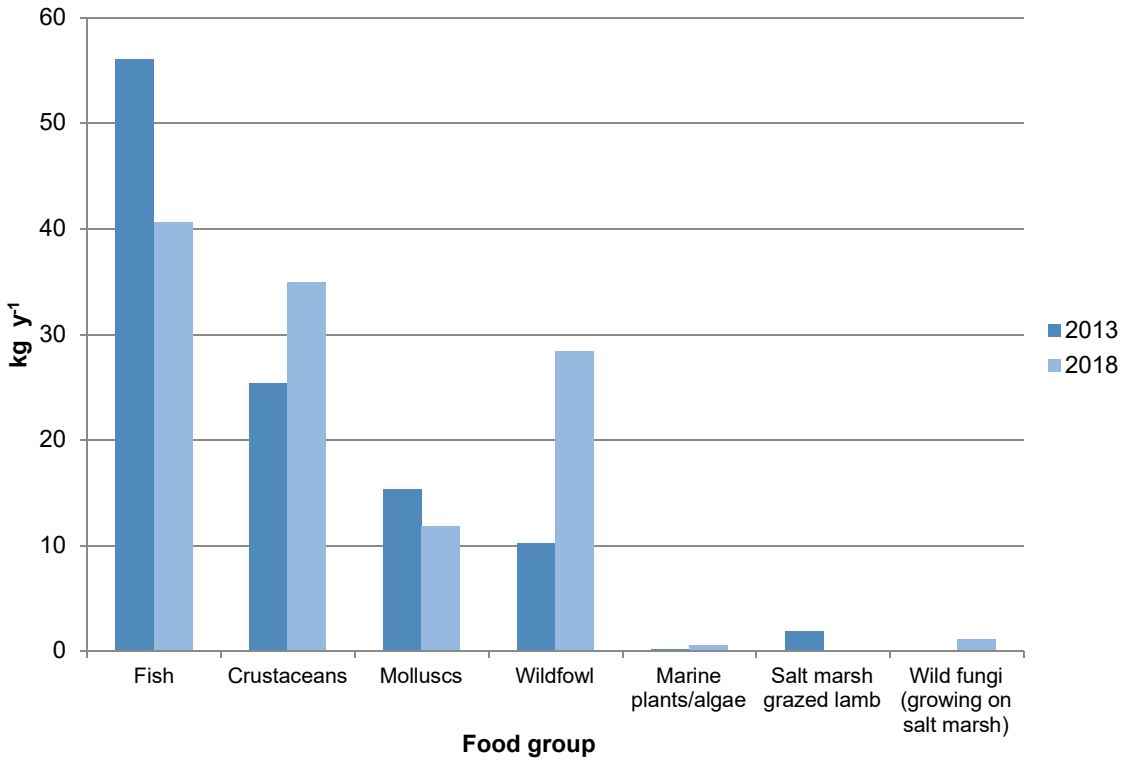
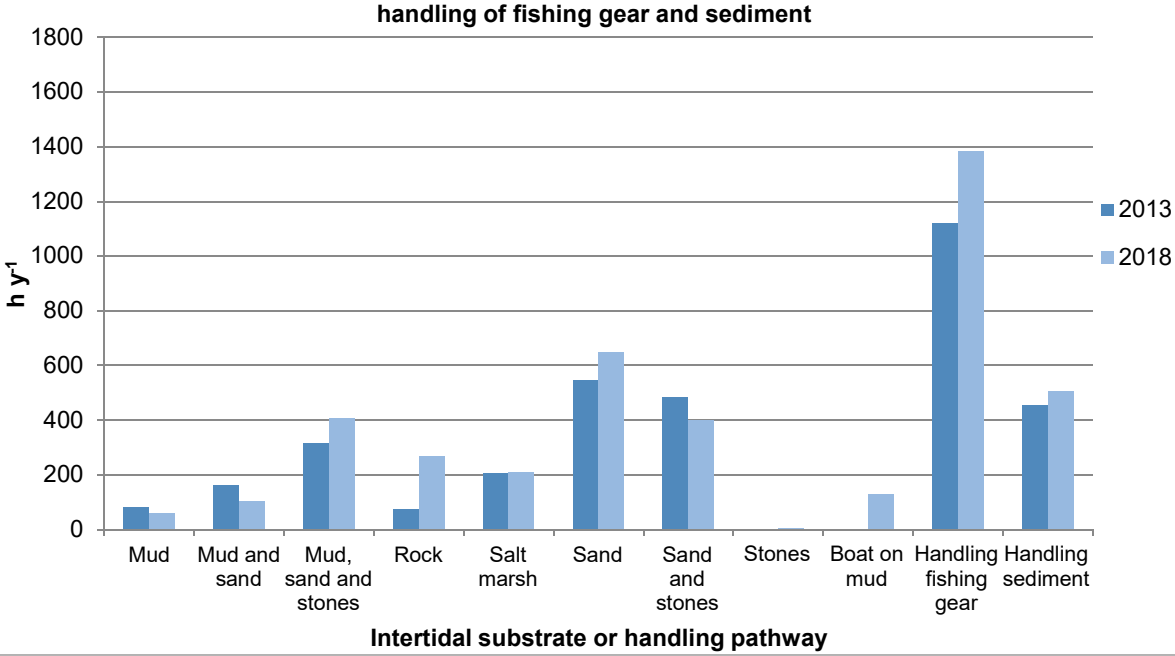


Figure ii. Mean rates for the high-rate groups for intertidal occupancy and handling of fishing gear and sediment



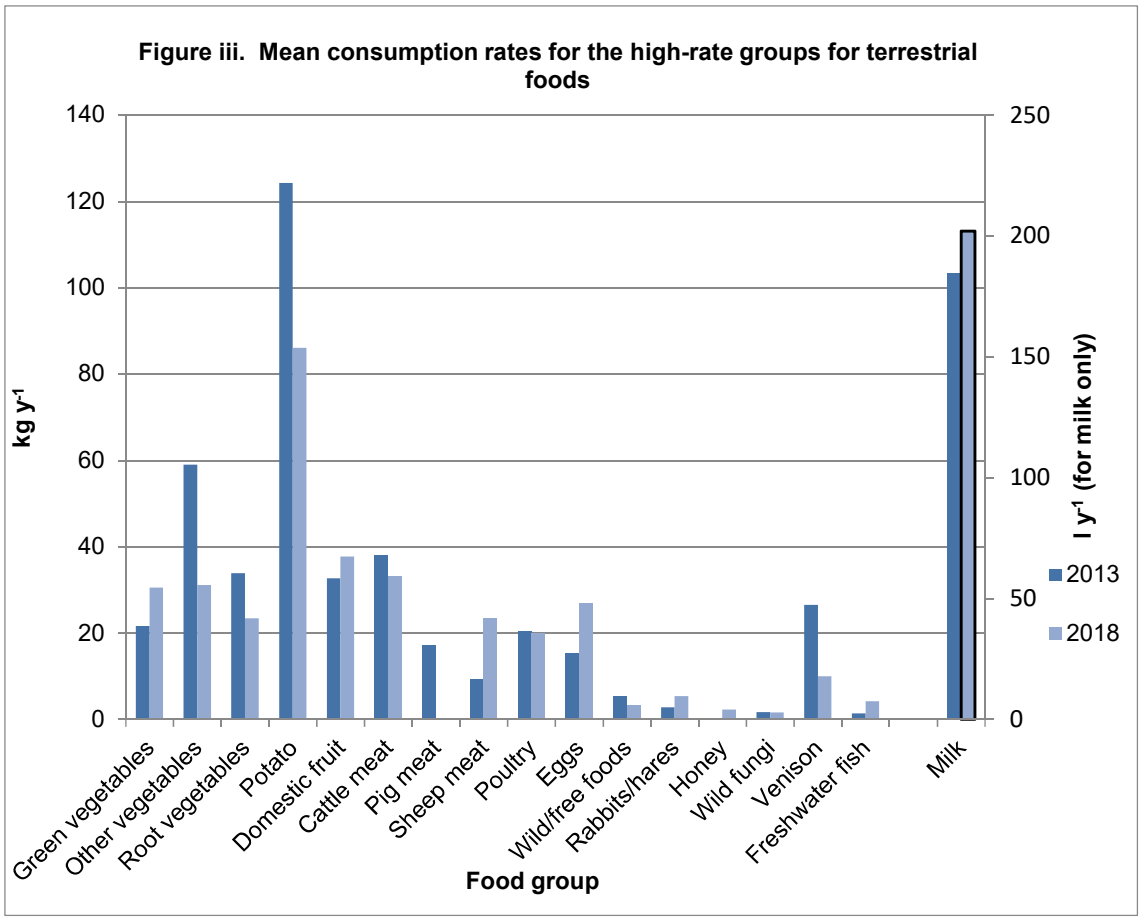


Figure iii. Mean consumption rates for the high-rate groups for terrestrial foods
kg y-1
l y-1 (for milk only)
140
120
100
80
60
40
20
0
250
200
150
100
50
0
2013
2018
Green vegetables
Other vegetables
Root vegetables
Potato
Domestic fruit
Cattle meat
Pig meat
Sheep meat
Poultry
Eggs
Wild/free foods
Rabbits/hares
Honey
Wild fungi
Venison
Freshwater fish
Milk
Food group

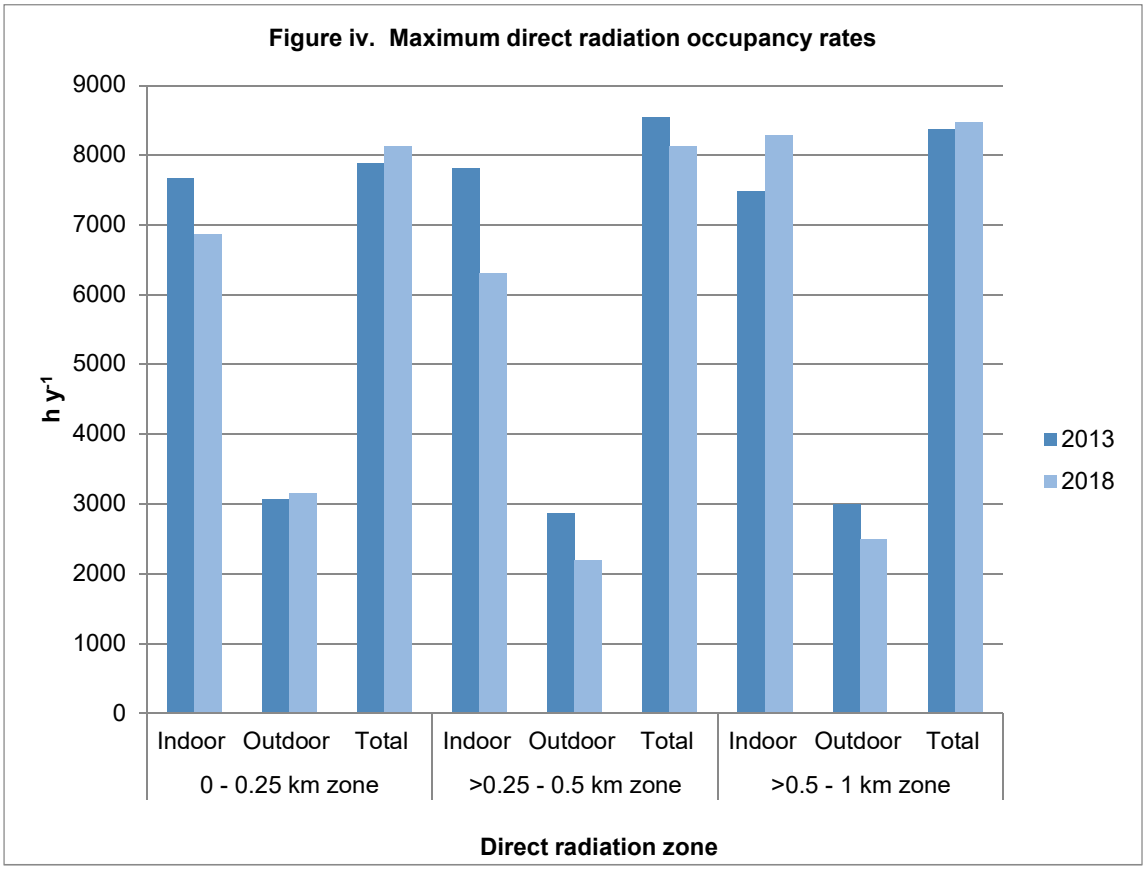


Figure iv. Maximum direct radiation occupancy rates
h y-1
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
2013
2018
Indoor
Outdoor
Total
0 - 0.25 km zone
>0.25 - 0.5 km zone
>0.5 - 1 km zone
Direct radiation zone

Habits survey information for consideration when selecting samples and measurements for monitoring programmes

The foods and intertidal locations identified in the 2018 Sellafield 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 10.2 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 Sellafield area and no changes are suggested.

1 Introduction

Members of the public might be exposed to radiation as a result of the operations of the Sellafield nuclear site, either through the permitted discharges of liquid or gaseous radioactive wastes into the local environment, or from radiation emanating directly from the site. This report provides information on activities carried out by members of the public in the vicinity of the Sellafield nuclear site, which may influence their radiation exposure. The study has been funded by the Environment Agency, the Food Standards Agency and the Office for Nuclear Regulation 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'.

1.1 Regulatory framework

In England, the Environment Agency regulates the discharges of radioactive waste under the Environmental Permitting (England and Wales) (Amendment) (No. 2) Regulations 2018 (UK Parliament, 2018). These new 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 Office for Nuclear Regulation (ONR) has implemented this legislation and is also responsible for regulating, under the Ionising Radiations Regulations 2017 (IRR 17) (UK Parliament, 2017), the exposure of the public to direct radiation from the operations occurring on these sites.

Appropriate discharge limits are set by the Environment Agency, after wide-ranging consultations that include the Food Standards Agency. The Food Standards Agency 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 Food Standards Agency also ensures that public radiation exposure via the food chain is within EU acceptable limits.

1.2 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 17. The requirement to observe the conditions laid down in the Basic Safety Standards (BSS) in England and Wales is incorporated in the Environmental Permitting (England and Wales) (Amendment) (No. 2) Regulations 2018 (UK Parliament, 2018). These require that the environment agencies ensure, wherever applicable, that:

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

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

The environment agencies are also required to ensure that the dose estimates are as realistic as possible for the population as a whole and for reference groups of the population. They are required to take all necessary steps to identify the reference groups of the population taking into account 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 (i.e. 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 *et al.*, 2005). NDAWG agreed that the optimal method for performing retrospective dose assessments would be to use habits profiles (profiling method) as described in Camplin *et al*. (2005). This approach was adopted in Radioactivity in Food and the Environment (RIFE) publications, (e.g. EA, FSA, FSS, NRW, NIEA and SEPA, 2017). 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, Public Health England (formerly, Health Protection Agency) and the Food Standards Agency jointly produced an update of the 2002 interim guidance and principles for assessing prospective doses (EA, SEPA, NIEA, HPA and FSA, 2012).

2 The Survey

2.1 Site activity

The Sellafield nuclear site is located on the Cumbrian coast, approximately 12 km south-east of the coastal town of Whitehaven. The main activities on the Sellafield site are: fuel reprocessing at the Magnox Reprocessing Plant; decommissioning and clean up of redundant nuclear facilities; and waste treatment and storage. The reprocessing of fuel at the Thermal Oxide Reprocessing Plant (THORP) was completed with the last fuel being sheared in November 2018. Once this fuel has been through the chemical plant, the THORP facility will enter a Post-Operative Clear Out (POCO) and will continue to store oxide fuels. The site also contains the Calder Hall Magnox nuclear power station, which ceased generating in 2003 and is undergoing decommissioning. Completion of Magnox reprocessing is expected in 2020 (NDA, 2018). Windscale, which includes three reactors currently being decommissioned, is also located within the Sellafield site. The Sellafield nuclear site is operated by Sellafield Limited and is owned by the Nuclear Decommissioning Authority (NDA).

Under the Radioactive Substances Regulation of the Environmental Permitting (England and Wales) (Amendment) (No. 2) Regulations 2018, Sellafield Ltd is permitted to undertake radioactive substances activities at the Sellafield site. This includes permission to discharge gaseous radioactive wastes via stacks to the atmosphere and liquid radioactive wastes into the Irish Sea. The permit has been varied to facilitate the disposal of decommissioning waste from the site. The site is licensed for the purposes of operating certain activities prescribed under the Nuclear Installations Act, 1965. The site contains sources of direct radiation. Details of the amounts of gaseous and liquid radioactive waste discharged are published in the RIFE reports, for example, EA, FSA, FSS, NRW, NIEA and SEPA, 2018.

Windscale was historically a separate licensed site located at Sellafield, however in 2008, the Windscale permit was transferred from UKAEA to Sellafield Ltd, and combined with the Sellafield site permit. Sellafield Ltd were granted a new site license effective from 1 April 2017, which covers Sellafield only, therefore amalgamating the Sellafield and Windscale nuclear sites. Discharges of gaseous and liquid radioactive wastes from Windscale are minor compared to the Sellafield site and are included as part of the permitted Sellafield discharges (EA, FSA, FSS, NRW, NIEA and SEPA, 2018).

2.2 Survey objectives

The Centre for Environment, Fisheries & Aquaculture Science (Cefas) undertook the Sellafield habits survey in 2018 on behalf of the Environment Agency, the Food Standards Agency, and the Office for Nuclear Regulation. 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 Sellafield nuclear site.

Specifically, investigations were conducted into the following:

- The consumption of food from the aquatic survey area
- Activities and occupancy over intertidal substrates
- The handling of fishing gear and sediment
- Activities and occupancy in and on water
- The use of seaweed as a fertiliser or animal feed
- 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
- A range of leisure activities and railway maintenance taking place in the Ravenglass Estuary, which were raised with the Environment Agency by a member of the public at an open meeting of the West Cumbria Sites Stakeholder Group (WCSSG).

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

2.3 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 site.

The aquatic survey area (shown in Figure 1, page 22) covered all tidal waters and intertidal areas from Parton (in the north) to Tarn Bay (in the south) and extended 11 km offshore. The Ravenglass Estuary and tidal stretches of the rivers Calder, Ehen, Irt, Mite and Esk were also included. This area was taken to represent the predominant area of mixing of discharged radionuclides in seawater. The Low Level Waste Repository (LLWR) site is located south-east of the Sellafield site (approximately 5 km between the centre of both sites). Due to the proximity, the aquatic survey area is the same for both sites and the terrestrial survey areas of both sites overlap.

The terrestrial survey area (see Figure 2, page 23) covered the land within 5 km of the site centre (National Grid Reference: NY 028 038), to encompass the main areas of potential deposition from gaseous discharges.

The direct radiation survey area (see Figure 2, page 23) covered the land and sea within 1 km of the 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.

The same aquatic, terrestrial and direct radiation survey areas were used in the previous habits survey conducted by Cefas in the Sellafield area, which was in 2013 (Clyne *et al*., 2014).

Figure 1. The Sellafield aquatic survey area

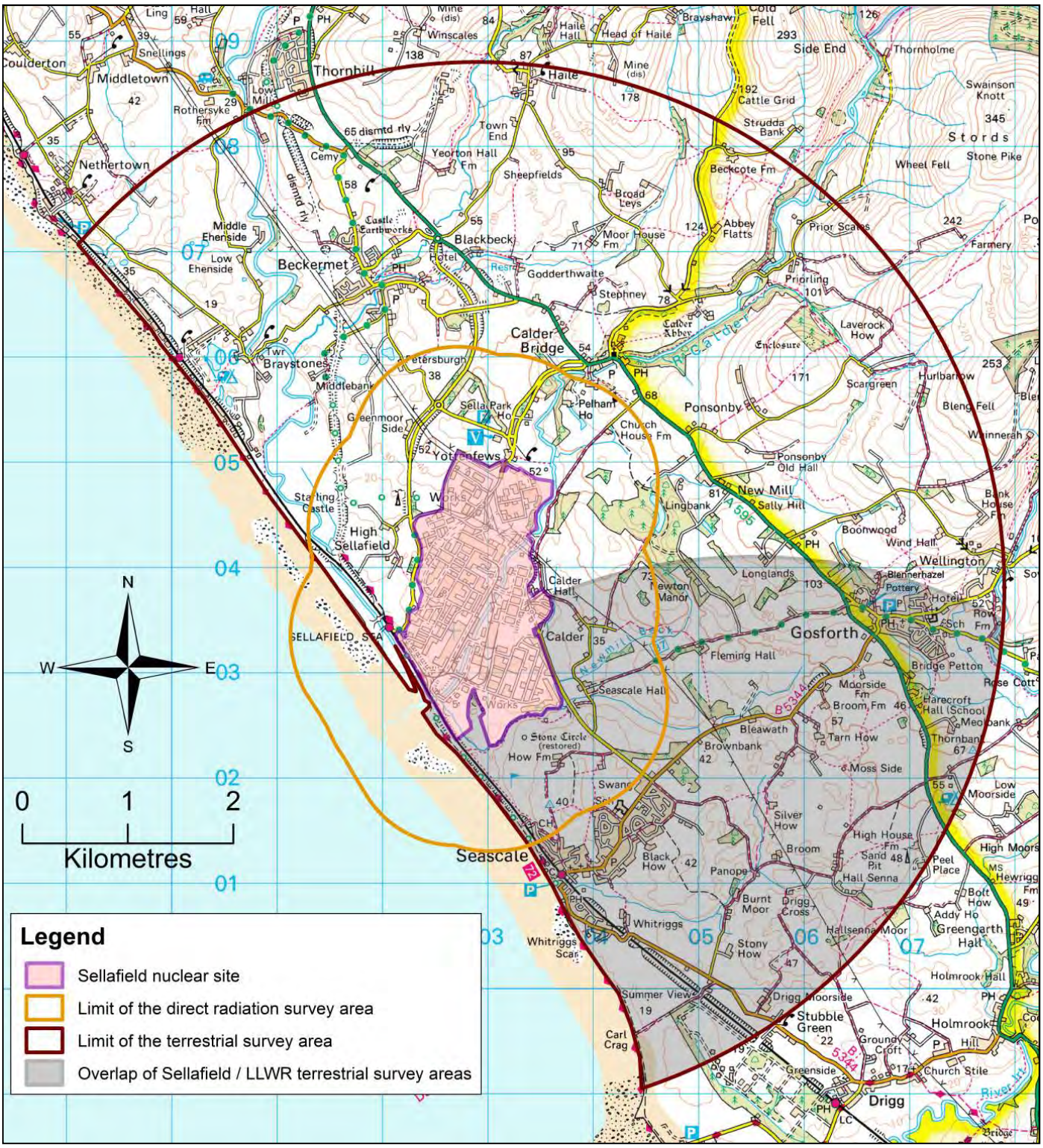


Figure 2. The Sellafield terrestrial and direct radiation survey areas

2.4 Conduct of the survey

As part of the pre-survey preparation, the Environment Agency, the Food Standards Agency and the Office for Nuclear Regulation 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 Sellafield nuclear site. People with local knowledge of the survey area were contacted for information relevant to the various exposure pathways. These included North Western Inshore Fisheries and Conservation Authority (NWIFCA) fisheries officers who provided information on fishing permits and restrictions, Marine Management Organisation who provided information on fishing further offshore and fishing boats that use Whitehaven Harbour, and Sellafield Ltd who provided information about the local allotment site and general activities.

A proposed programme for fieldwork was distributed to the Environment Agency, the Food Standards Agency, and the Office for Nuclear Regulation before the fieldwork commenced, for their comment. The Environment Agency requested a number of new activities to be investigated within the Ravenglass Estuary. These included: works on the Ravenglass Viaduct, an obstacle course race; a sea kayaking orienteering event and fell racing.

The fieldwork was carried out from the 6th to the 16th August 2018 according to techniques described by Leonard *et al.* (1982). During the fieldwork a meeting was held between members of the survey team and representatives from Sellafield Ltd. This discussion 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 meeting:

- Routine operations were being undertaken on the site at the time of the habits survey including: decommissioning and clean-up, reprocessing and storage and transfer of THORP storage ponds to long term storage and waste store.
- A 130 m high separation area and ventilation stack has been built close to the perimeter in north-west of the Sellafield site. This has replaced the Magnox reprocessing stack which is no longer a discharge point.
- The site outfalls remain unchanged since 2013.
- At the time of the meeting it was anticipated that THORP would close in November 2018. Final processing of material was expected to be completed within the 2018-2019 financial year.
- Control measures taken to limit the possibility that contamination is transferred off-site by wildlife include culling seagulls and pricking their eggs on site; and discouraging the nesting of pigeons on the site by restricting access with nets. Three deer were culled during security fence enhancement in November 2016 when they were caught between the fences.

- Information about potential exposure pathways and activities in the area included: NuGen offices based on the Moorside site, the golf course located in the direct radiation survey area, the Royal National Lifeboat Institution (RNLI) station at St Bees, Nuvia beach monitoring and unoccupied farms in the terrestrial survey area.

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, commercial fishermen, anglers, people spending time on intertidal 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 intertidal substrates in the aquatic area, and indoors and outdoors at most properties in the direct radiation survey area where interviews were conducted. Background gamma dose rates were taken at a distance beyond 5 km from the site centre. All gamma dose rate measurements were taken using a Thermo RadEye GX Survey Meter 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 Sellafield 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 as a percentage of the estimated complete coverage for that group (where it was possible to make such an estimate) has been calculated. The results are summarised in Table 1. These 'groups' are described and quantified, and the numbers of people for whom data were obtained are given as percentages of the totals. For certain groups, such as anglers, it can be virtually impossible to calculate the total number of people who undertake the activity in the survey area because it is difficult to quantify visitors from outside the area or occasional visitors during the year. Based on UK Office of National Statistics residential data for electoral wards (www.ons.gov.uk) there were approximately 4050 people living in the terrestrial survey area, although information was obtained for a significantly smaller number than this. 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 2employees 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.

3 Methods for data analysis

3.1 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 (e.g. 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 and Annex 2 for children and 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 3. Information obtained for railway maintenance works in the Ravenglass Estuary has been included in Annex 3 as the works were being undertaken before this survey in 2016 and works are proposed in 2019. The information provided in Annex 3 will enable a dose assessment to be undertaken for this activity, if required.

3.2 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 (e.g. 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 and Good Housekeeping, 1994), edible fraction data researched by Cefas, and information supplied by the Meat and Livestock Commission.

3.3 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 97.5th 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 2. 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'. Similarly, for aquatic food consumption, all crustacean species are grouped as 'crustaceans'. For external exposure over intertidal sediments, occupancies over the same substrate (e.g. sand) 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 A below, together with those used in reports prior to 2010, for comparison.

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

Age ranges used from 2010 onwards			Age ranges used prior to 2010	
Name of age group[a]	**Age range in group**		**Name of age group**	**Age range in group**
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.

3.4 Approaches for the identification of high rates

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

Firstly, the 'cut-off' method described by Hunt *et al.* (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, intertidal substrate and handling pathway identified in the survey. In certain cases, using the 'cut-off' method resulted in only one person being in the high-rate group. In these cases, expert judgement was used to decide whether the high-rate group should remain as one individual or whether others should be included. If others were included, the second highest rate was divided by three and all observations above this secondary 'cut-off' were included in the high-rate group.

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 *et al.,* 1995.

The mean rates for the high-rate groups for children and infants for consumption, intertidal 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 intertidal

occupancy pathways, based on generic 97.5th percentile rates, are provided in Annex 4. The age ranges within the age groups in Annex 4 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 foetal dose, consumption and occupancy rates are provided in Annex 5 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.

3.5 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 *et. al.,* 2005. The profiles for adults are used to assess total dose integrated across all pathways of exposure in the RIFE reports (e.g. EA, FSA, FSS, NRW, NIEA, and SEPA, 2018).

Matrices of profiles for adults, children, infants and women of childbearing age are presented in Annexes 6 to 9 respectively. 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.

3.6 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 taken into account 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 Environment Agency, the Food Standards Agency and the Office for Nuclear Regulation.
- Final reports were only issued when the Environment Agency, the Food Standards Agency and the Office for Nuclear Regulation were entirely satisfied with the format and content of the draft report.

4 Aquatic radiation pathways

4.1 Aquatic survey area

The aquatic survey area (shown in Figure 1, page 22) covered all tidal waters and intertidal areas from Parton in the north to Tarn Bay in the south and extended 11 km offshore. The Ravenglass Estuary and tidal stretches of the rivers Calder, Ehen, Irt, Mite and Esk were also included. This area is the same as the aquatic survey area used in the habits survey for the LLWR site near Drigg.

The shore in the northern part of the survey area between Parton and St Bees is predominately rocky except for the beaches at Parton, Whitehaven, Fleswick and St Bees. From St Bees to Drigg, the low-lying shore is primarily a mixture of sand, stones and boulder scars with extensive areas of sand or mud and sand exposed at low tide. The rivers Calder and Ehen converge to the south-west of the Sellafield site. The Drigg Dunes Nature Reserve comprises a large sand dune system to the north of the Ravenglass Estuary. The rivers Irt, Mite and Esk converge at the Ravenglass Estuary, which has a gradation from sand at the narrow mouth of the estuary to mud and salt marsh with vast areas of mud, sand and stones at low tide. Tarn Bay at the southernmost point of the survey area is a 4 km long sand and stones beach in front of the Ministry of Defence (MOD) owned Eskmeals firing range. The Cumbrian Coastal Way is a popular long-distance walk which follows the shore and the Ravenglass Estuary along the entire survey area. Network Rail have been undertaking works along the Cumbrian coastline to bolster the sea defences to protect the railway.

Parton

Parton (see Figure 3, page 33) is located at the northernmost point of the survey area. The beach at Parton has a stony upper shore with large sea defence boulders that meet the land. The mid and lower shore is sand interspersed with a mixture of mud, stones and rocks. Activities identified at Parton included walking, dog walking, angling, swimming, playing on the beach, snorkelling, working on a quad bike, collecting winkles, collecting clams and collecting mussels. On a spring tide, the water at high tide reaches the sea defence boulders so the dog walkers walk along a grassy path. There is a public slipway for launching small boats, with a nearby car park and secure compound where members of an angling club keep their boats and fishing gear. Hobby fishermen were identified setting pots offshore for crab and lobster.

Figure 3. Parton

Whitehaven

Whitehaven north beach is a mixture of sand and stones backed by large sea defence boulders. It is easily accessed from nearby car parks and was popular with walkers, dog walkers and anglers. Whitey Rock is located at the northern end of the beach. In previous surveys, mussels have been collected from Whitey Rock, but this was not identified in this survey.

The harbour at Whitehaven is split into two parts: the outer harbour, which partially dries out at low tide; and an inner harbour, which is kept at a constant sea level by maintained lock gates. Whitehaven marina has experienced a regeneration in the last ten years with over £1 million of investment to improve the harbour and its facilities (www.marinaprojects.com). The marina offered 400 fully serviced pontoon berths for leisure and commercial fishing vessels, and also has a pontoon for wind farm vessels to berth on (www.whitehavenmarina.co.uk). The commercial fishing vessels were predominately *Nephrops* trawlers with several potting vessels; most of the trawlers were tied up in the harbour for the duration of the habits survey. As part of the harbour maintenance, mussels are removed from the sea lock and are disposed of. The public are not permitted to take mussels from the lock. There is no routine dredging in the harbour, however, the inner harbour might be dredged in future to allow for larger boats to dock. In the outer harbour, the upper shore is predominately sand, which was popular with dog walkers. At low tide, a large expanse of mud and sand is exposed (see Figure 4, page 34), which is a well-used area by bait diggers. At high tide, a youth project used the outer harbour for water sports including canoeing, paddle boarding and kayaking.

Figure 4. Whitehaven Outer Harbour

The north and south piers of the harbour extended into the sea and were popular with anglers who preferred to fish into deep water (see Figure 5, below). Local angling clubs held regular fishing competitions in the area.

Figure 5. Whitehaven Harbour North Pier

Whitehaven south beach is predominately sand and stones with patches of rocks. The cliff is unstable due to an historic colliery spoil, (which was thought to be disposed of at this location in the 1800's) and access to the beach is restricted due to a fatality in 2007. Nobody was identified using this beach during the habits survey.

St Bees

St Bees Head has steep sandstone cliffs, which are popular with rock climbers. The shore around St Bees Head is accessed via several paths down the cliffs, the easiest of which leads to Fleswick Bay. Angling, bush craft sessions and walking took place on the shore at Fleswick. The beach at St Bees has a stony bank on the upper shore and is sand on the mid to lower shore (see Figure 6, below). There are rock pools at the northern end of the beach where it meets St Bees Head.

Figure 6. St Bees

The 2 km long beach at St Bees is very popular with locals, tourists and people staying at the caravan site at the northern end of the beach. There is a large car park by the beach at St Bees and another car park at the southern end of the beach at Seamill. Angling, dog walking, litter collecting, paddleboarding, paragliding, walking, dog walking, beachcombing, quad biking, metal detecting, bush craft sessions and playing on the beach were identified being undertaken. People were also swimming and paddling. Many of the activities were taking place at the northern end of the beach. The Cumbrian Wildlife Trust organised an annual beach sculpture competition at St Bees in the summer, this attracted several hundred people and also included rock pooling and kite flying. Seaweed (*Porphyra)* was collected from the southern end of the beach which was collected for commercial purposes to make

laverbread. Winkles and mussels were collected from the northern end of the beach for personal consumption. The Royal National Lifeboat Institution (RNLI) has a station based at St Bees and volunteers regularly respond to service calls and run training exercises within the survey area. Small leisure craft can be launched from the public slipway; however, this was not observed during the survey.

Coulderton, Nethertown and Braystones

To the south of Seamill, a railway track inhibits access to the shore. However, further south there is access to the beach at the villages of Coulderton, Nethertown and Braystones. There is no public parking at Coulderton but there is vehicle access to the houses on the shore. There is a large parking area at Nethertown and a small parking area at Braystones. At Coulderton and Nethertown, the upper shore has a bank of stones and the mid to lower shore has a mixture of boulders stone scars with reefs of honeycomb worm (*Sabellaria alveolata*) interspersed with areas of sand (see Figure 7, below). The boulder scar at Nethertown is a popular location for collecting winkles.

Figure 7. Nethertown

The beach at Braystones is similar but with larger areas of sand, and mud and sand exposed at low tide. There are beach chalets situated at the top of the stone bank at Coulderton, Nethertown and Braystones, which are used as residential and holiday homes. There are two large static caravan sites at Braystones, one is a holiday park with caravans to hire and the other is a private site. The beaches were used by the beach chalet residents and those at the caravan sites who were angling, bait digging, canoeing, walking, dog walking, jet skiing, paddleboarding, practising golf on the beach, rock pooling, sunbathing and swimming. Several types of shellfish and marine plants were collected from the shore:

mussels and winkles at Coulderton; limpets and winkles from Coulderton and Nethertown; and sea lettuce, *Porphyra* (for laverbread) and winkles from Braystones. Hobby boat and angling boats were observed pulled up on the shore at Coulderton and hobby fishermen were identified setting pots at Coulderton for brown crab and common lobsters. Hobby fishermen were setting nets and lines from the shore at Braystones and Nethertown for mixed fish species. Network Rail installed 'Rip Rap rock' sea defences against the embankment at Braystones in March 2018.

Sellafield

The beach at Sellafield is mainly sand with boulder scars, and towards the confluence of the rivers Ehen and Calder, the shore is predominantly sand and stones. The beach is backed by sand dunes, behind which, the River Ehen flows from the north-west along the southern end of the Sellafield site. The River Calder flows from the north-east through the Sellafield site and converges with the River Ehen at the Calder Viaduct before flowing out to sea. The beach could be accessed by walking along the beach from Braystones and Seascale. Many people drove their vehicles along the beach from Braystones towards Sellafield (see Figure 8, below). Access to the beach was also possible via a coastal cycle track from Seascale. Individuals were identified dog walking, angling, monitoring for radioactive particles in a vehicle, beachcombing, quad biking and collecting litter. *Porphyra* was being collected on the boulder scars for laverbread. Angling took place on the lower stretches of the River Ehen for salmon and a hobby fisherman was setting nets from the shore. Network Rail are planning to carry out works to repair the existing concrete sea wall at Sellafield and install rocks to protect the Sellafield viaduct from scour, between January and March 2019.

Figure 8. Looking towards Sellafield from Braystones

Seascale

Seascale is a popular tourist destination, which has good access to the shore, a large car park and local amenities. The shore is predominately sand with a strip of stones on the upper shore and boulder scars. Activities identified at Seascale included bait digging, dog walking, horse riding, kayaking, paddleboarding, paddling, swimming, walking, taking photographs, playing on the beach, bush craft sessions and monitoring for radioactive particles in a vehicle. There is a public slipway for launching small boats and a secure compound where members of an angling club keep their boats. Many families were visiting on holiday during the survey. The beach was particularly busy close to the amenities and walkers and dog walkers were mainly found further along the beach. One individual collected winkles and mussels from the scars for their own consumption.

Drigg

The beach at Drigg is predominantly sand, with a strip of stones on the upper shore, boulder scars on the lower shore, and is backed by complex sand dunes, (see Figure 9, below). There is one access road to the shore and an adequate parking area. Activities identified at Drigg beach included playing on the beach, sitting on the beach, swimming, taking photographs, walking, dog walking, shore angling, boat angling, collecting driftwood, horse riding, collecting litter and driving a tractor. There are two main boulder scars: Drigg Barn Scar and Kokoarrah Scar, the latter of which is below the low water mark and can only be accessed by foot at low water on a spring tide. Brown crab and common lobster were caught from the boulder scars by using hand held crabbing hooks, caught by hand, and pots were set from the shore. A few individuals collected winkles from the scars, two of whom also collected mussels.

Figure 9. Drigg beach, looking north towards the Sellafield site

The River Irt and Saltcoats

The River Irt flows from the north-east past Holmrook, through farmland, along the sand dunes at Drigg, and flows into the Ravenglass Estuary to the south of Saltcoats Village. The river can be accessed via farm fields, or one track which runs from Shore Road at the southern side of the LLWR site to a ford. Three activities were identified taking place along the lower stretches of the River Irt, which were wildfowling, kayaking and jet skiing. The shore at Saltcoats is a mixture of mud, sand, stones and saltmarsh. There is a popular caravan site with privately owned caravans at Saltcoats. Activities being undertaken at Saltcoats and the River Irt included tending to livestock on saltmarsh, walking and dog walking.

River Mite, Ravenglass and the Ravenglass Estuary

The River Mite flows from the north-east through farmland and past the village of Ravenglass where it joins the rivers Irt and Esk in the Ravenglass Estuary. The River Mite can be crossed at very low tide via a ford between Saltcoats and Ravenglass. There is a railway and pedestrian bridge over the River Mite from Saltcoats to Ravenglass.

Ravenglass is a busy tourist village with easy access to the shore via steps and two slipways at either end of the village. The upper shore is a mixture of mud, sand and stones leading to a soft mud at the lower shore at low tide (see Figure 10, below).

Figure 10. Ravenglass

Walkers and dog walkers frequently used the beach and many tourists were found walking on the beach for short amounts of time. Houses back onto the shore at Ravenglass and residents spent time on the shore including for property maintenance. Mussels were collected at Ravenglass for consumption by three individuals. Shore and boat angling and collecting peeler crabs for bait also took place. In previous years, commercial dredging of mussels offshore was identified, but this was reported to have closed. Activities being undertaken in the Ravenglass Estuary included collecting seaweed, samphire collection, wildfowling, kayaking, canoeing, boat maintenance, horse riding, jet skiing, sailing, quad biking, collecting litter and paddleboarding. Multiple boats are moored up in the estuary which rest on the mud at low tide.

A canoe club runs an annual navigation event at Ravenglass. Competitors orienteer around the course, which covers the rivers Irt, Mite and Esk, on kayaks, in canoes and on paddleboards. Adults and children competed the course with a race time of 130 – 240 minutes. An obstacle course race takes place annually around the Ravenglass Estuary and the River Esk and participants in the race spent approximately 20 mins in the mud and 20 minutes in water. A fell racing event takes place on hills which were outside of our survey areas.

Network Rail undertook maintenance work on the railway at Ravenglass in 2016. This work included the installation of rock armour and pitching repairs, which was undertaken over a 4 week period. Further maintenance work is planned between Ravenglass and Walls Bridge (south of Ravenglass) in 2019. This is expected to last for approximately 7 weeks. This information has been included in Annex 3 for assessments purposes.

The River Esk

The River Esk flows from the north-east, under the Eskmeals Viaduct and into the Ravenglass Estuary where it joins the rivers Irt and Mite. The banks of the river are predominately soft mud and salt marsh. There are two fords on the lower stretches of the Esk, one near Waberthwaite Church and one near to the Eskmeals Viaduct, where it is possible to cross the river at very low tide. The ford near Waberthwaite Church has soft steep banks and deep gullies. The River Esk ford near the Eskmeals Viaduct has a firm substrate of mud, sand and stones, and the banks of the river at this location are salt marsh and soft mud. Nobody was identified crossing the fords at the time of the survey. Angling, wildfowling and paddleboarding was taking place along the River Esk and wildfowling was taking place at Newbiggin Marsh. Mushrooms were collected for consumption from salt marsh on the River Esk.

Eskmeals and Tarn Bay

To the south of Ravenglass Estuary, a shingle spit marks the start of the Eskmeals Dunes Nature Reserve. The sand, shingle and salt marsh shore and extensive sand dune system can be accessed via a footpath running alongside the River Esk or along the shoreline from Eskmeals. Eskmeals Dunes

is leased by Cumbria Wildlife Trust from the Ministry of Defence (MOD). The MOD Eskmeals firing range is operational to the south of the nature reserve and runs parallel to the coastline for approximately 3 km. The beach alongside the Eskmeals firing range is predominantly sand with patches of stones and a large expanse of mud, sand and boulder scars at low tide. The beach can be accessed through the nature reserve or via a road at the southern end of the beach near Tarn Bay. Eskmeals was particularly popular with bait diggers and dog walkers. The nature reserve and parts of the beach are closed to the public when firing is taking place on the range. Tarn Bay marks the southern limit of the survey area and the shore is stones and sand.

4.2 Commercial fisheries

Approximately 10 small commercial trawlers were based at Whitehaven Harbour, which is the only fishing port in the survey area. The trawlers mainly fished for *Nephrops* as well as mixed fish species. For a number of years, the *Nephrops* fishery in the area has been declining and the fishery has been reported to be poor. As the vessels are relatively small they are subject to weather conditions, which has an impact on the frequency of their fishing trips. Throughout the survey, the trawler vessels were docked in the harbour.

Three potting boats were identified fishing for brown crabs and common lobsters in the survey area and one of the boats was also catching small quantities of whelks. The fishermen moored their boats at Whitehaven Harbour, with one boat used part time moored in the Ravenglass Estuary. The main potting areas were from Parton to Nethertown and Sellafield to Tarn Bay.

At the time of the last full habits survey in 2013, there was one classified shellfish bed in the survey area where the commercial fishing for mussels was permitted. In 2018, this fishery was reported to have closed.

North Western Inshore Fisheries and Conservation Authority (NWIFCA) had established a voluntary no netting area around St Bees Head in order to protect nesting sea birds.

4.3 Destination of seafood originating from the aquatic survey area

Small quantities of fish, *Nephrops,* brown crabs and common lobsters were sold locally, but the bulk of the commercial catch was consumed outside the survey area. Most of the fish were sent to Fleetwood and Lowestoft markets with smaller quantities sent to North Shields market. Most of the *Nephrops* were sent to processors before being sold throughout the UK and exported to Europe. Brown crabs and common lobsters were exported to France and Spain. Whelks were exported to South Asia.

4.4 Hobby fishing and angling and non-commercial shellfish collection

In this report, the term 'hobby fishing' is used to describe recreational fishing on a small scale with gear such as nets or pots. It is usually carried out by fishermen who do not have commercial fishing licences and therefore it is illegal to offer the catch for sale. Several hobby fishermen operated in the survey area who were mainly potting offshore of Parton, Drigg and Whitehaven north beach or setting nets from the shore at Braystones, Coulderton and Seascale. Hobby fishermen mainly caught brown crabs, common lobster, brown shrimps, cod, thornback ray, mackerel and plaice.

Individuals caught brown crabs and common lobsters from the boulder scars at Drigg by hand and using hand held crabbing hooks. The catches were consumed by the fishermen's families and friends.

Boat angling was very popular throughout the survey area with numerous private angling boats based at Whitehaven Harbour and in the Ravenglass Estuary as well as being launched from slipways at Parton, St Bees and Seascale, or being launched from the shore at Coulderton, Nethertown and Braystones. Shore angling was also popular at many locations including Parton, Whitehaven Harbour north and south piers, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale, Drigg, Eskmeals and Tarn Bay. The main edible species caught by anglers were cod, mackerel, plaice, pollack and thornback ray. Anglers were also identified fishing for salmon, brown trout and sea trout on the lower stretches of the rivers Ehen, Irt and Esk.

Three people were identified consuming large quantities of molluscs, which were winkles from Nethertown and Coulderton, and mussels from Parton. Many people were identified collecting and consuming small quantities of winkles from Parton, St Bees, Coulderton, Nethertown, Drigg and Eskmeals, collecting limpets from Coulderton and Nethertown, collecting mussels from Parton, St Bees, Coulderton, Seascale, Drigg and Ravenglass, collecting clams from Parton, and collecting cockles from Ravenglass. Whelks were caught as a by-catch of a commercial potting vessel and were consumed by one individual. The consumption of large quantities of molluscs has been in steady decline for a number of years. Historically, in the Sellafield area there were larger numbers of people that were collecting significant quantities molluscs for consumption, including winkles, mussels, cockles and razor shells. Local people have reported that there are less people collecting molluscs than in previous years and several people (previously interviewed) have now stopped collecting and consuming molluscs for reasons such as old age and ill health. It was also reported that members of the public are no longer permitted to collect shellfish from the shore in the Ravenglass area although a small quantity of mussels were being consumed from this area.

4.5 Wildfowling

Two wildfowling clubs were identified shooting in the survey area. One club, with approximately 30 members, had the rights to shoot on the rivers Irt and Mite. The other club, with approximately seven

members, had the rights to shoot on the River Esk at Newbiggin Marsh. The wildfowling season is from 1st September to 20th February. The wildfowl being shot included goose (unspecified species), mallard, snipe, teal and wigeon. Wildfowlers were shooting over salt marsh and mud and came into contact with the sediment when lying or kneeling in gullies or the edge of river banks.

4.6 Other pathways

One person was identified collecting small quantities of wild mushrooms from salt marsh on the River Esk, which were consumed by themselves and their family. Seaweed was collected from Parton, Ravenglass and Nethertown to use as a soil fertiliser on two vegetable gardens outside the terrestrial survey area and an allotment plot within the terrestrial survey area. *Porphyra* was collected from the boulder scars at St Bees, Braystones and Sellafield and was sold to a processor in Wales to make laverbread.

A beach monitoring programme using a vehicle-mounted detector system to monitor local beaches for radioactive particles and objects continued to be undertaken by Nuvia on behalf of Sellafield Ltd. "Particles and objects" are terms used which encompass discrete radioactive items which can range in radioactivity concentration, size and origin. "Particles" include radioactive scale, fragments of irradiated nuclear fuel, incinerated waste materials (typically less than 2mm in diameter). "Objects" are larger radioactive artefacts (e.g. dials) and stones which have radioactive contamination on their surface and are larger than 2mm in size. Particles are not physically the same at each of the sites mentioned but can be compared according to the hazard posed (EA, FSA, FSS, NRW, NIEA, and SEPA, 2018). Any radioactive objects that are found are removed from the beach and sent for laboratory analysis. The beach monitoring programme mainly focusses on the areas between Braystones and Sellafield but also monitors beaches throughout the survey area used in this habits survey.
(www.gov.uk/goverment/publications/monitoring-beaches-near-sellafield-for-radioactive-material)

Additional information was collected during this survey for use in the review of the particles risk assessment. This included information on where people spent time on the beaches and how people were dressed when they visit the beaches.

4.7 Food consumption data

Consumption data for aquatic foods are presented in Tables 3 to 8 for adults and in Tables 9 to 11 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 3.4, are given at the foot of each table.

Adults', children's and infants' consumption rates of vegetables and fruit that were grown on land that had been fertilised with seaweed collected from the shore in the aquatic survey area are presented in

Tables 12 and 13, for use in studies of the potential dose arising from the possible transfer of radionuclides from sea to land.

Adults' consumption rates

The people consuming the greatest quantities of food from the aquatic survey area were commercial fishermen, anglers and the families and friends of these groups of people.

Table B (below) presents a summary of the adults' consumption rates for the following food groups: fish; crustaceans; molluscs; wildfowl; marine plants/algae; wild fungi growing on salt marsh. 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 for fish, crustaceans and molluscs based on national data, which are referred to as 'generic' data in this report. No generic consumption rates are available for wildfowl, marine plants/algae or wild fungi growing on salt marsh.

Table B. Summary of adults' consumption rates of foods from the aquatic 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})	Generic mean* (kg y^{-1})	Generic 97.5th percentile* (kg y^{-1})
Fish	84	18	67.9	23.5	40.6	59.0	15.0	40.0
Crustaceans	51	11	58.2	23.7	34.8	40.1	3.5	10.0
Molluscs	22	4	16.0	8.7	11.8	14.2	3.5	10.0
Wildfowl	3	2	39.8	17.0	28.4	38.6	Not determined	Not determined
Marine plants/algae	11	1	0.5	0.5	0.5	0.4	Not determined	Not determined
Wild fungi growing on salt marsh	5	5	1.1	1.1	1.1	1.1	Not determined	Not determined

(*Generic rates based on data from Byrom *et al.*, 1995.)

The predominant species of fish consumed by adults were cod, thornback ray, plaice and mackerel with smaller quantities of bass, brill, brown trout, Dover sole, flounder, grey mullet, pollack, pouting, salmon, sea trout, turbot and whiting. The fish were caught throughout the aquatic survey area. Of the fish consumed by the 18 people in the high-rate group, the percentage breakdown of species (rounded to the nearest 5%) was 60% cod, 20% thornback ray, 10% plaice and a 10% mix of bass, brill, Dover sole, grey mullet, mackerel, pollack, pouting, salmon, sea trout, turbot and whiting. No brown trout or flounder were consumed by the members of the high-rate group.

The main species of crustaceans consumed by adults were common lobster, brown crab and brown shrimp, with smaller quantities of common prawn and *Nephrops*. The common lobster and brown crab were caught using pots at Parton, Whitehaven north beach, Sellafield, Seascale, Drigg, Ravenglass, Eskmeals and Tarn Bay, and by hooking or hand caught at Drigg. The brown shrimps were caught using a push net at Whitehaven north beach and Seamill. The common prawns were caught using a push net at Braystones and caught incidentally in pots offshore throughout the survey area. The *Nephrops* were caught between St Bees and Sellafield. Of the crustaceans consumed by the 11 people in the high-rate group, the percentage breakdown of species (rounded to the nearest 5%) was 45% common lobster, 40% brown crab and 15% brown shrimp.

The main species of molluscs consumed by adults were winkles, mussels and limpets, with smaller quantities of clams, whelks and cockles. The winkles were collected from Parton, St Bees Head, St Bees, Coulderton, the limpets were collected from Nethertown. The mussels were collected from Parton, St Bees, Coulderton, Seascale, Drigg and Ravenglass. Cockles were collected from within the survey area and clams were collected from Parton. Whelks were a by-catch of commercial vessels fishing throughout the survey area and consumed by one individual. Of the molluscs consumed by the three people in the high-rate group, the percentage breakdown of species, rounded to the nearest 5%, was 75% winkles, 15% mussels and 10% limpets.

The wildfowl consumed by adults were goose (unspecified species) and mallard, with smaller quantities of teal, wigeon and snipe. These were shot on salt marshes in the Ravenglass Estuary including Carlton Marsh, Newbiggin Marsh, the River Esk and other unspecified locations within the survey area. Of the wildfowl consumed by the two people in the high-rate group the percentage breakdown of species, (rounded to the nearest 5%) was 80% goose (unspecified species), 15% mallard and 5% wigeon and teal.

The main species of marine plants/algae consumed by adults was sea lettuce with smaller quantities of samphire. The sea lettuce was collected from the shore at Braystones, and the samphire was collected from the River Esk. Sea lettuce was the only species consumed by the only person in the high rate group.

Wild mushrooms were collected from salt marsh on the River Esk and were consumed by five individuals.

Children's and infants' consumption rates

Table C (below) presents a summary of children's and infants' consumption rates of fish, crustaceans and molluscs. No consumption of wildfowl, marine plants/algae or wild fungi growing on salt marsh was identified for both the child age group and the infant age group. No infants were identified consuming molluscs. The table includes the mean consumption rates for the high-rate group and the observed 97.5th percentile rates. No generic rates have been determined for the child or infant age groups.

Table C. Summary of children's consumption rates of foods from the aquatic 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})
Child age group (6 – 15 years old)						
Fish	11	3	24.1	16.3	21.5	24.1
Crustaceans	11	5	2.6	1.8	2.2	2.6
Molluscs	6	3	1.5	1.1	1.4	1.5
Infant age group (0 – 5 years old)						
Fish	1	1	0.9	0.9	0.9	Not applicable
Crustaceans	1	1	1.3	1.3	1.3	Not applicable
Molluscs	1	1	0.8	0.8	0.8	Not applicable

The species of fish consumed by the individuals in the child age group were bass, cod, mackerel, plaice and pollack, with smaller quantities of salmon, sea trout and whiting. The species of fish consumed by the only individual in the infant age group were cod and sea trout.

The species of crustaceans consumed by individuals in the child age group were common prawn and common lobster, with smaller quantities of brown shrimp and *Nephrops*. The species of crustaceans consumed by the only individual in the infant age group were common prawn and common lobster.

The species of molluscs consumed by individuals in the child age group were clam, with smaller quantities of mussel, winkle and cockle. The only species of mollusc consumed by an individual in the infant age group was clams.

Consumption of vegetables and domestic fruit grown on land where seaweed has been used as a fertiliser

Consumption rate data for foods grown in soil that had been fertilised with seaweed collected from the shore in the aquatic survey area are presented in Table 12 for adults and Table 13 for children and infants. Eight people in the adult age group was identified consuming foods that were grown in seaweed fertilised soil from the following food groups: green vegetables, other vegetables, root vegetables,

potato and domestic fruit. One child and one infant were identified consuming foods that were grown in seaweed fertilised soil from the following food groups: green vegetables, other vegetables, root vegetables, potato and domestic fruit. These data are presented for use in studies of the potential dose arising from the possible transfer onto the land of radionuclides originating from liquid discharges made into the sea. However, some of these foods were grown in the terrestrial survey area and the primary reason for investigating them was to gain information about foods potentially subject to gaseous discharges. Therefore, those that were grown in the terrestrial area are also included in the terrestrial food tables presented later in this report, and, in order to avoid double accounting in assessments of total dose, are entered only once in the Annexes, where they are classified as terrestrial foods. In Table 12, the foods that were grown outside of the terrestrial area are indicated.

4.8 Intertidal occupancy

Intertidal occupancy rates for adults are presented in Table 14 and intertidal occupancy rates for children and infants are presented in Table 15 and Table 16. It should be noted that there are often more than one substrate at one named location and that substrates at a given location are liable to change over time. Activities were assigned to the predominant substrate over which they were taking place.

Adults' intertidal occupancy rates

Table D (below) presents a summary of the adults' intertidal occupancy rates 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 D. Summary of adults' intertidal occupancy rates

Intertidal 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	24	1	62	62	34
Mud and sand	5	3	104	104	104
Mud, sand and stones	42	6	730	406	388
Rock	22	5	417	269	335
Salt marsh	11	5	274	210	274
Sand	314	23	1234	657	730
Sand and stones	124	12	576	400	449
Stones	1	1	4	4	Not applicable
Boat on mud	1	1	131	131	Not applicable

The activities undertaken by people in the adult high-rate groups for occupancy over each of the intertidal substrates were:

- For mud: wildfowling at the rivers Esk, Irt, Mite and Newbiggin Marsh.
- For mud and sand: bait digging at Whitehaven outer harbour.
- For mud, sand and stones: dog walking, collecting seaweed, bait digging, collecting peeler crabs for bait and horse riding at Ravenglass Estuary.
- For rock: angling at Parton, Fleswick and St Bees, hooking for crab and lobster at Drigg.
- For salt marsh: tending livestock at Saltcoats and River Esk, walking at Saltcoats.
- For sand: dog walking at Parton, St Bees, Nethertown, Braystones, Sellafield, Seascale, Drigg, Eskmeals and Tarn Bay; angling at St Bees, Seamill, Coulderton, Nethertown, Braystones, Seascale, Drigg and Tarn Bay; bait digging at St Bees, Seamill, Coulderton, Nethertown, Braystones and Drigg, practising golf at Braystones; setting nets at Nethertown, Braystones and Sellafield; monitoring for radioactive particles at St Bees, Braystones, Sellafield, Seascale and Drigg; walking at Braystones, Seascale and Drigg; beachcombing at Nethertown and Sellafield; playing at Sellafield, Seascale and Drigg.
- For sand and stones: potting from the shore at Whitehaven north beach and Drigg; dog walking at Parton; angling at high tide at Parton and Nethertown; playing at Parton; walking at Parton and Whitehaven north beach.
- For stones: collecting seaweed at Nethertown.
- For boat on mud: boat maintenance at Ravenglass Estuary.

Children's and infants' intertidal occupancy rates

Table E (below) presents a summary of the children's and infants' intertidal occupancy rates 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 E. Summary of children's and infants' intertidal occupancy rates

Intertidal 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})
Child age group (6 – 15 years old)					
Mud and sand	3	3	4	4	4
Mud and stones	6	2	105	105	105
Sand	52	10	261	136	191
Sand and stones	27	4	180	180	180
Infant age group (0 – 5 years old)					
Mud and sand	1	1	4	4	Not applicable
Sand	21	8	104	67	104
Sand and stones	3	2	366	366	366

The activities undertaken by individuals in the child age group high-rate groups for occupancy over each of the intertidal substrates were:

- For mud and sand: dog walking at Whitehaven outer harbour.
- For mud, sand and stones: angling and bait digging at Ravenglass.
- For sand: angling at Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg, bait digging at Drigg; dog walking at Whitehaven north beach, St Bees, Sellafield, Seascale and Drigg; horse riding at Seascale and Drigg; walking at Sellafield, Seascale and Drigg.
- For sand and stones: rock pooling at Braystones.

The activities undertaken by individuals in the infant age group high-rate groups for occupancy over each of the intertidal substrates were:

- For mud and sand: dog walking at Whitehaven outer harbour.
- For sand: playing at Seascale and Braystones; dog walking at Whitehaven north beach, St Bees and Seascale; rock pooling at Tarn Bay.
- For sand and stones: playing and walking at Parton.

4.9 Gamma dose rate measurements

Gamma dose rate measurements were taken over six intertidal substrates. All measurements were taken at a height of 1 metre above the substrate. The results are presented in Table 17 and are summarised in Table F (below).

Table F. Summary of gamma dose rate measurements taken over intertidal substrates

Substrate	Number of measurements taken	Minimum gamma dose rate at 1 metre[a] ($\mu Gy\ h^{-1}$)	Maximum gamma dose rate at 1 metre[a] ($\mu Gy\ h^{-1}$)
Mud	1	0.084 (one result only)	
Mud sand and stones	1	0.091 (one result only)	
Salt marsh	1	0.111 (one result only)	
Sand	6	0.068	0.092
Sand and stones	8	0.088	0.110
Stones	1	0.118 (one result only)	

Notes

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

For comparison, natural background levels have been estimated at 0.05 $\mu Gy\ h^{-1}$ over sandy substrates, 0.07 $\mu Gy\ h^{-1}$ over mud and over salt marsh, and 0.06 $\mu Gy\ h^{-1}$ over other substrates (EA, FSA, FSS, NRW, NIEA and SEPA, 2018).

4.10 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 intertidal areas and it has therefore been omitted from the report. Handling of angling equipment was not considered to be a significant pathway. Therefore, as in previous surveys, data for this pathway were not collected.

Handling rates of fishing gear and sediment for adults are presented in Table 18 and children's handling rates for sediment are presented in Table 19. No infants were identified handling sediment or fishing gear.

Adults' handling rates of fishing gear and sediment

Table G (below) presents a summary of the handling rates of fishing gear and sediment for adults. The table includes the mean handling rates for the high-rate groups and the observed 97.5th percentile rates.

Table G. Summary of adults' handling rates of fishing gear and sediment

Handling activity	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})
Handling fishing gear	20	6	1716	1384	1716
Handling sediment	68	2	698	506	207

The activities undertaken by people in the adult high-rate groups for handling included:

- For handling fishing gear: handling pots and nets throughout the survey area.
- For handling sediment: bait digging and collecting peeler crabs at Nethertown and Ravenglass Estuary.

Children's handling rates of sediment

Table H (page 51) presents a summary of the handling rates of fishing gear and sediment for children. The table includes the mean handling rates for the high-rate groups and the observed 97.5th percentile rates.

Table H. Summary of children's handling rates of sediment					
Handling activity	**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})**
Child age group (6 – 15 years old)					
Handling fishing gear	4	4	2	2	2
Handling sediment	16	2	38	38	38

The activity undertaken by the two individuals in the child high-rate group for handling fishing gear was push netting at Braystones. The activity undertaken by the two individuals in the child high-rate group for handling sediment was bait digging at Ravenglass and Drigg. No infants were identified handling fishing gear or sediment.

4.11 Water based activities

Activities taking place in or on water can lead to ingestion of water and/or inhalation of spray. These pathways are generally considered to be of minor radiological importance in comparison with other exposure pathways such as the ingestion of foods produced in the vicinity of a nuclear site. However, relevant data have been collected for consideration in dose assessments. Mean occupancy rates for the high-rate groups and 97.5th percentile rates have not been calculated.

Activities where there is a high likelihood of the 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 activities have been classified as activities 'on water'.

Occupancy rates for activities taking place 'in water' and 'on water' in the aquatic survey area are presented in Table 20 for adults and Table 21 for children and infants. Where generic data for groups of people were collected, for example members of sailing clubs, only representative examples have been included in the data presented.

Activities in water

The activities identified taking place in water in the aquatic survey area were kayaking, paddleboarding, swimming, surfing, snorkelling, jet skiing, playing on an inflatable dinghy, sub-aqua diving, rescue duties and swimming in an assault course on the River Esk. Kayaking is classified as an 'in water' activity since it is likely to lead to the ingestion of seawater. Ninety-eight observations were recorded for adults, 30 observations were recorded for the child age group and two observations were recorded for the infant age group. The highest occupancy rate for an adult was 960 h y^{-1} for an individual who was kayaking and paddleboarding at Whitehaven outer harbour, Whitehaven, Fleswick and the Ravenglass

Estuary. The highest occupancy rate for the child age group was 180 h y^{-1} for a group of children who were swimming at Braystones. The highest occupancy rate for the infant age group was 10 h y^{-1} for an infant swimming at Braystones.

Activities on water

The activities taking place on water in the aquatic survey area were sailing, commercial and hobby fishing (including gill netting, trawling and potting), boat angling, rescue duties, bird surveys from a boat, litter collecting from a boat, working on a boat, pleasure cruising, rowing, canoeing, push netting and paddling. Seventy-three were recorded for adults, 31 observations were recorded for the child age group and five observations were recorded for the infant age group. The highest occupancy rate for adults was 1900 h y^{-1} for four individuals potting at Sellafield, Seascale, Drigg, Ravenglass, Eskmeals and Tarn Bay. The highest occupancy rate for the child age group was 130 h y^{-1} for one child who was canoeing and collecting litter from a boat at Whitehaven inner harbour, Whitehaven outer harbour and Fleswick. The highest occupancy rate for the infant age group was 39 h y^{-1} for an infant who was angling from a boat on the River Esk.

5 Terrestrial radiation pathways

5.1 Terrestrial survey area

The terrestrial survey area (see Figure 2, page 23) covered the land and freshwater watercourses within 5 km of the site centre (National Grid Reference: NY 028 038). Due to the proximity of the Sellafield site to the LLWR site (approximately 5 km between the centre of both sites) the terrestrial survey areas for both sites overlap. The overlap area is shown in Figure 2.

The land in the terrestrial survey area is predominantly agricultural. Several villages were located within the terrestrial survey area including Beckermet to the north, Gosforth to the east, and the coastal village Seascale to the south. The River Ehen flows from the north-west along the south-western boundary of the Sellafield site and the River Calder flows from the north east and through the middle of the Sellafield site. The rivers converge at the Calder Viaduct and flow into the Irish Sea.

Thirty-six working farms were identified in the Sellafield terrestrial survey area. Of these farms:

- Five produced milk (from dairy cattle)
- Three produced milk (from dairy cattle) and beef cattle
- Two produced milk (from dairy cattle), beef cattle and lambs
- One produced milk (from dairy cattle) and lambs
- Five produced beef cattle
- Four produced lambs
- Thirteen produced beef cattle and lambs
- One produced beef cattle, lambs and chicken
- One produced lambs, beef cattle and beef cattle followers (young beef cattle, intended to replace older beef cattle)
- One produced lambs, pigs and arable crops for animal feed

The production of arable crops for human consumption was not identified. Grass (for silage and haylage), barley, turnips and oats were grown for use as animal feed on the farms where they were produced, and cereals were sold by one farm for animal feed. Farmers and their families were consuming milk, beef and lamb produced commercially on their own farms. No pork or chicken was being consumed by the farmers.

One allotment site and many private gardens were located in the survey area. A wide variety of fruit and vegetables were grown on the allotments and in the gardens and three people used small amounts of seaweed as fertiliser on their allotment plot or vegetable garden.

Four beekeepers were identified with a total of eight hives in the survey area. Three hives were located in the north-eastern part of the direct radiation survey area, five hives were located to the south-east of the survey area, and one hive was located to the south of Gosforth. The average production of honey per hive ranged from 5.0 kg y^{-1} to 40 kg y^{-1}. The honey was consumed by the beekeepers, their families and friends.

Wild foods that were collected from within the survey area and consumed included blackberries, crab apples, elderberries and mushrooms. Several individuals were shooting on farmland within the survey area, but no organised shoots were identified. Partridge, pheasant, pigeon, mallard, rabbit, hare and venison were shot and consumed. Angling was identified at a large stocked pond within the survey area and rainbow trout was consumed by two individuals. Brown trout were caught on the River Calder and were consumed by two individuals.

In the 2013 Sellafield habits survey, three households used spring water and one household used well water as their domestic supply. These households were unavailable for an interview during the 2018 survey. Farmers supplied their livestock with spring water or well water for drinking. Livestock also had access ditches and streams for drinking water.

The soil classification at farms where interviews were conducted in the terrestrial survey area included sandy loam, light to heavy loam, peat, and heavy clay loam.

5.2 Destination of food originating from the terrestrial survey area

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

- Milk was sold to dairy co-operatives, an independent dairy group and a milk processing company.
- Lambs were sold at a range of livestock markets in Cumbria, to a food processing company, slaughtered in Wales, local butchers and a national supermarket chain.
- Beef cattle were sold at a range livestock markets in Cumbria, to a food processing company, and privately to livestock dealers.
- Pork was sold to a national sausage producer and distributor.
- Chickens were sold to as laying hens for egg production.
- Arable crops were sold as animal feed to a local farm outside the survey area.
- Honey was sold from the door and given away to friends and family.

5.3 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. Routine pest control was undertaken on site, including actively managing the seagull and pigeon populations by culling, egg

pricking and discouraging bird nesting with netting. A number of deer were trapped between fences when new fences were erected around the site in 2016 and the deer were subsequently culled.

5.4 Food consumption data

Consumption data for locally produced foodstuffs potentially affected by deposition of gaseous discharges are presented in Tables 22 to 37 for adults and Tables 38 to 50 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 3.4, 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 51.

Adults' consumption rates

Consumption of locally produced foods was identified in the following 16 food groups: green vegetables; other vegetables; root vegetables; potato; domestic fruit; milk; cattle meat; sheep meat; poultry; eggs; wild/free foods; rabbits/hares; honey; wild fungi; venison; freshwater fish. No consumption of pig meat was identified.

Table I (page 56) 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 I. 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^{-1})	Observed minimum for the high-rate group (kg y^{-1} or l^{-1})	Observed mean for the high-rate group (kg y^{-1} or l^{-1})	Observed 97.5th percentile (kg y^{-1} or l^{-1})	Generic mean* (kg y^{-1} or l^{-1})	Generic 97.5th percentile* (kg y^{-1} or l^{-1})
Green vegetables	83	15	45.6	15.9	30.5	45.6	15.0	45.0
Other vegetables	71	19	49.3	18.1	31.1	45.6	20.0	50.0
Root vegetables	75	18	39.5	14.3	23.4	30.3	10.0	40.0
Potato	80	31	100.0	40.0	86.1	100.0	50.0	120.0
Domestic fruit	85	10	73.7	25.4	37.7	43.6	20.0	75.0
Milk	43	15	365.0	138.2	202.1	343.7	95.0	240.0
Cattle meat	32	12	50.0	18.9	33.1	50.0	15.0	45.0
Sheep meat	37	14	39.5	14.0	23.4	39.5	8.0	25.0
Poultry	31	5	28.3	10.6	20.1	23.3	10.0	30.0
Eggs	32	6	35.7	17.8	26.9	35.7	8.5	25.0
Wild/free foods	56	13	5.0	1.7	2.9	5.0	7.0	25.0
Rabbits/hares	5	3	7.4	4.3	5.4	7.1	6.0	15.0
Honey	20	2	2.3	2.3	2.3	2.3	2.5	9.5
Wild fungi	41	11	2.5	0.9	1.6	2.5	3.0	10.0
Venison	1	1	10.0	10.0	10.0	Not applicable	Not determined	Not determined
Freshwater fish	4	2	4.2	4.2	4.2	4.2	Not determined	Not determined

(*Generic rates based on data from Byrom *et al.*, 1995.)

Eggs were the only observed food group for which the mean consumption rate for the high-rate group was greater than the generic 97.5th percentile consumption rate. Ten of the mean consumption rates for the high-rate groups exceeded the generic mean consumption rates. These were for green vegetables, other vegetables, root vegetables, potato, domestic fruit, milk, cattle meat, sheep meat, poultry and eggs. Five of the observed 97.5th percentile consumption rates exceeded the generic 97.5th percentile consumption rates, which were for green vegetables, milk, cattle meat, sheep meat and egg.

Children's and infants' consumption rates

Twenty-eight individuals in the child age group and 11 individuals in the infant age group were identified consuming foods from the terrestrial survey area. Table J (page 57) presents a summary of children's and infants' 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 or infant age groups. In the child age group, no consumption of foods from the following food groups was identified: pig meat; honey; venison; freshwater fish. In the infant age group, no consumption of foods from the following food groups was identified: pig meat; honey; venison; freshwater fish.

Table J. Summary of children's and infants' 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 $^{-1}$)	Observed minimum for the high-rate group (kg y^{-1} or l $^{-1}$)	Observed mean for the high-rate group (kg y^{-1} or l $^{-1}$)	Observed 97.5th percentile (kg y^{-1} or l $^{-1}$)
Child age group (6 - 15 years old)						
Green vegetables	9	8	5.4	2.4	3.1	5.0
Other vegetables	4	2	28.0	11.6	19.8	26.8
Root vegetables	9	4	14.3	5.0	9.8	13.6
Potato	10	3	100.0	75.0	83.3	94.4
Domestic fruit	10	3	43.6	25.8	34.0	41.1
Milk	6	4	138.2	86.4	113.1	135.3
Cattle meat	6	3	27.0	27.0	27.0	27.0
Sheep meat	9	4	29.6	11.2	21.4	29.6
Poultry	7	3	4.1	1.8	2.9	3.9
Eggs	8	3	18.1	7.3	14.5	18.1
Wild/free foods	8	4	1.7	0.7	1.1	1.6
Rabbits/hares	1	1	0.4	0.4	0.4	Not applicable
Wild fungi	5	5	0.6	0.3	0.5	0.6
Infant age group (0 - 5 years old)						
Green vegetables	2	2	1.6	1.6	1.6	1.6
Other vegetables	1	1	1.6	1.6	1.6	Not applicable
Root vegetables	2	2	2.5	1.9	2.2	2.5
Potato	5	1	50.0	50.0	50.0	46.2
Domestic fruit	5	3	5.8	3.4	4.3	5.6
Milk	3	1	56.2	56.2	56.2	53.5
Cattle meat	1	1	2.4	2.4	2.4	Not applicable
Sheep meat	2	2	5.2	3.5	4.3	5.2
Poultry	2	1	3.3	3.3	3.3	3.2
Eggs	1	1	2.1	2.1	2.1	Not applicable
Wild/free foods	5	3	0.7	0.4	0.5	0.7
Rabbits/hares	2	1	2.2	2.2	2.2	2.1
Wild fungi	1	1	0.4	0.4	0.4	Not applicable

6 Direct radiation pathways

6.1 Direct radiation survey area

The direct radiation survey area (see Figure 2, page 23) covered the land and sea within 1 km of the Sellafield 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 Sellafield 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.

A large area of land to the north and west of the Sellafield site was acquired by NuGeneration Ltd. (NuGen) for the development of a new generation nuclear power station. As a result of this, three residential properties to the west of the site were unoccupied and boarded up, but the land in this area was still being farmed. Nugen staff and security spent time working in the area and a number of ecological and geological surveys have been undertaken to monitor the suitability of the site.

One hotel and two residential properties were located to the north of the site. One residential road was located to the north of the site at the outer limit of the survey area. Pelham House, owned by the NDA, is located to the south of the Calderbridge village. Local residents have access to an allotment site in the north of the survey area. The River Calder flows from the north-east, through the middle of the site, and joins the River Ehen at the Calder Viaduct. The river is accessible up to the site boundary and members of local fishing clubs have the rights to fish on the north-eastern stretch of the river. Residents of Calderbridge spent time in the area walking and dog walking.

Farmland to the east and south-east is adjacent to the boundary of the nuclear site. Newton Manor is located on the border of the direct radiation survey area and is surrounded by woodland, which was previously used for an organised game shoot. The NDA acquired the Manor which has fallen into disrepair and was scheduled to be demolished in 2018. A golf course occupies a large part of the survey area to the south and south-east of the site, from the site boundary to the outer limit of the survey area. A small number of properties, including a business, on the outskirts of Seascale to the south of the site fall within the direct radiation survey area at the outer limit. Many residents and tourists visited the beach at Seascale and walked north to Sellafield. A nature reserve covers a small area of sand dunes within the direct radiation survey area.

The Sellafield Rail Station is located close to the western side of the site. The rail tracks run parallel to the shore along the south-western edge of the Sellafield site and there is a manned signal box. There is a footbridge near the rail station that crosses the River Ehen but this has been closed to the public for many years. A cycle track runs along the south-western side of the site and the beach occupies a large part of the survey area to the south and west.

6.2 Residential activities

Residential properties are scattered across the survey area and the main area of houses is located in the outer limits of the survey area to the north in the village of Calderbridge and to the west of the survey area on the outskirts of the small seaside town of Seascale. Interviews were conducted in all three zones at 14 residences, six of which had children or infants. Four properties were unoccupied and boarded up; three were to the west of the site on the NuGen land, and one was to the north.

6.3 Leisure and educational activities

A number of leisure activities were undertaken in the direct radiation survey area. Many people were walking and dog walking in the area around the site and on the beach between Sellafield and Seascale. Angling and hobby fishing took place from the shore at Sellafield. Two angling clubs were identified that had the rights to fish on the River Calder within the survey area upriver of Duke's Bridge. Angling is not permitted along the section of the River Calder that flows through the Sellafield site. One well used allotment site was located to the north of the survey area.

6.4 Commercial activities

A large area of land (approximately 200 hectares) to the north and west of the Sellafield site was acquired by NuGen for the development of a new generation nuclear power station called Moorside. Three of the four residential properties in this area are unoccupied and boarded up and one farmer continues to farm in this area. At the time of the habits survey, the NuGen site was occupied by full-time and part-time staff, including security manning the site. However, Toshiba, which owned NuGen, experienced financial difficulties and needed to sell the NuGen consortium. In September 2018, NuGen announced that it was reducing its team at Moorside from more than 100 to fewer than 40. In November 2018, Toshiba announced that they were taking steps to close Nugen and were withdrawing from nuclear power plant construction in the UK (www.nugeneration.com).

A small number of businesses were spread throughout the survey area. Four farmers had fields within the survey area, some of which border the Sellafield site boundary. There was a golf course to the south-east of the site. The Sellafield Rail Station was unmanned, but employee occupancy rates were obtained for a manned signal box near the station. Railway works were carried out by Network Rail to change both railway tracks within the survey area, due to the degradation of the rails and the requirement to allow trains and other machinery to stable within the sidings. A sewage treatment works is located to the north-east of the site, approximately 0.2 km from the site fence. The sewage treatment works were approached for interview, but no data were obtained.

Interviews were conducted at seven businesses and one charity, one was in the 0 – 0.25 km zone, one was in the >0.25 – 0.5 km zone and five were in the >0.5 – 1.0 km zone. The number of employees at these businesses ranged from one to 17.

The activities of Sellafield site employees and contractors, and those working at NDA owned sites including Pelham House and Fellside Heat and Power Ltd, while at work were not considered in the direct radiation survey, as radiation workers are subject to different radiation protection criteria.

6.5 Occupancy rates

Table 52 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 53. A summary of occupancy rates in the direct radiation survey area is presented in Table K (below). Where generic data for groups of people were collected, for example employees of businesses, only representative examples have been included in the data presented.

Table K. 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	33	6867	3159	8123
>0.25 - 0.5 km	20	6308	2199	8507
>0.5 - 1.0 km	119	8290	2493	8472

0 - 0.25 km from the nuclear licensed site boundary

Occupancy data for 33 individuals in the 0 - 0.25 km zone were included in the analysis. The observations were for 23 people who were working in the area, seven residents, one person who was angling and maintaining the river bank on the River Calder and dog walking, and two people who were walking on the beach at Sellafield. The highest indoor occupancy rate was for three residents living at the same property. The highest outdoor occupancy rate and total occupancy rate was for another resident.

>0.25 - 0.5 km from the nuclear licensed site boundary

Occupancy data for 20 individuals in the >0.25 - 0.5 km zone were included in the analysis. The observations were for one resident, 16 people who were working in the area, two people who were dog walking on Sellafield beach and one person who was angling to the south of the confluence of the rivers at Sellafield Beach. The highest indoor, outdoor and total occupancy rate was for a resident.

>0.5 - 1.0 km from the nuclear licensed site boundary

Occupancy data for 120 people in the >0.5 - 1.0 km zone were included in the analysis. The observations were for 32 residents, 39 people who were working in the area, 21 people were playing golf at the Golf Club, 16 people were walking or dog walking from Seascale to Sellafield on the beach, eight people were tending to their allotment plot, two people who were hobby fishing from a boat, one person who was litter collecting on a quadbike on the beach between Seascale and Sellafield, and one person who was angling at Duke's Bridge and dog walking by the River Calder. The highest indoor occupancy rate and total occupancy rate were for a resident and the highest outdoor occupancy rate was for a farm worker.

6.6 Gamma dose rate measurements

Gamma dose rates were measured indoors and outdoors at most properties where interviews were conducted in the Sellafield 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 Thermo RadEye GX Survey Meter connected to a compensated Geiger-Müller tube. The indoor and outdoor measurements have not been adjusted for background dose rates. The results are presented in Table 54 and are summarised in Table L, below.

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

Substrate	Number of measurements taken	Minimum gamma dose rate at 1 metre ($\mu Gy\ h^{-1}$)	Maximum gamma dose rate at 1 metre ($\mu Gy\ h^{-1}$)
Indoor measurements[a]			
Concrete	14	0.041	0.155
Wood	1	0.098 (one result only)	
Outdoor measurements[a]			
Concrete	5	0.069	0.101
Grass	9	0.083	0.101
Mud and stones	1	0.087 (one result only)	
Background measurements			
Grass	3	0.079	0.103

Notes

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

Of the 15 measurements taken indoors at properties, 10 were higher than the maximum background reading, and of the 16 measurements taken outdoors at properties, no 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 inside properties are expected to be higher than those taken outdoors.

The gamma dose rates can be compared with readings taken by the RIMNET programme, which continuously monitors radiation levels at a network of 93 fixed monitors and 84 mobile monitors distributed throughout the UK (www.gov.uk). The nearest RIMNET station to Sellafield is at Cumbria Whitehaven, which is approximately 15 km away. The ambient (*i.e*. background) gamma dose rates at Cumbria Whitehaven from July to September, which is the most recent data at the time of reporting, ranged from 0.080 µGy h^{-1} to 0.110 µGy h^{-1}. All the outdoor readings taken during the Sellafield habits survey were within, or below, this range.

7 Uses of habits data for dose assessments

7.1 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 and Annex 2 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 55. Each of the 54 combinations shown in Table 55 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 55 because they have fewer pathways and a dose assessment for them would be adequately covered by one of the 54 listed combinations.

7.2 Foetal dose assessment

Dose assessment of the foetus 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 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 the foetus. Therefore, consumption and occupancy data collected during the Sellafield habits survey for females of childbearing age are presented in Annex 5. The Office of National Statistics classifies women to be of childbearing age if they are between 15 – 44 years old (www.ons.gov.uk); this age range has been used in Annex 5. 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 5 as they might be women of childbearing age.

7.3 Total dose assessment

The UK environment agencies and the Food Standards Agency 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 *et al*, 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 (e.g. EA, FSA, FSS, NRW, NIEA and SEPA, 2018).

The relevant matrix for the adults' profiled habits data is shown in Annex 6. Additionally, profiles have been created for the child and infant age groups, and for women of childbearing age. These are shown in Annexes 7, 8, and 9 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.

8 Comparisons with the previous survey

The results from this 2018 survey are compared below with results from the last combined habits survey undertaken at Sellafield in 2013. The aquatic, terrestrial and direct radiation survey areas in the 2018 survey were the same as those in the 2013 survey. The comparison of occupancy rates in the direct radiation area is for all age groups combined. All other comparisons are for adults only.

8.1 Aquatic survey area

Activities in the aquatic survey area in 2018 were broadly similar to those identified in 2013. The main differences were that the commercial mussel fishery at Ravenglass was reported to have ceased operating by 2018 and the *Nephrops* fishery has been in steady decline. It was reported that the *Nephrops* fishery off the Cumbrian coast is poor and the frequency of the Whitehaven based trawler fleet's fishing trips is highly variable due to the limitations of going to sea in adverse weather conditions in relatively small vessels. The Whitehaven trawlers did not leave the harbour during the period of the habits survey. Seaweed (*Porphyra)* was collected from the boulder scars at St Bees, Braystones and Sellafield for commercial purposes and was sold to processors in Wales to make laverbread. It was reported that members of the public are no longer permitted to collect shellfish from the shore in the Ravenglass area.

The main species of fish consumed by the adult high-rate group in 2018 were cod, thornback ray and plaice, and the main species of fish consumed by the adult high-rate group in 2013 were cod, thornback ray, bass, haddock and plaice. The main species of crustaceans consumed by the adult high-rate group in 2018 were common lobster, brown crab and brown shrimp, whereas in 2013 the main species of crustaceans were *Nephrops*, brown crab, brown shrimp and common lobster. The main species of molluscs consumed by the adult high-rate group in 2018 were winkles, mussels and limpets, and the main species of molluscs consumed by the adult high-rate group in 2013 were winkles and limpets. The wildfowl consumed by the adult high-rate group in 2013 was greylag goose, Canada goose and duck (unspecified species), and the wildfowl consumed by the adult high-rate group in 2018 was goose (unspecified species) and mallard. The only species of marine plants/algae consumed by the adult high-rate group in 2013 was samphire, whereas in 2018 the only species was sea lettuce.

A comparison between the 2013 and 2018 data for the consumption of aquatic foods is presented in Table M (see page 66).

Table M. Comparison between 2013 and 2018 consumption rates of aquatic food groups for adults						
	2013			2018		
Food group	**Number in high-rate group**	**Maximum consumption rate (kg y^{-1})**	**Mean consumption rate for the high-rate group (kg y^{-1})**	**Number in high-rate group**	**Maximum consumption rate (kg y^{-1})**	**Mean consumption rate for the high-rate group (kg y^{-1})**
Fish	18	106.1	56.1	18	67.9	40.6
Crustaceans	14	47.9	25.3	11	58.2	34.8
Molluscs	1	15.3	15.3	4	16.0	11.8
Wildfowl	4	16.8	10.2	2	39.8	28.4
Marine plants/algae	2	0.1	0.1	1	0.5	0.5
Salt marsh grazed lamb	6	1.9	1.9	Not identified		
Wild fungi growing on salt marsh	Not identified			5	1.1	1.1

For fish, in 2018 compared with 2013, there was a decrease in the maximum consumption rate and the mean consumption rate for the adult high-rate group. The decrease was due to a reduction in the quantity of fish consumed by a hobby fisherman and their family, and the cessation of fish consumption by another high-rate consumer due to ill health.

For crustaceans, there was a moderate increase in the maximum and the mean consumption rate of the high-rate group. The species of crustaceans consumed by this group has changed due to the decrease in observations of the Whitehaven *Nephrops* trawler crew who were interviewed in 2013, and the identification of new high-rate individuals. One high-rate consumer who was identified in both the 2013 and 2018 surveys had increased their crustacean consumption.

For molluscs, there was a slight increase in the maximum consumption rate and a decrease in the mean consumption rate of the high-rate group. Two high-rate individuals who were interviewed in both surveys had increased their consumption of molluscs in 2018 compared to 2013 and one new molluscs consumer was identified.

In 2018, compared with 2013, there was an increase in the mean consumption rate for the adult high-rate group for wildfowl due to the identification of a wildfowler who was consuming large quantities of wildfowl. The increase in the consumption of marine plants/algae was due to an individual consuming sea lettuce collected on the shore at Braystones.

In 2013, the consumption of lamb that had been grazed on salt marsh was identified but this was not found in 2018. In 2018, individuals were identified collecting wild mushrooms that were growing on salt marsh in the Ravenglass Estuary, which was a new pathway.

In 2013, intertidal occupancy for adults was recorded over the following seven substrates: mud; mud and sand; mud, sand and stones; rock; salt marsh; sand; sand and stones. In 2018, activities were recorded over similar substrates, with the addition of the following: stones; boat on mud.

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

- In 2013: wildfowling, dog walking, bait digging, angling, boat maintenance, setting nets, collecting winkles, hooking for crab and lobster, tending livestock, walking, laying pots on the shore and beachcombing.
- In 2018: wildfowling, bait digging, angling, dog walking, collecting seaweed, collecting peeler crabs for bait, horse riding, walking, boat maintenance, hoking for crab and lobster, tending livestock, beachcombing, setting nets, playing, practising golf on the beach, and monitoring beach for radioactive particles.

The following activities were undertaken by the individuals in the adult high-rate groups for handling fishing gear:

- In 2013: handling pots and nets.
- In 2018: handling pots and nets.

The following activities were undertaken by the individuals in the adult high-rate groups for handling sediment:

- In 2013: collecting winkles.
- In 2018: bait digging and collecting peeler crabs for bait.

A comparison between the 2013 and 2018 data for adult occupancy over intertidal substrates, handling fishing gear and handling sediment is shown in Table N (page 68).

Table N. Comparison between 2013 and 2018 intertidal occupancy rates and handling rates of fishing gear and sediment for adults

	2013			2018		
Intertidal substrate or handling pathway	**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})**
Mud	2	96	81	1	62	62
Mud and sand	4	234	163	3	104	104
Mud, sand and stones	5	490	316	6	730	406
Rock	4	105	74	5	417	269
Salt marsh	4	312	208	5	274	210
Sand	31	1035	546	23	1234	657
Sand and stones	8	828	486	12	576	400
Stones	Not identified			1	4	4
Boat on mud	Not identified			1	131	131
Handling fishing gear	7	1524	1120	6	1716	1384
Handling sediment	3	754	456	2	506	506

In 2018, compared to 2013, the mean intertidal occupancy rate for the adult high-rate group increased significantly over rock; increased slightly over mud, sand and stones; salt marsh; sand; and decreased over mud; mud and sand; and sand and stones. Occupancy over stones and over boat on mud was identified in 2018 but not in 2013.

The increase in the occupancy rate over rock was due to the identification in 2018 of several anglers spending time fishing from the rocks at Parton, St Bees and Fleswick compared to 2013. The increase in the occupancy over mud, sand and stones was due to the identification of an individual who was regularly dog walking and collecting seaweed at Ravenglass, an increase in an individual's time bait digging and collecting peeler crabs at Ravenglass, and high rate dog walkers who also went horse riding.

The mean rates for the adult high-rate groups for handling fishing gear increased in 2018 compared to 2013 and handling sediment decreased in 2018 compared to 2013. The increase in the handling rate for fishing gear in 2018 was due to a fisherman who had acquired a new potting boat and were spending increased amounts of time potting compared to 2013. The handling sediment rate decreased in 2018 because a high rate winkle collector had passed away since 2013.

For activities taking place in the water in the aquatic survey area, the maximum adult occupancy rate increased significantly from 90 h y^{-1} in 2013, for an individual who was wind surfing and surfing at St Bees, Seascale and Drigg, to 960 h y^{-1} in 2018, for one individual who was kayaking and paddleboarding at Whitehaven outer harbour, Whitehaven, Fleswick and Ravenglass Estuary.

For activities taking place on the water in the aquatic survey area, the maximum adult occupancy rate decreased slightly from 2000 y^{-1} in 2013, for an individual who was trawling from Whitehaven to Ravenglass, to 1880 y^{-1} in 2013, for an individual who was potting between Sellafield and Tarn Bay.

The use of seaweed as a fertiliser was identified on an allotment plot in 2013 and 2018, and on two vegetable gardens in 2018. A similar variety of vegetables were being grown on the allotment plot in 2013 and 2018. Children were identified consuming foods grown on land where seaweed has been used as a fertiliser in 2018 but not in 2013. The use of seaweed as an animal feed was not identified in either year.

8.2 Terrestrial survey area

Activities in the terrestrial survey area in 2018 were broadly similar to those in 2013 and the principal types of farm produce within the area continued to be a mix of milk (from dairy cattle), beef cattle and lambs. The growing of fruit and vegetables in gardens and on an allotment site, beekeeping, shooting on farmland and the collection of wild/free foods were identified in both surveys.

The mean consumption rates for the adult high-rate groups for terrestrial food groups from the 2013 and 2018 surveys are shown in Table O (page 70).

Table O. Comparison between 2013 and 2018 mean consumption rates for the adult high rate groups for terrestrial food groups (kg y^{-1} and l y^{-1})		
Food group	**2013**	**2018**
Green vegetables	21.6	30.5
Other vegetables	59.0	31.1
Root vegetables	33.9	23.4
Potato	124.3	86.1
Domestic fruit	32.7	37.7
Milk	184.9	202.1
Cattle meat	38.1	33.1
Pig meat	17.3	Not identified
Sheep meat	9.4	23.4
Poultry	20.5	20.1
Eggs	15.3	26.9
Wild/free foods	5.3	2.9
Rabbits/hares	2.8	5.4
Honey	0.2	2.3
Wild fungi	1.7	1.6
Venison	26.5	10.0
Freshwater fish	1.4	4.2

In 2018, compared to 2013, the mean consumption rates for the adult high-rate groups increased in 2018 in the following food groups: green vegetables; domestic fruit; milk; sheep meat; eggs; rabbits/hares; honey; freshwater fish. In 2018 the mean consumption rates for the adult high-rate groups decreased in the following food groups: other vegetables; root vegetables; potato; cattle meat; poultry; wild/free foods; wild fungi; venison. The consumption of pig meat was identified in 2013 but not in 2018. The most significant decreases in the consumption rates were for venison and other vegetables, while the most significant increases were for honey, freshwater fish and sheep meat.

Pig meat was consumed in 2013 but was not consumed in 2018 because the farm on which they were reared in 2013 no longer kept pigs in 2018. Venison consumption decreased because the high rate consumers of venison in 2013 had moved away from the area by 2018. The consumption of honey increased in 2018 due to the identification of several new beekeepers in the area, however, some of their hives had experienced disease and had not produced significant quantities of honey. No specific reasons were identified for the other changes in consumption rates.

In the 2013 Sellafield survey, three households used spring water and one household used well water as their domestic supply. These households were unavailable for an interview during the 2018 survey. In 2018 and 2013, farmers supplied their livestock with spring water or well water for drinking and livestock also had access ditches and streams for drinking water.

8.3 Direct radiation survey area

Activities identified in the direct radiation survey area in 2013 and 2018 were similar and included people residing, working and undertaking recreational activities. A comparison between the 2013 and 2018 direct radiation occupancy rates for all age groups combined, by zone, is presented in Table P (below).

Table P. Comparison between 2013 and 2018 direct radiation occupancy rates for all age groups combined (h y^{-1})		
	2013	**2018**
0 - 0.25 km zone		
Highest indoor	7667	6867
Highest outdoor	3060	3159
Highest total	7882	8123
>0.25 - 0.5 km zone		
Highest indoor	7814	6308
Highest outdoor	2864	2199
Highest total	8536	8507
>0.5 - 1.0 km zone		
Highest indoor	7476	8290
Highest outdoor	3000	2493
Highest total	8376	8472

The occupancy rates in the direct radiation survey area were similar in 2013 and 2018. The highest indoor, outdoor and total occupancy rates in all three zones in 2013 and 2018 were for residents, with the exception of the outdoor occupancy rate in the >0.5 – 1.0 km zone which was for a farm worker.

In the Sellafield direct radiation survey area, six sets of gamma dose measurements taken in 2018 can be compared with those taken at the same properties in 2013. These data are shown in Table Q (below).

Table Q. Comparison between 2013 and 2018 gamma dose rates (µGy h^{-1})				
	Indoor		**Outdoor**	
Location	**2013**	**2018**	**2013**	**2018**
Residence 6	0.091	0.041	0.085	0.087
Residence 2	0.079	0.099	0.068	0.100
Residence 5	0.101	0.109	0.085	0.094
Residence 4	0.138	0.135	0.094	0.100
Residence 15	0.127	0.093	0.085	0.081
Business 1	0.093	0.121	0.059	0.085

Notes
These measurements have not been adjusted for background dose rates.
The locations correspond to those in Table 54.

There was no consistent pattern in the differences in the gamma dose rates between 2013 and 2018. Three of the indoor readings were higher in 2018 than in 2013, and three were lower. For the outdoor readings, all six were higher in 2018 than in 2013.

9 Main findings

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

- Discharges of liquid radioactive waste into the Irish Sea
- 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, commercial fishermen, anglers, people spending time on intertidal 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 895 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 2.3. The consumption and occupancy rates in this section are presented to two significant figures.

9.1 Aquatic survey area

The mean consumption rates for the adult high-rate groups (as defined in Section 3.4) for the separate aquatic consumption pathways for foods potentially affected by liquid discharges were:

- 41 kg y^{-1} for fish
- 35 kg y^{-1} for crustaceans
- 12 kg y^{-1} for molluscs
- 28 kg y^{-1} for wildfowl
- 0.5 kg y^{-1} for marine plants/algae
- 1.1 kg y^{-1} for wild fungi growing on salt marsh

The predominant foods consumed by the people in the adult high-rate groups were:

- For fish: cod, thornback ray and plaice
- For crustaceans: common lobster, brown crab and brown shrimp
- For molluscs: winkle, mussel and limpet
- For wildfowl: goose (unspecified species) and mallard
- For marine plants/algae: sea lettuce
- For wild fungi growing on salt marsh: mushrooms

Seaweed was used as a fertiliser on an allotment plot and vegetables gardens where fruit and vegetables were grown. The use of seaweed as an animal feed was not identified.

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

- 62 h y^{-1} for mud
- 100 h y^{-1} for mud and sand
- 410 h y^{-1} for mud, sand and stones
- 270 h y^{-1} for rock
- 210 h y^{-1} for salt marsh
- 660 h y^{-1} for sand
- 400 h y^{-1} for sand and stones
- 4.0 h y^{-1} for stones
- 130 h y^{-1} for boat on mud

The mean rates for the adult high-rate groups for handling were:

- 1400 h y^{-1} for handling fishing gear (nets and pots)
- 510 h y^{-1} for handling sediment

The maximum adult occupancy rates for water based activities were:

- 960 h y^{-1} for 'in water'
- 1900 h y^{-1} for 'on water'

Individuals in the child and infant age groups were recorded consuming aquatic foods and undertaking activities in the aquatic survey area.

9.2 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:

- 31 kg y^{-1} for green vegetables
- 31 kg y^{-1} for other vegetables
- 23 kg y^{-1} for root vegetables
- 86 kg y^{-1} for potato
- 38 kg y^{-1} for domestic fruit
- 200 l y^{-1} for milk
- 33 kg y^{-1} for cattle meat
- 23 kg y^{-1} for sheep meat
- 20 kg y^{-1} for poultry
- 27 kg y^{-1} for eggs

- 2.9 kg y^{-1} for wild/free foods
- 5.4 kg y^{-1} for rabbits/hares
- 2.3 kg y^{-1} for honey
- 1.6 kg y^{-1} for wild fungi
- 10 kg y^{-1} for venison
- 4.2 kg y^{-1} for freshwater fish

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

No consumption of pig meat from the survey area was identified.

In the 2013 Sellafield habits survey, three households used spring water and one household used well water as their domestic supply. These households were unavailable for an interview during the 2018 survey. Farmers supplied their livestock with spring water or well water for drinking. Livestock also had access ditches and streams for drinking water.

9.3 Direct radiation survey area

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

0 - 0.25 km zone

- 6900 h y^{-1} for the indoor occupancy rate
- 3200 h y^{-1} for the outdoor occupancy rate
- 8100 h y^{-1} for the total occupancy rate

>0.25 - 0.5 km zone

- 6300 h y^{-1} for the indoor occupancy rate
- 2200 h y^{-1} for the outdoor occupancy rate
- 8500 h y^{-1} for the total occupancy rate

>0.5 - 1.0 km zone

- 8300 h y^{-1} for the indoor occupancy rate
- 2500 h y^{-1} for the outdoor occupancy rate
- 8500 h y^{-1} for the total occupancy rate

In the 0 - 0.25 km zone, the highest indoor occupancy rate was shared by three residents living at the same property. The highest outdoor occupancy rate and total occupancy rate was for another resident. In the 0.25 - 0.5 km zone, the highest indoor, outdoor and total occupancy rate was for a resident of a farm. In the >0.5 - 1.0 km zone, the highest indoor occupancy rate and total occupancy rate were for a resident and the highest outdoor occupancy rate was for a farm worker.

10 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 high amounts of time.

In England and Wales, the monitoring programme for radioactivity in food is undertaken by the Food Standards Agency, and the monitoring programme for radioactivity in the environment is conducted by the Environment Agency. The results of these programmes are published annually in the RIFE reports (e.g. EA, FSA, FSS, NRW, NIEA and SEPA, 2018).

In 2013 the Food Standards Agency 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.

10.1 Summary of the monitoring programmes for Sellafield

The 2017 monitoring programmes relevant to the Sellafield area included the samples and measurements listed below. The location names, foods and substrate classifications are taken directly from RIFE 22 (EA, FSA, FSS, NRW, NIEA and SEPA, 2018). Some of the samples and measurements taken for the monitoring programmes may be from outside the survey areas used for the 2018 Sellafield habits survey.

Aquatic samples

Food and environmental samples

Sample	***Location***
Cod	Parton
Cod	Whitehaven
Plaice	Whitehaven
Plaice	Ravenglass
Crabs	Parton
Crabs	Sellafield coastal area
Lobsters	Parton
Lobsters	Sellafield coastal area
Nephrops	Whitehaven
Common prawn	Seascale Area
Mussels	Whitehaven outer harbour
Mussels	Ravenglass

Winkles	Parton
Winkles	Nethertown
Samphire	Ravenglass
Seaweed	Ravenglass
Seaweed	Sellafield
Seaweed	St Bees

Gamma dose rate measurements over intertidal sediments

Location	***Substrate***
Whitehaven – outer harbour	Sand
Whitehaven – outer harbour	Sand and pebbles
St Bees	Sand
Nethertown beach	Pebbles
Nethertown beach	Shingle
Ehen spit	Sand and pebbles
Ehen spit	Sand and shingle
Ehen spit	Shingle
Braystones	Grass
Braystones beach	Pebbles
Braystones beach	Shingle
Sellafield dunes	Grass
North of former pipeline on foreshore	Sand
South of former pipeline on foreshore	Sand
River Calder downstream of site	Grass
River Calder upstream of site	Grass
Seascale beach	Sand
Seascale beach	Sand and shingle
Ravenglass – Carleton Marsh	Grass
Ravenglass – Carleton Marsh	Grass and mud
Ravenglass – Carleton Marsh	Salt marsh
Ravenglass – River Mite estuary (erosional)	Grass
Ravenglass – River Mite estuary (erosional)	Salt marsh
Ravenglass – Raven Villa	Salt marsh
Ravenglass – boat area	Sand and pebbles
Ravenglass – boat area	Stones
Ravenglass – ford	Sand
Muncaster Bridge	Grass
Ravenglass – salmon garth	Mud and sand
Ravenglass – salmon garth	Sand
Ravenglass – salmon garth	Sand and shingle
Ravenglass – Eskmeals Nature Reserve	Salt marsh
Newbiggin/Eskmeals Bridge	Salt marsh
Newbiggin/Eskmeals viaduct	Salt marsh
Tarn Bay	Sand

Terrestrial samples

Milk
Beef kidney
Beef liver
Beef muscle
Apple

Swede
Cabbage
Carrots
Eggs
Mushrooms
Pheasant
Potatoes
Rabbit
Sheep muscle
Sheep offal
Wood pigeon muscle
Grass
Soil

10.2 Information from the 2018 Sellafield habits survey for use in the selection of samples and measurements for monitoring programmes

Food Standards Agency monitoring

The following foods were either consumed in the largest quantities in their food groups or were the only food in their food group and could be considered when selecting samples for the Food Standards Agency monitoring programme.

Food	***Food Group***
Cod	Fish
Common lobster	Crustacean
Winkle	Mollusc
Goose (unspecified species)	Wildfowl
Sea lettuce	Marine plants/algae
Mushroom	Wild fungi growing on salt marsh
Cabbage	Green vegetables
Tomato	Other vegetables
Onion	Root vegetables
Potato	Potato
Apple	Domestic fruit
Cows' milk	Milk
Beef	Cattle meat
Lamb	Sheep meat
Pheasant	Poultry
Blackberry	Wild/free foods
Rabbit	Rabbits/hares
Honey	Honey
Mushroom	Wild fungi
Venison	Venison
Rainbow trout	Freshwater fish

Environment Agency monitoring

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

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Table 1. 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 Sellafield 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**)	4053[a]	159[b]	4%	The survey targeted individuals who were potentially the most exposed, mostly producers of local foods such as farmers and allotment holders.
	Number of people resident in the direct radiation survey area (See **(C) DIRECT RADIATION PATHWAYS**)	60	43[b]	72%	Interviews were conducted at 14 residences out of an estimated total of 22 permanent residences.
	Number of people working, visiting and undertaking recreational activities in the direct radiation survey area (See **(C) DIRECT RADIATION PATHWAYS**)	U	129[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 effected by liquid discharges (excluding those assigned to other categories above) (See **(A) AQUATIC PATHWAYS**)	U	564[b]	U	Where generalised data for groups of people were obtained, for example members of sailing clubs, only a limited number of representative individuals have been included.
	Total for aquatic, terrestrial and direct radiation survey areas	U	895[b]	U	
(A) AQUATIC PATHWAYS					
Commercial and hobby fishermen	Number of commercial and hobby fishermen fishing in the aquatic survey area	U	13	U	
People undertaking activities in or on water (*e.g.* swimmers, surfers, boat anglers, commercial and hobby fishermen etc.)	Number of people undertaking activities in or on water in the aquatic survey area	U	189	U	Where generalised data for groups of people were obtained, for example members of sailing clubs, only a limited number of representative individuals have been included.
People using the shore (e.g. dog walkers, shore anglers, people playing, etc.)	Number of people undertaking intertidal activities in the aquatic survey area	U	495	U	
Fish consumers	Number of people consuming fish from the aquatic survey area	U	96	U	
Crustacean consumers	Number of people consuming crustaceans from the aquatic survey area	U	63	U	
Mollusc consumers	Number of people consuming molluscs from the aquatic survey area	U	29	U	
(B) TERRESTRIAL PATHWAYS					
Farmers	Number of farmers and their family members consuming food from the terrestrial survey area	124	109	88%	Interviews were conducted at 36 farms out of an estimated 41 farms in the terrestrial survey area.

Table 1. Survey coverage

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
Allotment holders and gardeners	Number of allotment holders and gardeners and their family members consuming food from the terrestrial survey area	U	69	U	
Honey consumers	Number of people consuming honey produced in the survey area	U	20	U	Four beekeepers who kept hives in the survey area were interviewed.
(C) DIRECT RADIATION PATHWAYS					
Residents	Number of residents in the survey area	60	43	72%	Interviews were conducted at 14 residences out of an estimated total of 22 permanent residences.
Employees	Number of people working in the survey area	U	75	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	54	U	
BREAKDOWN OF AGE GROUPS FOR PEOPLE RESIDENT IN THE 5 km TERRESTRIAL SURVEY AREA					
Adult	16-year-old and over	3461[a]	772	22%	
Child	6-year-old to 15-year-old	362[a]	96	27%	
Infant	0 to 5-year-old	228[a]	30	13%	

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 2. Typical food groups used in habits surveys

Food group	Examples of foods within the group
Green vegetables	Asparagus, broccoli, Brussels sprout, cabbage, calabrese, cauliflower, chard, courgette, cucumber, gherkin, globe artichoke, herbs, kale, leaf beet, lettuce, marrow, spinach
Other vegetables	Aubergine, broad bean, chilli 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[c], 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 3. Adults' consumption rates of fish from the Sellafield aquatic survey area (kg y^{-1})

Person ID number	Bass	Brill	Brown trout	Cod	Dover sole	Flounder	Grey mullet	Mackerel	Plaice	Pollack	Pouting	Salmon	Sea trout	Thornback ray	Turbot	Whiting	Total
2273/1/1	**-**	**-**	**-**	**4.4**	**-**	**-**	**-**	**-**	**8.9**	**-**	**-**	**-**	**-**	**54.6**	**-**	**-**	**67.9**
2286/3/1	**9.1**	**-**	**-**	**20.9**	**2.7**	**-**	**-**	**-**	**10.9**	**-**	**-**	**-**	**-**	**20.9**	**2.7**	**-**	**67.1**
2286/1/1	**7.7**	**-**	**-**	**19.1**	**2.3**	**-**	**-**	**-**	**9.5**	**-**	**-**	**-**	**-**	**19.1**	**1.8**	**-**	**59.4**
2299/1/1	**-**	**-**	**-**	**30.0**	**-**	**-**	**-**	**7.2**	**17.2**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**54.5**
2299/2/1	**-**	**-**	**-**	**30.0**	**-**	**-**	**-**	**7.2**	**17.2**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**54.5**
2155/2/1	**-**	**-**	**-**	**23.7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**24.0**	**-**	**-**	**47.7**
1881/1/1	**-**	**-**	**-**	**47.6**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**47.6**
1952/1/1	**-**	**-**	**-**	**46.7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**46.7**
2060/1/1	**-**	**-**	**-**	**5.9**	**-**	**-**	**-**	**5.9**	**-**	**5.9**	**5.9**	**-**	**-**	**5.9**	**-**	**5.9**	**35.4**
2295/1/1	**-**	**-**	**-**	**35.0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**35.0**
2286/2/1	**4.5**	**-**	**-**	**10.4**	**1.4**	**-**	**-**	**-**	**5.4**	**-**	**-**	**-**	**-**	**10.4**	**1.4**	**-**	**33.6**
2058/1/1	**-**	**-**	**-**	**19.6**	**-**	**-**	**-**	**11.8**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**31.5**
2144/1/1	**-**	**1.1**	**-**	**7.7**	**2.3**	**-**	**-**	**-**	**7.7**	**-**	**-**	**-**	**-**	**7.7**	**-**	**-**	**26.5**
2144/2/1	**-**	**1.1**	**-**	**7.7**	**2.3**	**-**	**-**	**-**	**7.7**	**-**	**-**	**-**	**-**	**7.7**	**-**	**-**	**26.5**
2247/3/1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**9.1**	**15.9**	**-**	**-**	**-**	**24.9**
1905/1/1	**6.0**	**-**	**-**	**9.5**	**-**	**-**	**-**	**5.8**	**2.8**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**24.1**
2155/1/1	**-**	**-**	**-**	**23.7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**23.7**
2271/3/1	**-**	**-**	**-**	**2.4**	**-**	**-**	**4.7**	**2.4**	**4.7**	**4.7**	**-**	**-**	**-**	**-**	**-**	**4.7**	**23.5**
2034/1/1	-	-	-	4.1	-	-	-	4.1	4.1	4.1	-	-	-	-	-	4.1	20.6
2034/2/1	-	-	-	4.1	-	-	-	4.1	4.1	4.1	-	-	-	-	-	4.1	20.6
2079/1/1	-	-	-	5.7	-	-	-	0.6	-	5.7	-	2.2	-	-	-	5.7	19.8
2079/2/1	-	-	-	5.7	-	-	-	0.6	-	5.7	-	2.2	-	-	-	5.7	19.8
1932/1/1	-	-	-	18.0	-	-	-	-	-	-	-	-	-	-	-	-	18.0
2071/1/1	-	-	-	6.0	-	-	-	5.2	2.0	-	-	-	-	-	-	3.9	17.0
2071/2/1	-	-	-	6.0	-	-	-	5.2	2.0	-	-	-	-	-	-	3.9	17.0
2236/1/1	-	-	-	8.4	-	-	-	-	-	7.9	-	-	-	-	-	-	16.3
2070/1/1	-	-	-	6.3	-	-	-	8.3	-	-	-	-	-	-	-	-	14.6
2154/1/1	-	-	-	-	-	-	-	-	13.6	-	-	-	-	-	-	-	13.6
2273/2/1	-	-	-	4.4	-	-	-	-	8.9	-	-	-	-	-	-	-	13.3
2271/1/1	-	-	-	1.3	-	-	2.7	1.3	2.7	2.7	-	-	-	-	-	2.7	13.3
2271/2/1	-	-	-	1.3	-	-	2.7	1.3	2.7	2.7	-	-	-	-	-	2.7	13.3
2258/2/1	-	-	0.5	6.7	-	0.4	-	-	0.4	-	-	-	5.0	-	-	-	12.9

Table 3. Adults' consumption rates of fish from the Sellafield aquatic survey area (kg y^{-1})

Person ID number	Bass	Brill	Brown trout	Cod	Dover sole	Flounder	Grey mullet	Mackerel	Plaice	Pollack	Pouting	Salmon	Sea trout	Thornback ray	Turbot	Whiting	Total
2258/3/1	-	-	0.5	6.7	-	0.4	-	-	0.4	-	-	-	5.0	-	-	-	12.9
2193/1/1	-	-	-	12.0	-	-	-	-	-	-	-	-	-	-	-	-	12.0
2287/1/1	-	-	-	5.9	-	-	-	-	-	-	-	-	-	5.9	-	-	11.8
2287/2/1	-	-	-	5.9	-	-	-	-	-	-	-	-	-	5.9	-	-	11.8
2064/1/1	-	-	-	2.3	-	-	-	-	2.3	2.3	-	-	-	2.3	-	2.3	11.3
2064/2/1	-	-	-	2.3	-	-	-	-	2.3	2.3	-	-	-	2.3	-	2.3	11.3
2064/3/1	-	-	-	2.3	-	-	-	-	2.3	2.3	-	-	-	2.3	-	2.3	11.3
2079/3/1	-	-	-	2.8	-	-	-	0.3	-	2.8	-	1.1	-	-	-	2.8	9.9
2079/3/2	-	-	-	2.8	-	-	-	0.3	-	2.8	-	1.1	-	-	-	2.8	9.9
2079/4/1	-	-	-	2.8	-	-	-	0.3	-	2.8	-	1.1	-	-	-	2.8	9.9
2079/4/2	-	-	-	2.8	-	-	-	0.3	-	2.8	-	1.1	-	-	-	2.8	9.9
2253/1/1	3.0	-	-	3.0	-	-	-	-	3.0	-	-	-	-	0.02	-	-	9.0
2253/2/1	3.0	-	-	3.0	-	-	-	-	3.0	-	-	-	-	0.02	-	-	9.0
2156/1/1	-	-	-	4.5	-	-	-	-	-	-	-	-	-	4.5	-	-	9.0
2156/2/1	-	-	-	4.5	-	-	-	-	-	-	-	-	-	4.5	-	-	9.0
2156/3/1	-	-	-	4.5	-	-	-	-	-	-	-	-	-	4.5	-	-	9.0
2182/3/1	-	-	-	-	-	6.0	-	-	-	-	-	-	-	-	-	2.7	8.7
2058/2/1	-	-	-	-	-	-	-	7.8	-	-	-	-	-	-	-	-	7.8
1984/1/1	-	-	-	6.3	-	-	-	-	-	-	-	-	-	-	-	1.4	7.7
2049/1/1	-	-	-	-	-	-	-	7.3	-	-	-	-	-	-	-	-	7.3
2049/2/1	-	-	-	-	-	-	-	7.3	-	-	-	-	-	-	-	-	7.3
2221/1/1	-	-	-	-	-	-	-	7.3	-	-	-	-	-	-	-	-	7.3
2221/2/1	-	-	-	-	-	-	-	7.3	-	-	-	-	-	-	-	-	7.3
2052/1/1	-	-	-	-	-	-	-	6.0	-	-	-	-	-	-	-	-	6.0
2052/2/1	-	-	-	-	-	-	-	6.0	-	-	-	-	-	-	-	-	6.0
2052/3/1	-	-	-	-	-	-	-	6.0	-	-	-	-	-	-	-	-	6.0
2088/1/1	-	-	-	5.9	-	-	-	-	-	-	-	-	-	-	-	-	5.9
2058/3/1	-	-	-	2.7	-	-	-	2.7	-	-	-	-	-	-	-	-	5.4
1945/1/1	-	-	-	5.4	-	-	-	-	-	-	-	-	-	-	-	-	5.4
1892/1/1	-	-	-	3.6	-	-	-	-	1.2	-	-	-	-	-	-	-	4.8
1892/2/1	-	-	-	3.6	-	-	-	-	1.2	-	-	-	-	-	-	-	4.8
2294/1/1	-	-	-	1.5	-	-	-	1.5	-	-	-	-	-	-	1.5	-	4.5

Table 3. Adults' consumption rates of fish from the Sellafield aquatic survey area (kg y^{-1})

Person ID number	Bass	Brill	Brown trout	Cod	Dover sole	Flounder	Grey mullet	Mackerel	Plaice	Pollack	Pouting	Salmon	Sea trout	Thornback ray	Turbot	Whiting	Total
2133/2/1	-	-	-	1.8	-	-	-	2.4	-	-	-	-	-	-	-	-	4.2
2133/3/1	-	-	-	1.8	-	-	-	2.4	-	-	-	-	-	-	-	-	4.2
1902/1/1	-	-	-	3.3	-	-	-	-	-	-	-	-	-	-	-	-	3.3
1979/1/1	-	0.9	-	0.6	-	-	-	-	-	-	-	-	-	-	1.2	-	2.8
2053/1/1	-	-	-	-	-	-	-	2.8	-	-	-	-	-	-	-	-	2.8
2053/2/1	-	-	-	-	-	-	-	2.8	-	-	-	-	-	-	-	-	2.8
1991/1/1	-	-	-	-	-	-	-	2.3	-	-	-	-	-	-	-	-	2.3
2247/2/1	-	-	-	2.1	-	-	-	-	-	-	-	-	-	-	-	-	2.1
2258/1/1	-	-	-	1.0	-	-	-	-	-	-	-	-	0.8	-	-	-	1.8
2258/4/1	-	-	-	1.0	-	-	-	-	-	-	-	-	0.8	-	-	-	1.8
2048/1/1	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	1.2
2252/1/1	-	-	-	0.7	-	-	-	-	0.1	-	-	-	-	-	-	-	0.8
2252/2/1	-	-	-	0.7	-	-	-	-	0.1	-	-	-	-	-	-	-	0.8
2252/3/1	-	-	-	0.7	-	-	-	-	0.1	-	-	-	-	-	-	-	0.8
2252/4/1	-	-	-	0.7	-	-	-	-	0.1	-	-	-	-	-	-	-	0.8
2139/1/1	-	-	-	0.3	-	-	-	-	-	0.3	-	-	-	-	-	-	0.6
2139/2/1	-	-	-	0.3	-	-	-	-	-	0.3	-	-	-	-	-	-	0.6
2139/3/1	-	-	-	0.3	-	-	-	-	-	0.3	-	-	-	-	-	-	0.6
2043/1/1	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	0.5
2043/2/1	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	0.5

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of fish for adults based on the 18 high-rate consumers is 40.6 kg y^{-1}

The observed 97.5th percentile rate based on 84 observations is 59.0 kg y^{-1}

Table 4. Adults' consumption rates of crustaceans from the Sellafield aquatic survey area (kg y^{-1})

Person ID number	Brown crab	Brown shrimp	Common prawn	Common lobster	*Nephrops*	Total
2286/1/1	**8.1**	**30.8**	**1.8**	**17.4**	**-**	**58.2**
2286/2/1	**8.1**	**23.6**	**1.8**	**7.4**	**-**	**40.9**
2273/1/1	**14.3**	**-**	**-**	**22.4**	**0.7**	**37.5**
2273/2/1	**14.3**	**-**	**-**	**22.4**	**0.7**	**37.5**
2299/1/1	**21.5**	**-**	**-**	**11.2**	**-**	**32.7**
2299/2/1	**21.5**	**-**	**-**	**11.2**	**-**	**32.7**
2144/1/1	**15.6**	**-**	**-**	**15.4**	**0.9**	**31.9**
2144/2/1	**15.6**	**-**	**-**	**15.4**	**0.9**	**31.9**
2286/3/1	**8.1**	**8.8**	**-**	**14.9**	**-**	**31.8**
2058/1/1	**11.8**	**-**	**-**	**11.8**	**-**	**23.7**
2058/2/1	**11.8**	**-**	**-**	**11.8**	**-**	**23.7**
2049/2/1	7.2	-	-	11.2	-	18.4
2296/1/1	7.2	-	-	11.2	-	18.4
2296/2/1	7.2	-	-	11.2	-	18.4
2296/3/1	7.2	-	-	11.2	-	18.4
2296/4/1	7.2	-	-	11.2	-	18.4
2296/5/1	7.2	-	-	11.2	-	18.4
2296/6/1	7.2	-	-	11.2	-	18.4
2138/1/1	2.7	-	-	4.3	-	7.0
2048/1/1	4.5	-	-	-	-	4.5
2287/1/1	1.2	-	-	1.8	-	3.0
2287/2/1	1.2	-	-	1.8	-	3.0
2155/1/1	1.4	-	-	1.3	-	2.7
2155/2/1	1.4	-	-	1.3	-	2.7
2281/1/1	-	-	2.2	0.4	-	2.6
2281/2/1	-	-	2.2	0.4	-	2.6
1905/1/1	-	-	-	1.8	-	1.8
2038/2/1	0.7	-	-	1.1	-	1.8
2111/1/1	-	1.1	-	-	-	1.1
2111/2/1	-	1.1	-	-	-	1.1
1881/1/1	-	-	-	1.1	-	1.1
2133/1/1	0.5	-	-	0.4	-	1.0
2133/2/1	0.5	-	-	0.4	-	1.0
2133/3/1	0.5	-	-	0.4	-	1.0
2133/4/1	0.5	-	-	0.4	-	1.0
2133/7/1	0.5	-	-	0.4	-	1.0
2271/1/1	-	-	-	0.9	-	0.9
2294/1/1	0.3	-	-	0.4	-	0.7
2224/1/1	-	-	-	0.6	-	0.6
2224/1/2	-	-	-	0.6	-	0.6
2224/1/3	-	-	-	0.6	-	0.6
2225/1/1	-	-	-	0.6	-	0.6
2225/2/1	-	-	-	0.6	-	0.6
2223/1/1	0.5	-	-	-	-	0.5
2139/1/1	-	-	-	-	0.3	0.3
2139/2/1	-	-	-	-	0.3	0.3
2139/3/1	-	-	-	-	0.3	0.3
2253/1/1	0.3	-	-	-	-	0.3
2253/2/1	0.3	-	-	-	-	0.3
2043/1/1	0.2	-	-	-	-	0.2
2043/2/1	0.2	-	-	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of crustaceans for adults based on the 11 high-rate consumers is 34.8 kg y^{-1}

The observed 97.5th percentile rate based on 51 observations is 40.1 kg y^{-1}

Table 5. Adults' consumption rates of molluscs from the Sellafield aquatic survey area (kg y^{-1})

Person ID number	Clam	Cockle	Limpet	Mussel	Whelk	Winkle	Total
2286/1/1	**-**	**-**	**-**	**7.5**	**-**	**8.5**	**16.0**
2282/2/1	**-**	**-**	**-**	**-**	**-**	**12.6**	**12.6**
2085/3/1	**-**	**-**	-	**-**	**-**	**9.7**	**9.7**
2085/4/1	**-**	**-**	**3.6**	**-**	**-**	**5.1**	**8.7**
2286/2/1	-	-	-	-	-	4.3	4.3
2271/3/1	-	-	-	-	-	2.9	2.9
2286/3/1	-	-	-	2.5	-	-	2.5
2068/1/1	-	-	-	-	-	2.4	2.4
2068/2/1	-	-	-	-	-	2.4	2.4
2281/1/1	1.5	-	-	-	-	-	1.5
2281/2/1	1.5	-	-	-	-	-	1.5
2273/1/1	-	-	-	0.8	-	0.7	1.4
2273/2/1	-	-	-	0.8	-	0.7	1.4
2085/2/1	-	-	-	-	-	1.3	1.3
2085/1/1	-	-	-	-	-	0.4	0.4
2144/1/1	-	-	-	-	0.2	-	0.2
2139/1/1	-	-	-	0.1	-	0.1	0.2
2139/2/1	-	-	-	0.1	-	0.1	0.2
2139/3/1	-	-	-	0.1	-	0.1	0.2
2257/3/1	-	-	-	0.1	-	-	0.1
2225/1/1	-	0.04	-	-	-	-	0.04
2225/2/1	-	0.04	-	-	-	-	0.04

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of molluscs for adults based on the 4 high-rate consumers is 11.8 kg y^{-1}

The observed 97.5th percentile rate based on 22 observations is 14.2 kg y^{-1}

Table 6. Adults' consumption rates of wildfowl from the Sellafield aquatic survey area (kg y^{-1})

Person ID number	Goose (unspecified species)	Mallard	Snipe	Teal	Wigeon	Total
2298/1/1	**33.0**	**6.7**	**-**	**-**	**-**	**39.8**
2072/1/1	**13.2**	**1.8**	**-**	**0.6**	**1.4**	**17.0**
2138/1/1	-	-	1.4	-	-	1.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wildfowl for adults based on the 2 high-rate consumers is 28.4 kg y^{-1}

The observed 97.5th percentile rate based on 3 observations is 38.6 kg y^{-1}

Table 7. Adults' consumption rates of marine plants/algae from the Sellafield aquatic survey area (kg y^{-1})

Person ID number	Samphire	Sea lettuce	Total
2189/1/1	**-**	**0.5**	**0.5**
2274/2/1	0.1	-	0.1
2274/6/1	0.1	-	0.1
2274/6/2	0.1	-	0.1
2274/6/3	0.1	-	0.1
2274/6/4	0.1	-	0.1
2274/6/5	0.1	-	0.1
2274/7/1	0.1	-	0.1
2274/7/2	0.1	-	0.1
2274/7/3	0.1	-	0.1
2274/7/4	0.1	-	0.1

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of marine plants/algae for adults based on the high-rate consumer is 0.5 kg y^{-1}

The observed 97.5th percentile rate based on 11 observations is 0.4 kg y^{-1}

Table 8. Adults' consumption rates of wild salt marsh grown mushrooms from the Sellafield aquatic survey area (kg y^{-1})

Person ID number	Mushrooms
2240/1/1	**1.1**
2240/2/1	**1.1**
2240/3/1	**1.1**
2240/4/1	**1.1**
2240/5/1	**1.1**

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of salt marsh mushrooms for adults based on the 5 high-rate consumers is 1.1 kg y^{-1}

The observed 97.5th percentile rate based on 5 observations is 1.1 kg y^{-1}

Table 9. Children's and infants' consumption rates of fish from the Sellafield aquatic survey area (kg y^{-1})

Child age group (6 - 15 years old)

Person ID number	Age	Bass	Cod	Mackerel	Plaice	Pollack	Salmon	Sea trout	Whiting	Total
1905/2/1	**11**	**6.0**	**9.5**	**5.8**	**2.8**	**-**	**-**	**-**	**-**	**24.1**
1905/3/1	**13**	**6.0**	**9.5**	**5.8**	**2.8**	**-**	**-**	**-**	**-**	**24.1**
2236/4/1	**12**	**-**	**8.4**	**-**	**-**	**7.9**	**-**	**-**	**-**	**16.3**
2079/5/1	10	-	1.4	0.1	-	1.4	0.6	-	1.4	5.0
2079/6/1	12	-	1.4	0.1	-	1.4	0.6	-	1.4	5.0
1991/2/1	11	-	-	2.3	-	-	-	-	-	2.3
2053/3/1	8	-	-	2.1	-	-	-	-	-	2.1
2053/4/1	8	-	-	2.1	-	-	-	-	-	2.1
2258/6/1	8	-	0.8	-	-	-	-	0.6	-	1.3
2139/4/1	10	-	0.3	-	-	0.3	-	-	-	0.6
2139/5/1	8	-	0.2	-	-	0.2	-	-	-	0.5

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of fish for the child age group based on the 3 high-rate consumers is 21.5 kg y^{-1}

The observed 97.5th percentile rate based on 11 observations is 24.1 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Bass	Cod	Mackerel	Plaice	Pollack	Salmon	Sea trout	Whiting	Total
2258/5/1	**4**	**-**	**0.5**	**-**	**-**	**-**	**-**	**0.4**	**-**	**0.9**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of fish for the infant 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 10. Children's and Infants' consumption rates of crustaceans from the Sellafield aquatic survey area (kg y^{-1})

Child age group (6 - 15 years old)

Person ID number	Age	Brown shrimp	Common prawn	Common lobster	*Nephrops*	Total
2281/4/1	**11**	**-**	**2.2**	**0.4**	**-**	**2.6**
2281/5/1	**10**	**-**	**2.2**	**0.4**	**-**	**2.6**
2281/6/1	**6**	**-**	**1.7**	**0.3**	**-**	**2.0**
1905/2/1	**11**	**-**	**-**	**1.8**	**-**	**1.8**
1905/3/1	**13**	**-**	**-**	**1.8**	**-**	**1.8**
2139/4/1	10	-	-	-	0.3	0.3
2139/5/1	8	-	-	-	0.2	0.2
2111/3/1	11	0.1	-	-	-	0.1
2111/4/1	7	0.05	-	-	-	0.1
2111/5/1	6	0.05	-	-	-	0.1
2111/6/1	6	0.05	-	-	-	0.1

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of crustaceans for the child age group based on the 5 high-rate consumers is 2.2 kg y^{-1}

The observed 97.5th percentile rate based on 11 observations is 2.6 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Brown shrimp	Common prawn	Common lobster	*Nephrops*	Total
2281/3/1	**4**	**-**	**1.1**	**0.2**	**-**	**1.3**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of crustaceans for the infant age group based on the high-rate consumer is 1.3 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Table 11. Children's and infants' consumption rates of molluscs from the Sellafield aquatic survey area (kg y^{-1})

Child age group (6 - 15 years old)

Person ID number	Age	Clam	Cockle	Mussel	Winkle	Total
2281/4/1	**11**	**1.5**	-	**-**	**-**	**1.5**
2281/5/1	**10**	**1.5**	-	**-**	**-**	**1.5**
2281/6/1	**6**	**1.1**	-	**-**	**-**	**1.1**
2139/4/1	10	-	-	0.1	0.1	0.2
2139/5/1	8	-	-	0.05	0.1	0.2
2225/3/1	13	-	0.04	-	-	0.04

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of molluscs for the child age group based on the 3 high-rate consumers is 1.4 kg y^{-1}

The observed 97.5th percentile rate based on 6 observations is 1.5 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Clam	Cockle	Mussel	Winkle	Total
2281/3/1	**4**	**0.8**	-	**-**	**-**	**0.8**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of molluscs for the infant age group based on the high-rate consumer is 0.8 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Table 12: Adults' consumption rates of vegetables and domestic fruit grown on land where seaweed has been used as a fertiliser (kg y^{-1})

Green vegetables

Person ID number	Brussel sprout	Cabbage	Cucumber	Total
2258/2/1	2.2	10.2	8.8	21.2
2258/3/1	2.2	10.2	8.8	21.2
2258/1/1	0.3	1.6	1.4	3.3
2258/4/1	0.3	1.6	1.4	3.3

Other vegetables

Person ID number	Broad bean	French bean	Pea	Tomato	Total
2258/2/1	4.0	4.8	4.0	8.0	20.8
2258/3/1	4.0	4.8	4.0	8.0	20.8
2258/1/1	0.6	0.7	0.6	1.2	3.2
2258/4/1	0.6	0.7	0.6	1.2	3.2

Root vegtables

Person ID number	Beetroot	Leek	Onion	Total
2258/2/1	10.0	9.6	4.8	24.0
2258/3/1	10.0	9.6	4.8	24.4
2258/1/1	1.5	1.5	0.7	3.8
2258/4/1	1.5	1.5	0.7	3.8

Potato

Person ID number	Potato
2258/2/1	14.0
2258/3/1	14.0
2028/1/1	6.8 [a]
2028/2/1	6.8 [a]
2273/1/1	2.5 [a]
2273/2/1	2.5 [a]
2258/1/1	2.2
2258/4/1	2.2

Domestic fruit

Person ID number	Raspberry	Rhubarb	Total
2258/2/1	4.4	3.2	7.6
2258/3/1	4.4	3.2	7.6
2258/1/1	0.7	0.5	1.2
2258/4/1	0.7	0.5	1.2

Notes

These foods are included in the aquatic section of this report as seaweed has been used as a fertiliser so the exposure pathway is sea to land transfer and the source of the potential exposure is liquid discharge. However, these foods were grown in the terrestrial survey area and are also potentially exposed to gaseous discharges. Therefore, they are also included in the terrestrial groups and are included in Annex 1 as terrestrial foods. A small amount of foods were grown outside of the terrestrial area and these are marked with [a].

Table 13: Children's and infants' consumption rates of vegetables and domestic fruit grown on land where seaweed has been used as a fertiliser (kg y^{-1})

Green vegetables

Person ID number	Age	Brussel sprout	Cabbage	Cucumber	Total
2258/6/1	8	0.3	1.2	1.0	2.4
2258/5/1	4	0.2	0.8	0.7	1.6

Other vegetables

Person ID number	Age	Broad bean	French bean	Pea	Tomato	Total
2258/6/1	8	0.5	0.6	0.5	0.9	2.4
2258/5/1	4	0.3	0.4	0.3	0.6	1.6

Root vegtables

Person ID number	Age	Beetroot	Leek	Onion	Total
2258/6/1	8	1.2	1.1	0.6	2.8
2258/5/1	4	0.8	0.7	0.4	1.9

Potato

Person ID number	Age	Potato
2258/6/1	8	1.6
2258/5/1	4	1.1

Domestic fruit

Person ID number	Age	Raspberry	Rhubarb	Total
2258/6/1	8	0.5	0.4	0.9
2258/5/1	4	0.3	0.2	0.6

Notes

These foods are included in the aquatic section of this report as the exposure pathway is sea to land transfer and the source of the potential exposure is liquid discharge. However these foods were grown in the terrestrial survey area and are also potentially exposed to gaseous discharges. Therefore they are also included in the terrestrial groups and are included in Annex 1 as terrestrial foods.

Table 14. Adults' intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
2072/1/1	**River Esk, River Irt, River Mite and Newbiggin Marsh**	**Wildfowling**	**62**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
			-	-	-	-	8	-	-	-	-
2298/1/1	River Esk, River Irt, River Mite and Newbiggin Marsh	Wildfowling	14	-	-	-	-	-	-	-	-
		Walking	-	-	-	-	2	-	-	-	-
2274/1/1	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/1/2	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/1/3	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/1/4	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/1/5	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/1/6	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/1/7	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/1/8	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/1/9	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/1/10	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/2/1	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/3/1	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/4/1	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/4/2	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/4/3	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/4/4	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/4/5	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/4/6	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/4/7	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/4/8	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/4/9	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2274/4/10	Ravenglass Estuary and River Esk	Obstacle course	1	-	-	-	-	-	-	-	-
2064/1/1	**Whitehaven outer harbour**	**Bait digging**	**-**	**104**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Parton, Fleswick and St Bees	**Angling**	**-**	**-**	**-**	**261**	-	-	-	-	-
2064/2/1	**Whitehaven outer harbour**	**Bait digging**	**-**	**104**	-	-	-	-	-	-	-
	Parton, Fleswick and St Bees	**Angling**	**-**	**-**	**-**	**261**	-	-	-	-	-
2064/3/1	**Whitehaven outer harbour**	**Bait digging**	**-**	**104**	-	-	-	-	-	-	-
	Parton, Fleswick and St Bees	**Angling**	**-**	**-**	**-**	**261**	-	-	-	-	-
2281/1/1	Whitehaven inner harbour	Dog walking	-	4	-	-	-	-	-	-	-
	Whitehaven north beach, St Bees and Seascale		-	-	-	-	-	90	-	-	-
	Parton	Collecting a small quantity of clams	-	-	-	-	-		-	-	-
		Dog walking	-	-	-	-	-	-	10	-	-
2281/2/1	Whitehaven inner harbour	Dog walking	-	4	-	-	-	-	-	-	-
	Whitehaven north beach, St Bees and Seascale		-	-	-	-	-	90	-	-	-
	Parton		-	-	-	-	-	-	10	-	-
2028/1/1	**Ravenglass Estuary**	**Dog walking**	**-**	**-**	**730**	**-**	**-**	**-**	**-**	**-**	**-**
		Collecting seaweed	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**
	Drigg	**Dog walking**	-	-	-	-	-	209	-	-	-

Table 14. Adults' intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
2258/2/1	**Ravenglass Estuary**	**Bait digging, collecting seaweed and collecting peeler crabs for bait**	**-**	**-**	**389**	-	-	-	-	-	-
	Nethertown	**Angling and bait digging**	**-**	**-**	**-**	**-**	**-**	**782**	-	-	-
		Collecting seaweed	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**4**	**-**
2133/2/1	**Ravenglass Estuary**	**Horse riding and dog walking**	**-**	**-**	**366**	-	-	-	-	-	-
	Saltcoats	**Dog walking**	**-**	**-**	**-**	**-**	**183**	-	-	-	-
2133/4/1	**Ravenglass Estuary**	**Horse riding and dog walking**	**-**	**-**	**366**	-	-	-	-	-	-
	Saltcoats	**Dog walking**	**-**	**-**	**-**	**-**	**183**	-	-	-	-
2193/1/1	**Ravenglass**	**Bait digging**	**-**	**-**	**313**	-	-	-	-	-	-
	St Bees, Nethertown, Braystones, Seascale, Drigg and Tarn Bay	**Angling**	**-**	**-**	**-**	**-**	**-**	**470**	-	-	-
2256/2/1	**Ravenglass Estuary**	**Dog walking**	**-**	**-**	**274**	-	-	-	-	-	-
	Drigg		-	-	-	-	-	274	-	-	-
2149/2/1	Ravenglass Estuary	Dog walking	-	-	240	-	-	-	-	-	-
	Seascale and Braystones	Dog walking	-	-	-	-	-	128	-	-	-
	Sellafield, St Bees and Drigg	Dog walking	-	-	-	-	-	60	-	-	-
1914/1/1	Ravenglass	Walking	-	-	235	-	-	-	-	-	-
	Drigg and Seascale	**Dog walking and walking**	-	-	-	-	-	**511**	-	-	-
			-	-	-	-	-		-	-	-
1982/1/1	Ravenglass	Taking photographs	-	-	235	-	-	-	-	-	-
	St Bees and Drigg		-	-	-	-	-	14	-	-	-
1980/1/1	Ravenglass	Working on a quad bike	-	-	209	-	-	-	-	-	-
	St Bees, Sellafield, Drigg and Tarn Bay		-	-	-	-	-	15	-	-	-
	Parton, Whitehaven north beach, Coulderton, Nethertown, Braystones and Seascale		-	-	-	-	-	-	22	-	-
1980/2/1	Ravenglass	Working on a quad bike	-	-	209	-	-	-	-	-	-
	St Bees, Sellafield, Drigg and Tarn Bay		-	-	-	-	-	15	-	-	-
	Parton, Whitehaven north beach, Coulderton, Nethertown, Braystones and Seascale		-	-	-	-	-	-	22	-	-
1980/3/1	Ravenglass	Working on a quad bike	-	-	209	-	-	-	-	-	-
	St Bees, Sellafield, Drigg and Tarn Bay		-	-	-	-	-	15	-	-	-
	Parton, Whitehaven north beach, Coulderton, Nethertown, Braystones and Seascale		-	-	-	-	-	-	22	-	-
1980/4/1	Ravenglass	Working on a quad bike	-	-	209	-	-	-	-	-	-
	St Bees, Sellafield, Drigg and Tarn Bay		-	-	-	-	-	15	-	-	-
	Parton, Whitehaven north beach, Coulderton, Nethertown, Braystones and Seascale		-	-	-	-	-	-	22	-	-
2133/7/1	Ravenglass Estuary	Horse riding	-	-	183	-	-	-	-	-	-
2133/8/1	Ravenglass Estuary	Horse riding	-	-	183	-	-	-	-	-	-
2045/1/1	Ravenglass	Property maintainance	-	-	168	-	-	-	-	-	-
2203/1/1	Ravenglass	Litter collecting on a quad bike	-	-	151	-	-	-	-	-	-
	Sellafield, Drigg and Seascale	Litter collecting on a quad bike	-	-	-	-	-	402	-	-	-

Table 14. Adults' intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
1881/1/1	**Ravenglass Estuary**	**Boat maintenance**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**131**
			-	-	131	-	-	-	-	-	-
1905/1/1	Ravenglass	Angling and bait digging	-	-	105	-	-	-	-	-	-
	Drigg		-	-	-	-	-	105	-	-	-
2195/1/1	Ravenglass	Dog walking, taking photographs and beachcombing	-	-	79	-	-	-	-	-	-
	Seascale, Drigg, Eskmeals and Tarn Bay		-	-	-	-	-	281	-	-	-
	Seascale	Dog walking	-	-	-	-	-	-	31	-	-
2195/2/1	Ravenglass	Dog walking, taking photographs and beachcombing	-	-	79	-	-	-	-	-	-
	Seascale, Drigg, Eskmeals and Tarn Bay		-	-	-	-	-	312	-	-	-
2296/1/1	Ravenglass Estuary	Boat maintenance	-	-	17	-	-	-	-	-	-
		Walking and wildfowling	-	-	-	-	84	-	-	-	-
2296/2/1	Ravenglass Estuary	Boat maintenance and wildfowling	-	-	17	-	-	-	-	-	-
		Wildfowling	-	-	-	-	84	-	-	-	-
2085/3/1	Ravenglass	Collecting mussels	-	-	12	-	-	-	-	-	-
	Eskmeals	Collecting winkles	-	-	-	-	-	-	24	-	-
2171/1/1	Saltcoats and Ravenglass Estuary	Walking	-	-	10	-	-	-	-	-	-
	Seascale		-	-	-	-	-	55	-	-	-
2171/2/1	Saltcoats and Ravenglass Estuary	Walking	-	-	10	-	-	-	-	-	-
	Seascale		-	-	-	-	-	55	-	-	-
1950/1/1	Ravenglass Estuary	Angling	-	-	7	-	-	-	-	-	-
	Drigg, Eskmeals and Tarn Bay	Angling and bait digging	-	-	-	-	-	28	-	-	-
2183/1/1	Ravenglass Estuary	Dog walking	-	-	5	-	-	-	-	-	-
2183/2/1	Ravenglass Estuary	Dog walking	-	-	5	-	-	-	-	-	-
1929/1/1	Ravenglass Estuary	Dog walking	-	-	3	-	-	-	-	-	-
	Seascale		-	-	-	-	-	-	6	-	-
1929/2/1	Ravenglass Estuary	Dog walking	-	-	3	-	-	-	-	-	-
	Seascale		-	-	-	-	-	-	6	-	-
1927/1/1	Ravenglass Estuary	Walking	-	-	2	-	-	-	-	-	-
1927/2/1	Ravenglass Estuary	Walking	-	-	2	-	-	-	-	-	-
1927/3/1	Ravenglass Estuary	Walking	-	-	2	-	-	-	-	-	-
1927/4/1	Ravenglass Estuary	Walking	-	-	2	-	-	-	-	-	-
1927/5/1	Ravenglass Estuary	Walking	-	-	2	-	-	-	-	-	-
1928/1/1	Ravenglass Estuary	Dog walking	-	-	2	-	-	-	-	-	-
1928/2/1	Ravenglass Estuary	Dog walking	-	-	2	-	-	-	-	-	-
2185/1/1	Ravenglass Estuary	Dog walking	-	-	1	-	-	-	-	-	-
	St Bees, Seamill, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg		-	-	-	-	-	106	-	-	-
1930/1/1	Ravenglass Estuary	Walking	-	-	1	-	-	-	-	-	-
1930/2/1	Ravenglass Estuary	Walking	-	-	1	-	-	-	-	-	-
1930/3/1	Ravenglass Estuary	Walking	-	-	1	-	-	-	-	-	-
2060/1/1	**Parton and Fleswick**	**Angling**	**-**	**-**	**-**	**417**	-	-	-	-	-

Table 14. Adults' intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
2286/3/1	**Drigg**	**Hooking for crabs and lobsters**	**-**	**-**	**-**	**146**	-	-	-	-	-
	Parton and Seamill	Angling	-	-	-	-	-	-	114	-	-
2271/3/1	Parton, St Bees Head and St Bees	Angling and collecting small quantities of winkles at St Bees	-	-	-	116	-	-	-	-	-
2271/1/1	Parton and St Bees Head	Angling	-	-	-	104	-	-	-	-	-
2058/1/1	Parton	Angling	-	-	-	70	-	-	-	-	-
	Sellafield		-	-	-	-	-	70	-	-	-
2286/1/1	Parton and St Bees	Collecting winkles and mussels	-	-	-	44	-	-	-	-	-
	Coulderton, Nethertown, Braystones and Seascale	Angling, setting nets and drift netting	-	-	-	-	-	330	-	-	-
	Whitehaven north beach and Drigg	Potting from the shore	-	-	-	-	-	-	**576**	-	-
2238/1/1	St Bees Head and St Bees	Rock climbing	-	-	-	28	-	-	-	-	-
		Resting	-	-	-	-	-	28	-	-	-
2238/2/1	St Bees Head and St Bees	Rock climbing	-	-	-	28	-	-	-	-	-
		Resting	-	-	-	-	-	28	-	-	-
2238/3/1	St Bees Head and St Bees	Rock climbing	-	-	-	28	-	-	-	-	-
		Resting	-	-	-	-	-	28	-	-	-
2238/4/1	St Bees Head and St Bees	Rock climbing	-	-	-	28	-	-	-	-	-
		Resting	-	-	-	-	-	28	-	-	-
2238/5/1	St Bees Head and St Bees	Rock climbing	-	-	-	28	-	-	-	-	-
		Resting	-	-	-	-	-	28	-	-	-
2238/6/1	St Bees Head and St Bees	Rock climbing	-	-	-	28	-	-	-	-	-
		Resting	-	-	-	-	-	28	-	-	-
2238/7/1	St Bees Head and St Bees	Rock climbing	-	-	-	28	-	-	-	-	-
		Resting	-	-	-	-	-	28	-	-	-
2155/1/1	Drigg	Hooking for crabs and lobsters	-	-	-	20	-	-	-	-	-
	Braystones, Seascale, St Bees, Drigg, Eskmeals and Tarn Bay	Angling and bait digging	-	-	-	-	-	264	-	-	-
2070/1/1	Parton	Angling	-	-	-	16	-	-	-	-	-
	Nethertown		-	-	-	-	-	-	16	-	-
2048/1/1	Fleswick	Angling	-	-	-	12	-	-	-	-	-
	St Bees		-	-	-	-	-	12	-	-	-
2225/2/1	Drigg	Hooking for crabs and lobsters	-	-	-	4	-	-	-	-	-
		Angling	-	-	-	-	-	4	-	-	-
2139/1/1	Drigg	Collecting small quantities of winkles and mussels	-	-	-	2	-	-	-	-	-
	Coulderton and Seascale	Walking and collecting small quantities of mussels	-	-	-	-	-	-	27	-	-
2139/2/1	Drigg	Collecting small quantities of winkles and mussels	-	-	-	2	-	-	-	-	-
	Coulderton and Seascale	Collecting small quantities of mussels	-	-	-	-	-	-	2	-	-
2133/1/1	**Saltcoats**	**Tending livestock**	**-**	**-**	**-**	**-**	**274**	**-**	**-**	**-**	**-**
2133/3/1	**Saltcoats**	**Tending livestock**	**-**	**-**	**-**	**-**	**274**	**-**	**-**	**-**	**-**

Table 14. Adults' intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
2240/1/1	**River Esk**	**Tending livestock (and collecting small quantities of mushrooms growing on the salt marsh)**	**-**	**-**	**-**	**-**	**136**	-	-	-	-
2047/1/1	Newbiggin Marsh	Tending livestock	-	-	-	-	30	-	-	-	-
2029/1/1	Eskmeals	Taking photographs	-	-	-	-	6	-	-	-	-
	Tarn Bay		-	-	-	-	-	48	-	-	-
2253/1/1	**Nethertown and Sellafield**	**Beachcombing, dog walking and setting sets**	**-**	**-**	**-**	**-**	**-**	**1234**	-	-	-
2283/1/1	**Sellafield and Seascale**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**1095**	**-**	**-**	**-**
2282/1/1	**Braystones**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**730**	-	-	-
	Nethertown	Collecting winkles	-	-	-	-	-	-	24	-	-
1986/1/1	**Eskmeals and Tarn Bay**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**730**	**-**	**-**	**-**
2037/2/1	**Braystones**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**730**	**-**	**-**	**-**
2037/5/1	**Seascale and Braystones**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**730**	**-**	**-**	**-**
2176/1/1	**Seascale**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**730**	**-**	**-**	**-**
2286/2/1	**Braystones**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**730**	**-**	**-**	**-**
2280/1/1	**Braystones**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**730**	-	-	-
2190/1/1	**Nethertown, Braystones and Sellafield**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**729**	**-**	**-**	**-**
2034/1/1	**Braystones**	**Angling, bait digging, practising golf, setting nets and walking**	**-**	**-**	**-**	**-**	**-**	**668**	**-**	**-**	**-**
2247/1/1	**St Bees, Seamill, Coulderton, Nethertown, Braystones and Drigg**	**Angling and bait digging**	**-**	**-**	**-**	**-**	**-**	**607**	**-**	**-**	**-**
2279/1/1	**Seascale and Sellafield**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**587**	**-**	**-**	**-**
2293/1/1	**St Bees, Braystones, Sellafield, Seascale and Drigg**	**Beach monitoring**	-	-	-	-	-	**532**	-	-	-
			-	-	-	-	-	-	60	-	-
2293/1/2	**St Bees, Braystones, Sellafield, Seascale and Drigg**	**Beach monitoring**	-	-	-	-	-	**532**	-	-	-
			-	-	-	-	-	-	60	-	-
2296/5/1	**Sellafield, Seascale and Drigg**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**469**	**-**	**-**	**-**
	Seascale	**Playing**	**-**	**-**	**-**	**-**	**-**		**-**	**-**	**-**
2152/1/1	**Seascale**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**456**	**-**	**-**	**-**
	Parton		**-**	**-**	**-**	**-**	**-**	**-**	**456**	**-**	**-**
2208/1/1	**Parton, St Bees, Nethertown and Braystones**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**443**	**-**	**-**	**-**
2208/2/1	**Parton, St Bees, Nethertown and Braystones**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**443**	**-**	**-**	**-**
2208/3/1	**Parton, St Bees, Nethertown and Braystones**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**443**	**-**	**-**	**-**
1921/1/1	Drigg	Dog walking	-	-	-	-	-	365	**-**	**-**	**-**
1940/1/1	Tarn Bay	Dog walking	-	-	-	-	-	365	**-**	**-**	**-**
1986/2/1	Tarn Bay and Eskmeals	Dog walking	-	-	-	-	-	365	**-**	**-**	**-**
2037/4/1	St Bees	Dog walking	-	-	-	-	-	365	**-**	**-**	**-**
2280/3/1	Braystones	Dog walking	-	-	-	-	-	365	**-**	**-**	**-**
2168/1/1	Braystones	Dog walking	-	-	-	-	-	365	**-**	**-**	**-**
2173/1/1	Seascale	Dog walking	-	-	-	-	-	365	**-**	**-**	**-**
2252/2/1	Eskmeals and Tarn Bay	Dog walking	-	-	-	-	-	365	**-**	**-**	**-**
2278/1/1	St Bees, Seascale and Drigg	Dog walking	-	-	-	-	-	350	-	-	-
2145/1/1	Braystones	Walking	-	-	-	-	-	337	-	-	-
2145/2/1	Braystones	Walking	-	-	-	-	-	337	-	-	-
2263/1/1	Whitehaven north beach and St Bees	Dog walking and playing	-	-	-	-	-	337	-	-	-

Table 14. Adults' intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
2062/1/1	Whitehaven north beach, St Bees and Braystones	Dog walking	-	-	-	-	-	313	-	-	-
2062/2/1	Whitehaven north beach, St Bees and Braystones	Dog walking	-	-	-	-	-	313	-	-	-
2194/1/1	Seascale and Drigg	Dog walking	-	-	-	-	-	312	-	-	-
2196/4/1	Braystones and Seascale	Dog walking	-	-	-	-	-	313	-	-	-
2200/1/1	Seascale	Dog walking	-	-	-	-	-	313	-	-	-
2200/2/1	Seascale	Dog walking	-	-	-	-	-	313	-	-	-
2186/1/1	Coulderton, Nethertown, Braystones, St Bees, Seamill, Sellafield, Seascale and Drigg,	Dog walking	-	-	-	-	-	312	-	-	-
2261/1/1	Seascale	Dog walking and horse riding	-	-	-	-	-	291	-	-	-
1932/1/1	St Bees, Drigg and Tarn Bay	Angling and bait digging	-	-	-	-	-	284	-	-	-
	Braystones	Angling	-	-	-	-	-	-	67	-	-
2152/2/1	Seascale	**Dog walking**	-	-	-	-	-	274	-	-	-
	Parton		-	-	-	-	-	-	**274**	-	-
1904/1/1	Drigg	Dog walking and litter collecting	-	-	-	-	-	274	-	-	-
1904/2/1	Drigg	Dog walking and litter collecting	-	-	-	-	-	274	-	-	-
1939/1/1	Tarn Bay	Dog walking	-	-	-	-	-	274	-	-	-
2163/1/1	Seascale	Dog walking	-	-	-	-	-	274	-	-	-
1874/1/1	Drigg and Tarn Bay	Angling and bait digging	-	-	-	-	-	268	-	-	-
2051/1/1	Drigg and Tarn Bay	Angling	-	-	-	-	-	261	-	-	-
2051/2/1	Drigg and Tarn Bay	Angling	-	-	-	-	-	261	-	-	-
2051/3/1	Drigg and Tarn Bay	Angling	-	-	-	-	-	261	-	-	-
2149/1/1	Seascale	Dog walking	-	-	-	-	-	226	-	-	-
1992/1/1	St Bees and Seamill	Dog walking	-	-	-	-	-	209	-	-	-
1992/2/1	St Bees and Seamill	Dog walking	-	-	-	-	-	209	-	-	-
1998/1/1	St Bees and Seamill	Dog walking	-	-	-	-	-	209	-	-	-
2201/1/1	Seascale	Dog walking	-	-	-	-	-	209	-	-	-
2201/2/1	Seascale	Dog walking	-	-	-	-	-	209	-	-	-
2265/1/1	Parton	Dog walking	-	-	-	-	-	209	-	-	-
2265/2/1	Parton	Dog walking	-	-	-	-	-	209	-	-	-
1873/1/1	St Bees and Tarn Bay	Angling and bait digging	-	-	-	-	-	196	-	-	-
1873/2/1	St Bees and Tarn Bay	Angling and bait digging	-	-	-	-	-	196	-	-	-
2189/1/1	Nethertown and Braystones	Angling and walking	-	-	-	-	-	195	-	-	-
	Braystones	Walking and collecting small quantities of sea lettuce	-	-	-	-	-	-	26	-	-
2196/1/1	Seascale	Playing and walking	-	-	-	-	-	192	-	-	-
2056/1/1	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/2	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/3	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/4	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/5	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-

Table 14. Adults' intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
2056/1/6	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/7	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/8	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/9	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/10	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/11	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/12	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/13	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/14	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/15	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/16	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/17	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/18	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/19	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2056/1/20	Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	191	-	-	-
2114/2/1	Seascale and Drigg	Walking	-	-	-	-	-	189	-	-	-
2261/2/1	Seascale	Dog walking	-	-	-	-	-	183	-	-	-
2264/1/1	Seamill	Walking	-	-	-	-	-	182	-	-	-
2111/7/1	Braystones	Dog walking	-	-	-	-	-	168	-	-	-
		Angling	-	-	-	-	-	-	48	-	-
1883/1/1	Drigg	Litter collecting and sunbathing	-	-	-	-	-	156	-	-	-
2037/1/1	Nethertown, Braystones and Sellafield	Dog walking	-	-	-	-	-	156	-	-	-
2067/1/1	St Bees and Seascale	Litter collecting	-	-	-	-	-	156	-	-	-
2280/2/1	Braystones	Dog walking	-	-	-	-	-	156	-	-	-
2153/1/1	Seascale and Drigg	Walking	-	-	-	-	-	156	-	-	-
2153/2/1	Seascale and Drigg	Walking	-	-	-	-	-	156	-	-	-
2196/2/1	Seascale	Walking	-	-	-	-	-	156	-	-	-
2196/3/1	Seascale	Walking	-	-	-	-	-	156	-	-	-
2196/3/2	Seascale	Walking	-	-	-	-	-	156	-	-	-
2196/3/3	Seascale	Walking	-	-	-	-	-	156	-	-	-
2196/3/4	Seascale	Walking	-	-	-	-	-	156	-	-	-
2196/3/5	Seascale	Walking	-	-	-	-	-	156	-	-	-
2196/3/6	Seascale	Walking	-	-	-	-	-	156	-	-	-

Table 14. Adults' intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
2196/3/7	Seascale	Walking	-	-	-	-	-	156	-	-	-
2196/3/8	Seascale	Walking	-	-	-	-	-	156	-	-	-
2252/1/1	Tarn Bay	Angling and bait digging	-	-	-	-	-	156	-	-	-
2079/1/1	Nethertown, Braystones and Drigg	Bait digging and setting nets	-	-	-	-	-	146	-	-	-
2154/1/1	Braystones, Seascale and Eskmeals	Bait digging	-	-	-	-	-	135	-	-	-
2196/1/1	Seascale	Playing	-	-	-	-	-	108	-	-	-
2159/1/1	Sellafield, Seascale and Drigg	Dog walking, horse riding, and walking	-	-	-	-	-	120	-	-	-
2159/2/1	Sellafield, Seascale and Drigg	Dog walking, horse riding, and walking	-	-	-	-	-	120	-	-	-
1856/1/1	St Bees	Dog walking	-	-	-	-	-	117	-	-	-
1856/2/1	St Bees	Dog walking	-	-	-	-	-	117	-	-	-
2187/1/1	St Bees, Braystones and Seascale	Dog walking	-	-	-	-	-	117	-	-	-
2187/2/1	St Bees, Braystones and Seascale	Dog walking	-	-	-	-	-	117	-	-	-
2085/1/1	Braystones and Eskmeals	Bait digging	-	-	-	-	-	104	-	-	-
	Coulderton and Nethertown	Collecting winkles and limpets	-	-	-	-	-	-	52	-	-
1951/1/1	Eskmeals and Tarn Bay	Dog walking	-	-	-	-	-	104	-	-	-
2037/3/1	Nethertown	Dog walking	-	-	-	-	-	104	-	-	-
2136/1/1	Sellafield and Seascale	Walking	-	-	-	-	-	104	-	-	-
2223/1/1	Whitehaven north beach, St Bees, Braystones, Drigg and Tarn Bay	Angling	-	-	-	-	-	104	-	-	-
1875/1/1	Tarn Bay	Dog walking	-	-	-	-	-	91	-	-	-
2065/1/1	Whitehaven north beach	Dog walking	-	-	-	-	-	91	-	-	-
2198/1/1	Seascale and Drigg	Dog walking	-	-	-	-	-	88	-	-	-
2198/2/1	Seascale and Drigg	Dog walking	-	-	-	-	-	88	-	-	-
2174/1/1	Sellafield and Seascale	Dog walking	-	-	-	-	-	78	-	-	-
	Seascale	Playing	-	-	-	-	-	-	11	-	-
2174/2/1	Sellafield and Seascale	Dog walking	-	-	-	-	-	78	-	-	-
	Seascale	Playing	-	-	-	-	-	-	11	-	-
1997/1/1	St Bees	Walking	-	-	-	-	-	78	-	-	-
1997/2/1	St Bees	Walking	-	-	-	-	-	78	-	-	-
2147/1/1	Seascale	Dog walking	-	-	-	-	-	78	-	-	-
2147/2/1	Seascale	Dog walking	-	-	-	-	-	78	-	-	-
2172/1/1	Sellafield and Seascale	Dog walking	-	-	-	-	-	78	-	-	-
2266/1/1	Parton and Whitehaven north beach	Dog walking	-	-	-	-	-	78	-	-	-
1931/1/1	Tarn Bay	Rock pooling and walking	-	-	-	-	-	76	-	-	-
2063/1/1	Braystones	Playing	-	-	-	-	-	73	-	-	-
2063/2/1	Braystones	Playing						73			
2182/1/1	Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	72	-	-	-
2182/3/1	Sellafield, Seascale and Drigg	Angling	-	-	-	-	-	72	-	-	-
1990/1/1	Eskmeals and Tarn Bay	Walking	-	-	-	-	-	65	-	-	-
1990/2/1	Eskmeals and Tarn Bay	Walking	-	-	-	-	-	65	-	-	-
1945/1/1	St Bees	Angling	-	-	-	-	-	52	-	-	-
	Parton and Nethertown		-	-	-	-	-	-	104	-	-
1960/1/1	Drigg	Beachcombing	-	-	-	-	-	52	-	-	-
2167/1/1	Seascale	Walking	-	-	-	-	-	52	-	-	-
2267/1/1	Parton	Walking	-	-	-	-	-	52	-	-	-

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Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
2267/2/1	Parton	Walking	-	-	-	-	-	52	-	-	-
2277/1/1	Seascale and Drigg	Dog walking	-	-	-	-	-	52	-	-	-
2277/2/1	Seascale and Drigg	Dog walking	-	-	-	-	-	52	-	-	-
2178/1/1	St Bees and Seascale	Beachcombing and playing	-	-	-	-	-	46	-	-	-
2178/2/1	St Bees and Seascale	Beachcombing and playing	-	-	-	-	-	46	-	-	-
2197/2/1	Braystones	Walking	-	-	-	-	-	45	-	-	-
2269/1/1	St Bees	Bush craft sessions and litter collecting	-	-	-	-	-	40	-	-	-
	Parton, Whitehaven north beach, Flewick and Seascale	Bush craft sessions, litter collecting and walking	-	-	-	-	-	-	50	-	-
2175/1/1	Seascale	Dog walking and walking	-	-	-	-	-	40	-	-	-
2175/2/1	Seascale	Dog walking and walking	-	-	-	-	-	40	-	-	-
2167/3/1	Seascale	Walking	-	-	-	-	-	39	-	-	-
2167/4/1	Seascale	Walking	-	-	-	-	-	39	-	-	-
2241/2/1	Sellafield	Working on sand dunes	-	-	-	-	-	37	-	-	-
2196/10/1	Seascale	Playing	-	-	-	-	-	36	-	-	-
2135/1/1	St Bees	Sitting on the beach	-	-	-	-	-	35	-	-	-
2169/1/1	St Bees and Seascale	Dog walking	-	-	-	-	-	66	-	-	-
2169/2/1	Seascale	Dog walking	-	-	-	-	-	66	-	-	-
2269/29/1	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/29/2	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/29/3	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/30/1	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/30/2	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/30/3	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/31/1	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/31/2	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/31/3	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/32/1	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/32/2	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/32/3	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/33/1	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/33/2	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-

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Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
2269/33/3	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/34/1	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/34/2	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2269/34/3	St Bees	Litter collecting	-	-	-	-	-	30	-	-	-
	Parton and Whitehaven north beach		-	-	-	-	-	-	30	-	-
2177/1/1	St Bees and Seascale	Walking	-	-	-	-	-	26	-	-	-
2177/2/1	St Bees and Seascale	Walking	-	-	-	-	-	27	-	-	-
1857/1/1	St Bees	Dog walking	-	-	-	-	-	24	-	-	-
1857/2/1	St Bees	Dog walking	-	-	-	-	-	24	-	-	-
1922/1/1	Drigg	Walking	-	-	-	-	-	24	-	-	-
1922/2/1	Drigg	Walking	-	-	-	-	-	24	-	-	-
2078/1/1	St Bees and Seascale	Playing	-	-	-	-	-	24	-	-	-
2078/2/1	St Bees and Seascale	Playing	-	-	-	-	-	24	-	-	-
2181/1/1	Seascale and Drigg	Horse riding	-	-	-	-	-	25	-	-	-
2202/2/1	Seascale and Drigg	Dog walking	-	-	-	-	-	24	-	-	-
1952/1/1	St Bees	Angling	-	-	-	-	-	22	-	-	-
	Parton and Nethertown		-	-	-	-	-	-	37	-	-
1996/1/1	St Bees	Playing	-	-	-	-	-	20	-	-	-
2162/2/1	Seascale	Walking	-	-	-	-	-	20	-	-	-
2188/1/1	Braystones	Playing and sitting on the beach	-	-	-	-	-	18	-	-	-
2188/2/1	Braystones	Playing and sitting on the beach	-	-	-	-	-	19	-	-	-
1994/1/1	St Bees and Drigg	Playing	-	-	-	-	-	15	-	-	-
1994/2/1	St Bees and Drigg	Playing	-	-	-	-	-	15	-	-	-
2160/2/1	Seascale	Playing	-	-	-	-	-	12	-	-	-
2241/1/1	Sellafield	Nature warden	-	-	-	-	-	12	-	-	-
2269/2/1	St Bees	Bush craft sessions	-	-	-	-	-	10	-	-	-
	Whitehaven, Fleswick and Seascale	Bush craft sessions and walking	-	-	-	-	-	-	20	-	-
2269/3/1	St Bees	Bush craft sessions	-	-	-	-	-	10	-	-	-
	Whitehaven, Fleswick and Seascale	Bush craft sessions and walking	-	-	-	-	-	-	20	-	-
2269/4/1	St Bees	Bush craft sessions	-	-	-	-	-	10	-	-	-
	Whitehaven, Fleswick and Seascale	Bush craft sessions and walking	-	-	-	-	-	-	20	-	-
2269/28/1	St Bees	Bush craft sessions	-	-	-	-	-	10	-	-	-
	Whitehaven, Fleswick and Seascale	Bush craft sessions and walking	-	-	-	-	-	-	20	-	-
2151/1/1	Seascale	Dog walking	-	-	-	-	-	10	-	-	-
	Parton		-	-	-	-	-	-	10	-	-
2158/2/1	Seascale	Beachcombing	-	-	-	-	-	10	-	-	-
2050/2/1	St Bees	Litter collecting	-	-	-	-	-	9	-	-	-
	Whitehaven north shore		-	-	-	-	-	-	9	-	-
2050/2/2	St Bees	Litter collecting	-	-	-	-	-	9	-	-	-
	Whitehaven north shore		-	-	-	-	-	-	9	-	-

Table 14. Adults' intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
2050/2/3	St Bees	Litter collecting	-	-	-	-	-	9	-	-	-
	Whitehaven north shore		-	-	-	-	-	-	9	-	-
2050/2/4	St Bees	Litter collecting	-	-	-	-	-	9	-	-	-
	Whitehaven north shore		-	-	-	-	-	-	9	-	-
2050/2/5	St Bees	Litter collecting	-	-	-	-	-	9	-	-	-
	Whitehaven north shore		-	-	-	-	-	-	9	-	-
2050/2/6	St Bees	Litter collecting	-	-	-	-	-	9	-	-	-
	Whitehaven north shore		-	-	-	-	-	-	9	-	-
2050/2/7	St Bees	Litter collecting	-	-	-	-	-	9	-	-	-
	Whitehaven north shore		-	-	-	-	-	-	9	-	-
1999/1/1	St Bees and Sellafield	Collecting *Porphyra* (for laverbread)	-	-	-	-	-	8	-	-	-
	Braystones		-	-	-	-	-	-	4	-	-
1999/2/1	St Bees and Sellafield	Collecting *Porphyra* (for laverbread)	-	-	-	-	-	8	-	-	-
	Braystones		-	-	-	-	-	-	4	-	-
1993/1/1	St Bees	Sitting on the beach	-	-	-	-	-	7	-	-	-
2165/2/1	St Bees and Seascale	Playing	-	-	-	-	-	7	-	-	-
2269/17/1	St Bees	Bush craft sessions	-	-	-	-	-	6	-	-	-
	Whitehaven, Fleswick and Seascale	Bush craft sessions and walking	-	-	-	-	-	-	17	-	-
2269/18/1	St Bees	Bush craft sessions	-	-	-	-	-	6	-	-	-
	Whitehaven, Fleswick and Seascale	Bush craft sessions and walking	-	-	-	-	-	-	17	-	-
2269/19/1	St Bees	Bush craft sessions	-	-	-	-	-	6	-	-	-
	Whitehaven, Fleswick and Seascale	Bush craft sessions and walking	-	-	-	-	-	-	17	-	-
2269/20/1	St Bees	Bush craft sessions	-	-	-	-	-	6	-	-	-
	Whitehaven, Fleswick and Seascale	Bush craft sessions and walking	-	-	-	-	-	-	17	-	-
2269/21/1	St Bees	Bush craft sessions	-	-	-	-	-	6	-	-	-
	Whitehaven, Fleswick and Seascale	Bush craft sessions and walking	-	-	-	-	-	-	17	-	-
2269/22/1	St Bees	Bush craft sessions	-	-	-	-	-	6	-	-	-
	Whitehaven, Fleswick and Seascale	Bush craft sessions and walking	-	-	-	-	-	-	17	-	-
2269/23/1	St Bees	Bush craft sessions	-	-	-	-	-	6	-	-	-
	Whitehaven, Fleswick and Seascale	Bush craft sessions and walking	-	-	-	-	-	-	17	-	-
2269/24/1	St Bees	Bush craft sessions	-	-	-	-	-	6	-	-	-
	Whitehaven, Fleswick and Seascale	Bush craft sessions and walking	-	-	-	-	-	-	17	-	-
1924/1/1	Drigg	Walking	-	-	-	-	-	6	-	-	-
1924/2/1	Drigg	Walking	-	-	-	-	-	6	-	-	-
2156/1/1	Braystones	Setting nets	-	-	-	-	-	6	-	-	-
2156/2/1	Braystones	Setting nets	-	-	-	-	-	6	-	-	-
2156/3/1	Braystones	Setting nets	-	-	-	-	-	6	-	-	-
2165/1/1	St Bees and Seascale	Playing	-	-	-	-	-	6	-	-	-
2181/2/1	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/2/2	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/3/1	Seascale	Horse riding	-	-	-	-	-	6	-	-	-

Table 14. Adults' intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
2181/3/2	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/3/3	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/3/4	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/3/5	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/1	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/2	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/3	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/4	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/5	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/6	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/7	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/8	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/9	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/10	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/11	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/12	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/13	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/14	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/15	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/16	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/17	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/18	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/4/19	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/5/1	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
2181/5/2	Seascale	Horse riding	-	-	-	-	-	6	-	-	-
1902/1/1	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/1	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/2	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/3	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/4	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/5	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/6	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/7	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/8	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/9	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/10	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/11	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-

Table 14. Adults' intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
1902/2/12	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/13	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/14	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/15	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/16	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/17	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/18	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/19	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1902/2/20	Various locations within the survey area	Angling	-	-	-	-	-	4	-	-	-
			-	-	-	-	-	-	8	-	-
1950/4/1	Drigg, Eskmeals and Tarn Bay	Bait digging	-	-	-	-	-	3	-	-	-
2131/1/1	Seascale	Sitting on the beach	-	-	-	-	-	3	-	-	-
2131/2/1	Seascale	Sitting on the beach	-	-	-	-	-	3	-	-	-
2148/1/1	Seascale	Dog walking	-	-	-	-	-	3	-	-	-
2191/1/1	Braystones	Walking	-	-	-	-	-	3	-	-	-
2245/3/1	Seascale	Horse riding	-	-	-	-	-	2	-	-	-
2245/4/1	Seascale	Horse riding	-	-	-	-	-	2	-	-	-
2259/3/1	Seascale	Horse riding	-	-	-	-	-	2	-	-	-
2259/4/1	Seascale	Horse riding	-	-	-	-	-	2	-	-	-
2295/1/1	**Parton and Nethertown**	**Angling at high tide**	**-**	**-**	**-**	**-**	**-**	**-**	**547**	-	-
2039/1/1	**Parton**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**-**	**527**	-	-
1896/1/1	**Parton**	**Playing and walking**	**-**	**-**	**-**	**-**	**-**	**-**	**366**	-	-
1896/2/1	**Parton**	**Playing and walking**	**-**	**-**	**-**	**-**	**-**	**-**	**366**	-	-
2038/1/1	**Parton**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**-**	**365**	-	-
2262/1/1	**Whitehaven north beach**	**Walking**	**-**	**-**	**-**	**-**	**-**	**-**	**365**	-	-
2043/1/1	**Parton**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**-**	**334**	-	-
2043/2/1	**Parton**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**-**	**334**	-	-
1892/1/1	**Parton**	**Dog walking and angling**	**-**	**-**	**-**	**-**	**-**	**-**	**295**	-	-
1892/2/1	**Parton**	**Dog walking**	**-**	**-**	**-**	**-**	**-**	**-**	191	-	-
2038/2/1	Parton	Dog walking	-	-	-	-	-	-	182	-	-
2044/1/1	Parton	Dog walking	-	-	-	-	-	-	156	-	-
1935/1/1	Parton	Angling	-	-	-	-	-	-	104	-	-
2140/1/1	Seascale	Walking	-	-	-	-	-	-	104	-	-
2140/2/1	Seascale	Walking	-	-	-	-	-	-	104	-	-
1897/1/1	Parton	Walking	-	-	-	-	-	-	26	-	-
1899/1/1	Whitehaven north beach	Walking	-	-	-	-	-	-	24	-	-
2004/1/1	Braystones	Sunbathing	-	-	-	-	-	-	18	-	-
1898/1/1	Parton	Dog walking	-	-	-	-	-	-	15	-	-
2050/6/1	Whitehaven north beach	Rock pooling	-	-	-	-	-	-	15	-	-
2050/6/2	Whitehaven north beach	Rock pooling	-	-	-	-	-	-	15	-	-
2050/6/3	Whitehaven north beach	Rock pooling	-	-	-	-	-	-	15	-	-

Table 14. Adults' intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
2050/6/4	Whitehaven north beach	Rock pooling	-	-	-	-	-	-	15	-	-
2050/6/5	Whitehaven north beach	Rock pooling	-	-	-	-	-	-	15	-	-
2050/6/6	Whitehaven north beach	Rock pooling	-	-	-	-	-	-	15	-	-
2050/6/7	Whitehaven north beach	Rock pooling	-	-	-	-	-	-	15	-	-
2050/6/8	Whitehaven north beach	Rock pooling	-	-	-	-	-	-	15	-	-
2050/6/9	Whitehaven north beach	Rock pooling	-	-	-	-	-	-	15	-	-
2050/6/10	Whitehaven north beach	Rock pooling	-	-	-	-	-	-	15	-	-
2068/1/1	St Bees and St Bees Head	Collecting small amounts of winkles	-	-	-	-	-	-	6	-	-
2068/2/1	St Bees and St Bees Head	Collecting small amounts of winkles	-	-	-	-	-	-	6	-	-
2273/1/1	Parton	Collecting winkles and seaweeed	-	-	-	-	-	-	6	-	-
1988/1/1	Nethertown	Walking	-	-	-	-	-	-	4	-	-
2040/1/1	Parton	Dog walking	-	-	-	-	-	-	1	-	-

Notes

Emboldened observations are the high-rate individuals

The mean intertidal occupancy rate over mud for adults based on 1 high-rate observation is 62 h y^{-1}

The observed 97.5th percentile rate based on 24 observations is 34 h y^{-1}

The mean intertidal occupancy rate over mud and sand for adults based on 3 high-rate observations is 104 h y^{-1}

The observed 97.5th percentile rate based on 5 observations is 104 h y^{-1}

The mean intertidal occupancy rate over mud, sand and stones for adults based on 6 high-rate observations is 406 h y^{-1}

The observed 97.5th percentile rate based on 42 observations is 388 h y^{-1}

The mean intertidal occupancy rate over rock for adults based on 5 high-rate observations is 269 h y^{-1}

The observed 97.5th percentile rate based on 22 observations is 335 h y^{-1}

The mean intertidal occupancy rate over salt marsh for adults based on 5 high-rate observations is 210 h y^{-1}

The observed 97.5th percentile rate based on 11 observations is 274 h y^{-1}

The mean intertidal occupancy rate over sand for adults based on 23 high-rate observations is 657 h y^{-1}

The observed 97.5th percentile rate based on 314 observations is 730 h y^{-1}

The mean intertidal occupancy rate over sand and stones for adults based on 12 high-rate observations is 400 h y^{-1}

The observed 97.5th percentile rate based on 124 observations is 449 h y^{-1}

The mean intertidal occupancy rate over stones for adults based on 1 high-rate observation is 4 h y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

The mean intertidal occupancy rate over boat on mud for adults based on 1 high-rate observation is 131 h y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Table 15. Children's intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Location	Activity	Mud and sand	Mud, sand and stones	Sand	Sand and stones
2281/4/1	**11**	**Whitehaven outer harbour**	**Dog walking**	**4**	-	-	-
		Whitehaven north beach, St Bees and Seascale		-	-	**90**	-
		Parton					10
2281/5/1	**10**	**Whitehaven outer harbour**	**Dog walking**	**4**	-	-	-
		Whitehaven north beach, St Bees and Seascale		-	-	**90**	-
		Parton					10
2281/6/1	**6**	**Whitehaven outer harbour**	**Dog walking**	**4**	-	-	-
		Whitehaven north beach, St Bees and Seascale		-	-	**90**	-
		Parton					10
1905/3/1	**13**	**Ravenglass**	**Angling and bait digging**	-	**105**	-	-
		Drigg		-	-	**105**	-
1905/2/1	**11**	**Ravenglass**	**Angling and bait digging**	-	**105**	-	-
		Drigg		-	-	**105**	-
1950/2/1	11	Ravenglass Estuary	Angling	-	7	-	-
		Drigg, Eskmeals and Tarn Bay	Angling and bait digging	-	-	9	-
1950/3/1	9	Ravenglass Estuary	Angling	-	7	-	-
		Drigg, Eskmeals and Tarn Bay	Angling and bait digging	-	-	9	-
1930/4/1	13	Ravenglass	Walking	-	1	-	-
1930/5/1	11	Ravenglass	Walking	-	1	-	-
2051/4/1	**11**	**Drigg and Tarn Bay**	**Angling**	**-**	**-**	**261**	-
2159/3/1	**6**	**Seascale and Drigg**	**Horse riding**	**-**	**-**	**120**	-
		Sellafield, Seascale and Drigg	**Dog walking and walking**	**-**	**-**		-
2056/2/1	**12**	**Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg**	**Angling**	**-**	**-**	**191**	-
2056/2/2	**12**	**Parton, Whitehaven north beach, St Bees, Coulderton, Nethertown, Braystones, Sellafield, Seascale and Drigg**	**Angling**	**-**	**-**	**191**	-
2187/3/1	**6**	**St Bees, Braystones and Seascale**	**Dog walking**	**-**	**-**	**117**	-

Table 15. Children's intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Location	Activity	Mud and sand	Mud, sand and stones	Sand	Sand and stones
2063/2/1	10	Braystones	Playing	-	-	63	-
2063/4/1	8	Braystones	Playing	-	-	63	-
2277/3/1	10	Seascale and Drigg	Dog walking	-	-	52	-
2277/4/1	10	Seascale and Drigg	Dog walking	-	-	52	-
2178/3/1	8	Seascale	Playing and beachcombing	-	-	46	-
2197/1/1	10	Braystones	Walking	-	-	45	-
2196/5/1	11	Seascale	Playing	-	-	36	-
2196/6/1	8	Seascale	Playing	-	-	36	-
2196/7/1	13	Seascale	Playing	-	-	36	-
2196/11/1	14	Seascale	Playing	-	-	36	-
2196/12/1	12	Seascale	Playing	-	-	36	-
2177/3/1	12	St Bees and Seascale	Walking	-	-	26	-
2177/4/1	8	St Bees and Seascale	Walking	-	-	26	-
2263/2/1	10	St Bees	Playing	-	-	24	-
2263/3/1	12	St Bees	Playing	-	-	24	-
1996/2/1	8	St Bees	Playing	-	-	20	-
2162/3/1	9	Seascale	Walking	-	-	20	-
2162/4/1	8	Seascale	Walking	-	-	20	-
2162/5/1	8	Seascale	Walking	-	-	20	-
2188/4/1	6	Braystones	Playing and sitting on the beach	-	-	18	-
1994/3/1	8	St Bees and Drigg	Playing	-	-	15	-
2178/5/1	7	Seascale and St Bees	Playing and beach combing	-	-	15	-
2158/7/1	8	Seascale	Beachcombing	-	-	10	-
2158/10/1	6	Seascale	Beachcombing	-	-	10	-
2050/3/1	8	St Bees	Litter collecting	-	-	9	-
		Whitehaven north shore		-	-	-	9
2050/3/2	8	St Bees	Litter collecting	-	-	9	-
		Whitehaven north shore		-	-	-	9

Table 15. Children's intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Location	Activity	Mud and sand	Mud, sand and stones	Sand	Sand and stones
2050/3/3	8	St Bees	Litter collecting	-	-	9	-
		Whitehaven north shore		-	-	-	9
2269/7/1	12	St Bees	Bush craft sessions	-	-	6	-
		Seascale	Bush craft sessions and walking	-	-	-	11
		Fleswick and Whitehaven		-	-	-	
2269/9/1	13	St Bees	Bush craft sessions	-	-	6	-
		Seascale	Bush craft sessions and walking	-	-	-	11
		Fleswick and Whitehaven		-	-	-	
2269/11/1	14	St Bees	Bush craft sessions	-	-	6	-
		Seascale	Bush craft sessions and walking	-	-	-	11
		Fleswick and Whitehaven		-	-	-	
2269/13/1	14	St Bees	Bush craft sessions	-	-	6	-
		Seascale	Bush craft sessions and walking	-	-	-	11
		Fleswick and Whitehaven		-	-	-	
2269/15/1	15	St Bees	Bush craft sessions	-	-	6	-
		Seascale	Bush craft sessions and walking	-	-	-	11
		Fleswick and Whitehaven		-	-	-	
2269/5/1	12	St Bees	Bush craft sessions	-	-	6	-
		Seascale	Bush craft sessions and walking	-	-	-	11
		Fleswick and Whitehaven		-	-	-	
2269/6/1	12	St Bees	Bush craft sessions	-	-	6	-
		Seascale	Bush craft sessions and walking	-	-	-	11
		Fleswick and Whitehaven		-	-	-	
2269/8/1	13	St Bees	Bush craft sessions	-	-	6	-
		Seascale	Bush craft sessions and walking	-	-	-	11
		Fleswick and Whitehaven		-	-	-	
2269/10/1	13	St Bees	Bush craft sessions	-	-	6	-
		Seascale	Bush craft sessions and walking	-	-	-	11
		Fleswick and Whitehaven		-	-	-	
2269/12/1	14	St Bees	Bush craft sessions	-	-	6	-
		Seascale	Bush craft sessions and walking	-	-	-	11
		Fleswick and Whitehaven		-	-	-	
2269/14/1	15	St Bees	Bush craft sessions	-	-	6	-
		Seascale	Bush craft sessions and walking	-	-	-	11
		Fleswick and Whitehaven		-	-	-	

Table 15. Children's intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Location	Activity	Mud and sand	Mud, sand and stones	Sand	Sand and stones
2269/16/1	15	St Bees	Bush craft sessions	-	-	6	-
		Seascale	Bush craft sessions and walking	-	-	-	11
		Fleswick and Whitehaven		-	-	-	
2225/3/1	13	Drigg	Angling	-	-	4	-
2111/3/1	**11**	**Braystones**	**Rock pooling**	**-**	**-**	**-**	**180**
2111/4/1	**7**	**Braystones**	**Rock pooling**	**-**	**-**	**-**	**180**
2111/5/1	**6**	**Braystones**	**Rock pooling**	**-**	**-**	**-**	**180**
2111/6/1	**6**	**Braystones**	**Rock pooling**	**-**	**-**	**-**	**180**
2139/4/1	10	Seascale	Walking	-	-	-	25
2139/5/1	8	Seascale	Walking	-	-	-	25
2004/2/1	9	Braystones	Sunbathing	-	-	-	18
2004/3/1	9	Braystones	Sunbathing	-	-	-	18
2174/3/1	7	Seascale	Playing	-	-	-	11

Notes

Emboldened observations are the high-rate individuals

The mean intertidal occupancy rate over mud and sand for the child age group based on 3 high-rate observations is 4 h y^{-1}

The observed 97.5th percentile rate based on 3 observations is 4 h y^{-1}

The mean intertidal occupancy rate over mud, sand and stones for the child age group based on 2 high-rate observations is 105 h y^{-1}

The observed 97.5th percentile rate based on 6 observations is 105 h y^{-1}

The mean intertidal occupancy rate over sand for the child age group based on 10 high-rate observations is 136 h y^{-1}

The observed 97.5th percentile rate based on 52 observations is 191 h y^{-1}

The mean intertidal occupancy rate over sand and stones for the child age group based on 4 high-rate observations is 180 h y^{-1}

The observed 97.5th percentile rate based on 27 observations is 180 h y^{-1}

Table 16. Infant's intertidal occupancy rates in the Sellafield aquatic survey area (h y^{-1})

Infant age group (0 - 5 years old)

Person ID number	Age	Location	Activity	Mud and sand	Sand	Sand and stones
2281/3/1	**4**	**Whitehaven outer harbour**	**Dog walking**	**4**	**-**	**-**
		Whitehaven north beach, St Bees and Seascale		**-**	**90**	**-**
		Parton		**-**	**-**	10
2296/7/1	**1**	**Seascale**	**Playing**	**-**	**104**	**-**
2296/8/1	**3**	**Seascale**	**Playing**	**-**	**104**	**-**
2063/5/1	**5**	**Braystones**	**Playing**	**-**	**63**	**-**
1931/2/1	**5**	**Tarn Bay**	**Rock pooling**	**-**	**52**	**-**
1931/3/1	**3**	**Tarn Bay**	**Rock pooling**	**-**	**52**	**-**
2196/8/1	**1**	**Seascale**	**Playing**	**-**	**36**	**-**
2196/9/1	**4**	**Seascale**	**Playing**	**-**	**36**	**-**
2178/4/1	4	St Bees and Seascale	Playing and beachcombing	-	26	-
2178/6/1	3	St Bees and Seascale	Playing and beachcombing	-	26	-
2078/3/1	5	Seascale and St Bees	Playing	-	24	-
2078/4/1	5	Seascale and St Bees	Playing	-	24	-
1996/3/1	5	St Bees	Playing	-	20	-
2188/3/1	3	Braystones	Playing and sitting on the beach	-	18	-
1994/4/1	5	St Bees and Drigg	Playing	-	15	-
1994/5/1	1	St Bees and Drigg	Playing	-	15	-
2160/4/1	3	Seascale	Playing	-	12	-
2160/5/1	5	Seascale	Playing	-	12	-
2158/8/1	4	Seascale	Beachcombing	-	10	-
2158/9/1	4	Seascale	Beachcombing	-	10	-
2165/3/1	5	St Bees and Seascale	Playing	-	6	-
1896/3/1	**4**	**Parton**	**Playing and walking**	**-**	**-**	**366**
1896/4/1	**4**	**Parton**	**Playing and walking**	**-**	**-**	**366**

Notes

Emboldened observations are the high-rate individuals

The mean intertidal occupancy rate over mud and sand for the infant age group based on 1 high-rate observation is 4 h y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

The mean intertidal occupancy rate over sand for the infant age group based on 8 high-rate observations is 67 h y^{-1}

The observed 97.5th percentile rate based on 21 observations is 104 h y^{-1}

The mean intertidal occupancy rate over sand and stones for the infant age group based on 2 high-rate observations is 366 h y^{-1}

The observed 97.5th percentile rate based on 3 observations is 366 h y^{-1}

Table 17. Gamma dose rate measurements over intertidal substrates in the Sellafield aquatic survey area (µGy h^{-1})

Location	National Grid Reference	Substrate	Gamma dose rate at 1 metre[a]
Parton	NX 979 208	Sand and stones	0.088
Whitehaven north beach	NY 972 187	Sand	0.084
Whitehaven north beach	NY 972 187	Stones	0.118
Whitehaven north beach	NX 972 187	Sand and stones	0.091
St Bees	NX 960 115	Sand	0.069
Coulderton	NX 980 085	Sand and stones	0.110
Coulderton	NX 989 070	Sand	0.068
Nethertown	NX 989 070	Sand and stones	0.091
Braystones	NX 999 058	Sand	0.071
Sellafield	NY 023 026	Sand and stones	0.105
Seascale	NY 036 092	Sand and stones	0.091
Drigg	SD 047 984	Sand	0.092
Saltcoats	SD 079 968	Sand and stones	0.093
Ravenglass Estuary	SD 084 966	Mud, sand and stones	0.091
Ravenglass Estuary	SD 083 964	Mud	0.084
Ravenglass Estuary	SD 083 961	Sand and stones	0.096
Eskmeals	SD 087 942	Salt marsh	0.111
Tarn Bay	SD 079 906	Sand	0.072

Notes

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

Table 18. Adults' handling rates of fishing gear and sediment in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Fishing gear	Sediment
2296/2/1	**Sellafield to Tarn Bay**	**Potting**	**1716**	**-**
	Ravenglass Estuary and River Esk	**Wildfowling**	**-**	84
2296/1/1	**Sellafield to Tarn Bay**	**Potting**	**1716**	-
	Ravenglass Estuary and River Esk	**Wildfowling**	**-**	84
2296/4/1	**Sellafield to Tarn Bay**	**Potting**	**1716**	**-**
2296/3/1	**Sellafield to Tarn Bay**	**Potting**	**1716**	**-**
2088/2/1	**Whitehaven to Drigg**	**Trawling**	**720**	**-**
2088/1/1	**Whitehaven to Drigg**	**Trawling**	**720**	**-**
2286/1/1	Parton, Whitehaven north beach, St Bees, Seamill, Braystones, Seascale and Drigg	Potting, drift netting, setting nets and push netting	434	-
	Parton and St Bees	Collecting winkles and mussels	-	44
2253/1/1	Braystones	Setting nets	354	**-**
2156/2/1	Braystones	Setting nets	122	-
2156/3/1	Braystones	Setting nets	122	-
2156/1/1	Braystones	Setting nets	122	-
2144/1/1	Parton	Potting	104	-
2034/1/1	Braystones	Setting nets	86	-
		Bait digging	-	34
2299/2/1	Sellafield and Seascale	Potting and gill netting	78	-
2299/1/1	Sellafield and Seascale	Potting and gill netting	78	-
2079/1/1	Nethertown, Braystones and Drigg	Setting nets	52	-
		Bait digging	-	42
2287/1/1	Parton	Potting	17	-
2287/2/1	Parton	Potting	17	-
2111/1/1	Braystones	Push netting	1	-
2111/2/1	Braystones	Push netting	1	-
2258/2/1	**Nethertown and Ravenglass Estuary**	**Bait digging and collecting peeler crabs for bait**	**-**	**698**
2193/1/1	**Ravenglass Estuary**	**Bait digging**	**-**	**313**
2085/1/1	Braystones and Eskmeals	Bait digging (including collecting a small amount of winkles at Coulderton and Nethertown)	-	156
1932/1/1	Tarn Bay	Bait digging	-	150
2154/1/1	Braystones, Seascale and Eskmeals	Bait digging	-	136
1873/2/1	Tarn Bay	Bait digging	-	118
1873/1/1	Tarn Bay	Bait digging	-	118
2064/3/1	Whitehaven outer harbour	Bait digging	-	104

Table 18. Adults' handling rates of fishing gear and sediment in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Fishing gear	Sediment
2064/1/1	Whitehaven outer harbour	Bait digging	-	104
2064/2/1	Whitehaven outer harbour	Bait digging	-	104
2155/1/1	Braystones, Drig, Eskmeals and Tarn Bay	Bait digging	-	72
2072/1/1	River Esk, River Irt, River Mite and Newbiggin Marsh	Wildfowling	-	70
1874/1/1	Tarn Bay	Bait digging	-	52
2252/1/1	Tarn Bay	Bait digging	-	52
1905/1/1	Drigg and Ravenglass	Bait digging	-	38
2085/3/1	Ravenglass and Eskmeals	Collecting winkles and mussels	-	36
2298/1/1	River Esk, River Irt and Newbiggin Marsh	Wildfowling	-	14
2226/1/1	Nethertown	Collecting winkles	-	24
2247/1/1	Braystones	Bait digging	-	21
2269/2/1	St Bees and Seascale	Bush craft sessions	-	21
2269/28/1	St Bees and Seascale	Bush craft sessions	-	21
2269/1/1	St Bees and Seascale	Bush craft sessions	-	21
2269/4/1	St Bees and Seascale	Bush craft sessions	-	21
2269/3/1	St Bees and Seascale	Bush craft sessions	-	21
2271/3/1	St Bees	Collecting winkles	-	12
1950/1/1	Drigg, Eskmeals and Tarn Bay	Bait digging	-	12
2269/24/1	St Bees and Seascale	Bush craft sessions	-	12
2269/17/1	St Bees and Seascale	Bush craft sessions	-	12
2269/22/1	St Bees and Seascale	Bush craft sessions	-	12
2269/23/1	St Bees and Seascale	Bush craft sessions	-	12
2269/18/1	St Bees and Seascale	Bush craft sessions	-	12
2269/19/1	St Bees and Seascale	Bush craft sessions	-	12
2269/20/1	St Bees and Seascale	Bush craft sessions	-	12
2269/21/1	St Bees and Seascale	Bush craft sessions	-	12
2068/1/1	St Bees and St Bees Head	Collecting winkles	-	6
2068/2/1	St Bees and St Bees Head	Collecting winkles	-	6
2281/1/1	Parton	Collecting cockles	-	4
2273/1/1	Parton	Collecting winkles	-	4
1950/4/1	Drigg, Eskmeals and Tarn Bay	Bait digging	-	3
2139/2/1	Coulderton, Seascale and Drigg	Collecting winkles and mussels	-	2
2139/1/1	Coulderton, Seascale and Drigg	Collecting winkles and mussels	-	2
2274/1/7	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/4/4	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/4/10	Ravenglass Estuary and River Esk	Obstacle course	-	1

Table 18. Adults' handling rates of fishing gear and sediment in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Location	Activity	Fishing gear	Sediment
2274/1/2	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/1/8	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/2/1	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/1/10	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/1/5	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/1/4	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/1/9	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/1/3	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/1/6	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/3/1	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/4/3	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/4/7	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/4/1	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/4/2	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/4/5	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/1/1	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/4/8	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/4/6	Ravenglass Estuary and River Esk	Obstacle course	-	1
2274/4/9	Ravenglass Estuary and River Esk	Obstacle course	-	1

Notes

Emboldened observations are the high-rate individuals

The mean handling rate of fishing gear for adults based on 6 high-rate observations is 1384 h y^{-1}

The observed 97.5th percentile rate based on 20 observations is 1716 h y^{-1}

The mean handling rate of sediments for adults based on 2 high-rate observations is 506 h y^{-1}

The observed 97.5th percentile rate based on 68 observations is 207 h y^{-1}

Table 19. Children's handling rates of fishing gear and sediment in the Sellafield aquatic survey area (h y^{-1})

Person ID number	Age	Location	Activity	Fishing gear	Sediment
2111/5/1	**6**	**Braystones**	**Push netting**	**2**	**-**
2111/6/1	**6**	**Braystones**	**Push netting**	**2**	**-**
2111/4/1	**7**	**Braystones**	**Push netting**	**2**	**-**
2111/3/1	**11**	**Braystones**	**Push netting**	**2**	**-**
1905/3/1	**13**	**Ravenglass and Drigg**	**Bait digging**	**-**	**38**
1905/2/1	**11**	**Ravenglass and Drigg**	**Bait digging**	**-**	**38**
2269/6/1	12	St Bees and Seascale	Bush craft sessions	-	12
2269/8/1	13	St Bees and Seascale	Bush craft sessions	-	12
2269/13/1	14	St Bees and Seascale	Bush craft sessions	-	12
2269/15/1	15	St Bees and Seascale	Bush craft sessions	-	12
2269/5/1	12	St Bees and Seascale	Bush craft sessions	-	12
2269/16/1	15	St Bees and Seascale	Bush craft sessions	-	12
2269/12/1	14	St Bees and Seascale	Bush craft sessions	-	12
2269/11/1	14	St Bees and Seascale	Bush craft sessions	-	12
2269/14/1	15	St Bees and Seascale	Bush craft sessions	-	12
2269/10/1	13	St Bees and Seascale	Bush craft sessions	-	12
2269/9/1	13	St Bees and Seascale	Bush craft sessions	-	12
2269/7/1	12	St Bees and Seascale	Bush craft sessions	-	12
1950/2/1	11	Tarn Bay, Drigg and Eskmeals	Bait digging	-	2
1950/3/1	9	Tarn Bay, Drigg and Eskmeals	Bait digging	-	2

Notes

Emboldened observations are the high-rate individuals

The mean handling rate of fishing gear for the child age group based on 4 high-rate observations is 2 h y^{-1}

The observed 97.5th percentile rate based on 4 observations is 2 h y^{-1}

The mean handling rate of sediments for the child age group based on 2 high-rate observations is 38 h y^{-1}

The observed 97.5th percentile rate based on 16 observations is 38 h y^{-1}

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

Person ID number	Location	Activity	In water	On water
2269/1/1	Whitehaven outer harbour, Whitehaven, Fleswick and Ravenglass Estuary	Kayaking and paddleboarding	956	-
	Whitehaven inner harbour, Whitehaven and Fleswick	Canoeing	-	13
2269/25/1	Ravenglass Estuary	Paddleboarding	939	-
2269/26/1	Ravenglass Estuary	Paddleboarding	939	-
2269/27/1	Ravenglass Estuary	Paddleboarding	939	-
2252/1/1	Eskmeals and Tarn Bay	Swimming, surfing, kayaking and snorkelling	101	-
2167/1/1	Seascale	Swimming and kayaking	81	-
2252/4/1	Eskmeals and Tarn Bay	Swimming, surfing and kayaking	75	-
2114/2/1	Drigg	Swimming	63	-
2252/2/1	Eskmeals and Tarn Bay	Kayaking and swimming	62	-
2252/3/1	Eskmeals and Tarn Bay	Kayaking and swimming	62	-
2135/1/1	St Bees	Paddleboarding	52	-
2108/1/1	Various locations within the survey area	Jetskiing	30	-
		Boat angling	-	20
1915/1/1	Ravenglass Estuary	Kayaking	18	-
2269/17/1	Whitehaven outer harbour, Whitehaven and Fleswick	Kayaking and paddleboarding	18	-
	Whitehaven inner harbour, Whitehaven and Fleswick	Canoeing	-	14
2269/19/1	Whitehaven outer harbour, Whitehaven and Fleswick	Kayaking and paddleboarding	18	-
	Whitehaven inner harbour, Whitehaven and Fleswick	Canoeing	-	14
2269/21/1	Whitehaven outer harbour, Whitehaven and Fleswick	Kayaking and paddleboarding	18	-
	Whitehaven inner harbour, Whitehaven and Fleswick	Canoeing	-	14
2269/23/1	Whitehaven outer harbour, Whitehaven and Fleswick	Kayaking and paddleboarding	18	-
	Whitehaven inner harbour, Whitehaven and Fleswick	Canoeing	-	14
2269/2/1	Whitehaven outer harbour, Whitehaven and Fleswick	Kayaking and paddleboarding	17	-
	Whitehaven inner harbour, Whitehaven and Fleswick	Canoeing	-	13
2269/3/1	Whitehaven outer harbour, Whitehaven and Fleswick	Kayaking and paddleboarding	17	-
	Whitehaven inner harbour, Whitehaven and Fleswick	Canoeing	-	13
2269/4/1	Whitehaven outer harbour, Whitehaven and Fleswick	Kayaking and paddleboarding	17	-
	Whitehaven inner harbour, Whitehaven and Fleswick	Canoeing	-	13
2269/28/1	Whitehaven outer harbour, Whitehaven and Fleswick	Kayaking and paddleboarding	17	-
	Whitehaven inner harbour, Whitehaven and Fleswick	Canoeing	-	13
2167/2/1	Seascale	Kayaking	16	-
2167/3/1	Seascale	Kayaking	16	-
2280/1/1	Braystones	Paddleboarding and swimming	14	-
2280/5/1	Braystones	Paddleboarding and swimming	14	-

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

Person ID number	Location	Activity	In water	On water
2199/1/1	Seascale	Swimming and playing on an inflatable dinghy	13	-
2269/18/1	Whitehaven outer harbour	Kayaking and paddleboarding	12	-
	Whitehaven inner harbour	Canoeing	-	8
2269/20/1	Whitehaven outer harbour	Kayaking and paddleboarding	12	-
	Whitehaven inner harbour	Canoeing	-	8
2269/22/1	Whitehaven outer harbour	Kayaking and paddleboarding	12	-
	Whitehaven inner harbour	Canoeing	-	8
2269/24/1	Whitehaven outer harbour	Kayaking and paddleboarding	12	-
	Whitehaven inner harbour	Canoeing	-	8
2133/2/1	Ravenglass Estuary	Jetskiing	12	-
	Drigg and Ravenglass Estuary	Boat angling	-	16
2133/5/1	Ravenglass Estuary	Jetskiing	12	-
2133/6/1	Ravenglass Estuary	Jetskiing	12	-
2224/1/1	Parton	Sub-aqua diving	11	-
2224/1/2	Parton	Sub-aqua diving	11	-
2224/1/3	Parton	Sub-aqua diving	11	-
2174/2/1	Seascale	Kayaking	9	-
1979/1/1	Braystones	Swimming	9	-
2242/7/1	Whitehaven inner harbour	Kayaking	5	-
		Rowing	-	78
2242/8/1	Whitehaven inner harbour	Kayaking	5	-
		Rowing	-	78
2242/9/1	Whitehaven inner harbour	Kayaking	5	-
		Rowing	-	78
2242/10/1	Whitehaven inner harbour	Kayaking	5	-
		Rowing	-	78
2242/10/2	Whitehaven inner harbour	Kayaking	5	-
		Rowing	-	78
2242/10/3	Whitehaven inner harbour	Kayaking	5	-
		Rowing	-	78
2242/11/1	Whitehaven inner harbour	Kayaking	5	-
		Rowing	-	78
2242/11/2	Whitehaven inner harbour	Kayaking	5	-
		Rowing	-	78
2242/11/3	Whitehaven inner harbour	Kayaking	5	-
		Rowing	-	78

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

Person ID number	Location	Activity	In water	On water
2142/2/1	Ravenglass Estuary and River Esk	Swimming	4	-
2142/3/1	Ravenglass Estuary and River Esk	Swimming	4	-
2280/3/1	Braystones	Swimming	4	-
2280/4/1	Braystones	Swimming	4	-
2004/1/1	Braystones	Swimming	3	-
2281/1/1	Whitehaven north beach	Swimming	3	-
2281/2/1	Whitehaven north beach	Swimming	3	-
2182/1/1	Parton	Snorkelling	3	-
2247/1/1	Parton	Snorkelling	3	-
2141/1/1	River Esk, River Irt, River Mite, Ravenglass Estuary	Kayaking	2	-
2141/1/2	River Esk, River Irt, River Mite, Ravenglass Estuary	Kayaking	2	-
2141/1/3	River Esk, River Irt, River Mite, Ravenglass Estuary	Kayaking	2	-
2141/1/4	River Esk, River Irt, River Mite, Ravenglass Estuary	Kayaking	2	-
2141/1/5	River Esk, River Irt, River Mite, Ravenglass Estuary	Kayaking	2	-
2141/1/6	River Esk, River Irt, River Mite, Ravenglass Estuary	Kayaking	2	-
2141/1/7	River Esk, River Irt, River Mite, Ravenglass Estuary	Kayaking	2	-
2141/1/8	River Esk, River Irt, River Mite, Ravenglass Estuary	Kayaking	2	-
2141/1/9	River Esk, River Irt, River Mite, Ravenglass Estuary	Kayaking	2	-
2141/1/10	River Esk, River Irt, River Mite, Ravenglass Estuary	Kayaking	2	-
2141/3/1	River Esk, River Irt, River Mite, Ravenglass Estuary	Paddleboarding	2	-
2142/5/1	River Esk and Ravenglass Estuary	Paddleboarding	2	-
2142/5/2	River Esk and Ravenglass Estuary	Paddleboarding	2	-
2142/5/3	River Esk and Ravenglass Estuary	Paddleboarding	2	-
1986/1/1	Eskmeals and Tarn Bay	Swimming	1	-
1986/2/1	Eskmeals and Tarn Bay	Swimming	1	-
2131/1/1	Seascale	Swimming	1	-
2131/2/1	Seascale	Swimming	1	-
2059/1/1	Various locations within the survey area	Rescue duties and training	1	175
2059/1/2	Various locations within the survey area	Rescue duties and training	1	175
2059/1/3	Various locations within the survey area	Rescue duties and training	1	175
2059/1/4	Various locations within the survey area	Rescue duties and training	1	175
2274/1/1	Ravenglass Estuary and River Esk	Swimming	1	-
2274/1/2	Ravenglass Estuary and River Esk	Swimming	1	-
2274/1/3	Ravenglass Estuary and River Esk	Swimming	1	-
2274/1/4	Ravenglass Estuary and River Esk	Swimming	1	-
2274/1/5	Ravenglass Estuary and River Esk	Swimming	1	-

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

Person ID number	Location	Activity	In water	On water
2274/1/6	Ravenglass Estuary and River Esk	Swimming	1	-
2274/1/7	Ravenglass Estuary and River Esk	Swimming	1	-
2274/1/8	Ravenglass Estuary and River Esk	Swimming	1	-
2274/1/9	Ravenglass Estuary and River Esk	Swimming	1	-
2274/1/10	Ravenglass Estuary and River Esk	Swimming	1	-
2274/4/1	Ravenglass Estuary and River Esk	Swimming	1	-
2274/4/2	Ravenglass Estuary and River Esk	Swimming	1	-
2274/4/3	Ravenglass Estuary and River Esk	Swimming	1	-
2274/4/4	Ravenglass Estuary and River Esk	Swimming	1	-
2274/4/5	Ravenglass Estuary and River Esk	Swimming	1	-
2274/4/6	Ravenglass Estuary and River Esk	Swimming	1	-
2274/4/7	Ravenglass Estuary and River Esk	Swimming	1	-
2274/4/8	Ravenglass Estuary and River Esk	Swimming	1	-
2274/4/9	Ravenglass Estuary and River Esk	Swimming	1	-
2274/4/10	Ravenglass Estuary and River Esk	Swimming	1	-
2296/1/1	Sellafield, Seascale, Drigg, Ravenglass, Eskmeals and Tarn Bay	Potting	-	1877
2296/2/1	Sellafield, Seascale, Drigg, Ravenglass, Eskmeals and Tarn Bay	Potting	-	1877
2296/3/1	Sellafield, Seascale, Drigg, Ravenglass, Eskmeals and Tarn Bay	Potting	-	1877
2296/4/1	Sellafield, Seascale, Drigg, Ravenglass, Eskmeals and Tarn Bay	Potting	-	1877
2269/35/1	Whitehaven inner harbour	Litter collecting from a boat	-	1825
2269/36/1	Whitehaven inner harbour	Litter collecting from a boat	-	1825
2088/1/1	Whitehaven, St Bees Head, Nethertown, Braystones, Sellafield, Seascale,Drigg and Ravenglass	Trawling	-	1020
2088/2/1	Whitehaven, St Bees Head, Nethertown, Braystones, Sellafield, Seascale,Drigg and Ravenglass	Trawling	-	1020
2287/1/1	Parton and Whitehaven	Potting and boat angling	-	339
2287/2/1	Parton and Whitehaven	Potting and boat angling	-	339
1980/1/1	Various locations within the survey area	Working on a boat	-	313
1980/2/1	Various locations within the survey area	Working on a boat	-	313
1980/3/1	Various locations within the survey area	Working on a boat	-	313
1980/4/1	Various locations within the survey area	Working on a boat	-	313
2299/1/1	Sellafield and Seascale	Potting, boat angling and gill netting	-	183
2299/2/1	Sellafield and Seascale	Potting, boat angling and gill netting	-	183
2144/1/1	Parton	Potting	-	156
2111/1/1	Braystones	Paddling and push netting	-	146
2111/2/1	Braystones	Paddling and push netting	-	146

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

Person ID number	Location	Activity	In water	On water
2166/1/1	Sellafield and Seascale	Paddling	-	92
2179/1/1	Seascale	Paddling	-	72
1972/1/1	River Esk	Angling	-	39
1881/1/1	Drigg and Ravenglass Estuary	Boat angling	-	32
2079/1/1	Drigg and Ravenglass Estuary	Boat angling	-	25
2236/1/1	Whitehaven, St Bees Head and St Bees	Boat angling	-	24
2284/1/1	Whitehaven north beach and Seamill	Push netting	-	24
2111/7/1	Braystones	Canoeing	-	20
1944/1/1	Whitehaven	Pleasure cruising	-	16
2133/3/1	Drigg and Ravenglass Estuary	Boat angling	-	16
2178/1/1	Seascale and St Bees	Paddling	-	15
2178/2/1	Seascale and St Bees	Paddling	-	15
1940/1/1	Tarn Bay	Paddling	-	13
2136/1/1	Ravenglass	Canoeing	-	12
2027/1/1	Ravenglass Estuary	Canoeing	-	10
2165/1/1	St Bees and Seascale	Paddling	-	6
2165/2/1	St Bees and Seascale	Paddling	-	6
2050/1/1	St Bees Head	Sea bird surveys from a boat	-	5
2050/1/2	St Bees Head	Sea bird surveys from a boat	-	5
2050/1/3	St Bees Head	Sea bird surveys from a boat	-	5
1916/1/1	Various locations within the survey area	Sailing	-	4
2141/2/1	Ravenglass Estuary, River Esk, River Irt and River Mite	Canoeing	-	2
2141/2/2	Ravenglass Estuary, River Esk, River Irt and River Mite	Canoeing	-	2
2141/2/3	Ravenglass Estuary, River Esk, River Irt and River Mite	Canoeing	-	2
2141/2/4	Ravenglass Estuary, River Esk, River Irt and River Mite	Canoeing	-	2
2141/2/5	Ravenglass Estuary, River Esk, River Irt and River Mite	Canoeing	-	2

Table 21. Children's and infant's occupancy rates in and on water in the Sellafield aquatic survey area (h y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Location	Activity	In water	On water
2111/3/1	11	Braystones	Swimming	180	-
			Push netting and canoeing	-	44
2111/6/1	6	Braystones	Swimming	180	-
			Push netting and canoeing	-	44
2111/4/1	7	Braystones	Swimming	180	-
			Push netting	-	24
2111/5/1	6	Braystones	Swimming	180	-
			Push netting	-	24
2269/11/1	14	Whitehaven outer harbour and Fleswick	Kayaking and paddleboarding	18	-
		Whitehaven outer harbour, Whitehaven inner harbour and Fleswick	Canoeing and litter collecting from a boat	-	131
2269/5/1	12	Whitehaven outer harbour and Fleswick	Kayaking and paddleboarding	18	-
		Whitehaven outer harbour, Whitehaven inner harbour and Fleswick	Canoeing and litter collecting from a boat	-	126
2269/9/1	13	Whitehaven outer harbour and Fleswick	Kayaking and paddleboarding	18	-
		Whitehaven outer harbour, Whitehaven inner harbour and Fleswick	Canoeing and litter collecting from a boat	-	126
2269/13/1	14	Whitehaven outer harbour and Fleswick	Kayaking and paddleboarding	18	-
		Fleswick	Canoeing	-	14
2269/15/1	15	Whitehaven outer harbour and Fleswick	Kayaking and paddleboarding	18	-
		Fleswick	Canoeing	-	14
2269/7/1	12	Whitehaven outer harbour and Fleswick	Kayaking and paddleboarding	18	-
		Fleswick	Canoeing	-	8
2199/2/1	6	Seascale	Windsurfing and swimming	13	-
2269/14/1	15	Whitehaven outer harbour and Fleswick	Kayaking and paddleboarding	12	-
		Whitehaven outer harbour, Whitehaven inner harbour and Fleswick	Canoeing and litter collecting from a boat	-	126
2269/6/1	12	Whitehaven outer harbour and Fleswick	Kayaking and paddleboarding	12	-
		Fleswick	Canoeing	-	14
2269/8/1	13	Whitehaven outer harbour and Fleswick	Kayaking and paddleboarding	12	-
		Fleswick	Canoeing	-	14
2269/10/1	13	Whitehaven outer harbour and Fleswick	Kayaking and paddleboarding	12	-
		Fleswick	Canoeing	-	14
2269/12/1	14	Whitehaven outer harbour and Fleswick	Kayaking and paddleboarding	12	-
		Fleswick	Canoeing	-	8
2269/16/1	15	Whitehaven outer harbour and Fleswick	Kayaking and paddleboarding	12	-
		Fleswick	Canoeing	-	8
2063/2/1	10	Braystones	Swimming	10	-
2063/4/1	8	Braystones	Swimming	10	-
2242/1/1	10	Whitehaven inner harbour	Kayaking	5	-
			Rowing	-	78
2242/2/1	11	Whitehaven inner harbour	Kayaking	5	-
			Rowing	-	78
2242/3/1	12	Whitehaven inner harbour	Kayaking	5	-
			Rowing	-	78
2242/4/1	13	Whitehaven inner harbour	Kayaking	5	-
			Rowing	-	78
2242/5/1	14	Whitehaven inner harbour	Kayaking	5	-
			Rowing	-	78
2242/6/1	15	Whitehaven inner harbour	Kayaking	5	-
			Rowing	-	78
2004/2/1	9	Braystones	Swimming	3	-
2004/3/1	9	Braystones	Swimming	3	-
2281/4/1	11	Whitehaven north beach	Swimming	3	-
2281/5/1	10	Whitehaven north beach	Swimming	3	-
2281/6/1	6	Whitehaven north beach	Swimming	3	-
1972/3/1	6	River Esk	Angling	-	39
1972/5/1	7	River Esk	Angling	-	39
1972/6/1	8	River Esk	Angling	-	39
1972/7/1	9	River Esk	Angling	-	39
1972/8/1	10	River Esk	Angling	-	39
1972/9/1	11	River Esk	Angling	-	39
2236/4/1	12	St Bees, St Bees Head and Whitehaven	Boat angling	-	24
2178/3/1	8	Seascale and St Bees	Paddling	-	15
2178/5/1	7	Seascale and St Bees	Paddling	-	15

Infant age group (0 - 5 years old)

Person ID number	Age	Location	Activity	In water	On water
2063/5/1	5	Braystones	Swimming	10	-
2281/3/1	4	Whitehaven north beach	Swimming	3	-
1972/2/1	4	River Esk	Angling	-	39
1972/4/1	5	River Esk	Angling	-	39
2178/4/1	4	Seascale and St Bees	Paddling	-	15
2178/6/1	3	Seascale and St Bees	Paddling	-	15
2165/3/1	5	Seascale and St Bees	Paddling	-	6

Table 22. Adults' consumption rates of green vegetables from the Sellafield terrestrial survey area (kg y $^{-1}$)

Person ID number	Broccoli	Brussel sprout	Cabbage	Calabrese	Cauliflower	Courgette	Cucumber	Herbs	Kale	Lettuce	Rocket	Spinach	Total
2239/2/1	**-**	**12.3**	**23.0**	**-**	**4.6**	**5.8**	**-**	**-**	**-**	**-**	**-**	**-**	**45.6**
2239/3/1	**-**	**12.3**	**23.0**	**-**	**4.6**	**5.8**	**-**	**-**	**-**	**-**	**-**	**-**	**45.6**
2239/6/1	**-**	**12.3**	**23.0**	**-**	**4.6**	**5.8**	**-**	**-**	**-**	**-**	**-**	**-**	**45.6**
2239/7/1	**-**	**12.3**	**23.0**	**-**	**4.6**	**5.8**	**-**	**-**	**-**	**-**	**-**	**-**	**45.6**
1947/1/1	**-**	**-**	**3.4**	**-**	**-**	**3.7**	**29.8**	**0.1**	**-**	**-**	**-**	**-**	**37.0**
1947/2/1	**-**	**-**	**3.4**	**-**	**-**	**3.7**	**29.8**	**0.1**	**-**	**-**	**-**	**-**	**37.0**
1850/1/1	**-**	**-**	**30.5**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**30.5**
1850/2/1	**-**	**-**	**30.5**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**30.5**
2256/2/1	**7.3**	**9.8**	**-**	**-**	**-**	**-**	**-**	**-**	**6.6**	**-**	**-**	**-**	**23.7**
2258/2/1	**-**	**2.2**	**10.2**	**-**	**-**	**-**	**8.8**	**-**	**-**	**-**	**-**	**-**	**21.2**
2258/3/1	**-**	**2.2**	**10.2**	**-**	**-**	**-**	**8.8**	**-**	**-**	**-**	**-**	**-**	**21.2**
2041/1/1	**-**	**-**	**-**	**-**	**-**	**1.3**	**4.3**	**0.1**	**-**	**15.0**	**0.5**	**-**	**21.1**
2041/2/1	**-**	**-**	**-**	**-**	**-**	**1.3**	**4.3**	**0.1**	**-**	**15.0**	**0.5**	**-**	**21.1**
2250/1/1	**0.5**	**2.7**	**3.1**	**-**	**3.0**	**2.8**	**-**	**-**	**2.0**	**0.7**	**-**	**1.0**	**15.9**
2250/2/1	**0.5**	**2.7**	**3.1**	**-**	**3.0**	**2.8**	**-**	**-**	**2.0**	**0.7**	**-**	**1.0**	**15.9**
2140/1/1	-	2.7	-	-	3.4	2.5	-	-	-	2.5	-	-	11.1
2140/2/1	-	2.7	-	-	3.4	2.5	-	-	-	2.5	-	-	11.1
1973/1/1	-	-	-	-	-	3.7	6.8	-	-	-	-	-	10.5
2239/4/1	-	2.7	5.1	-	1.0	1.3	-	-	-	-	-	-	10.1
2239/5/1	-	2.7	5.1	-	1.0	1.3	-	-	-	-	-	-	10.1
1864/1/1	-	-	-	-	-	-	8.5	-	-	-	-	-	8.5
1864/2/1	-	-	-	-	-	-	8.5	-	-	-	-	-	8.5
2245/1/1	-	-	-	-	-	6.0	-	-	-	-	-	-	6.0
2245/2/1	-	-	-	-	-	6.0	-	-	-	-	-	-	6.0
2259/1/1	-	-	-	-	-	6.0	-	-	-	-	-	-	6.0
2259/2/1	-	-	-	-	-	6.0	-	-	-	-	-	-	6.0
2225/1/1	-	-	-	-	-	-	4.3	-	1.1	-	-	-	5.4
2225/2/1	-	-	-	-	-	-	4.3	-	1.1	-	-	-	5.4
2225/4/1	-	-	-	-	-	-	4.3	-	1.1	-	-	-	5.4
1859/1/1	-	-	-	-	-	4.4	-	-	-	-	-	-	4.4
1859/2/1	-	-	-	-	-	4.4	-	-	-	-	-	-	4.4
1859/3/1	-	-	-	-	-	4.4	-	-	-	-	-	-	4.4
1859/4/1	-	-	-	-	-	4.4	-	-	-	-	-	-	4.4
1859/5/1	-	-	-	-	-	4.4	-	-	-	-	-	-	4.4
2023/1/1	-	-	-	-	-	4.1	-	-	-	-	-	-	4.1
2023/2/1	-	-	-	-	-	4.1	-	-	-	-	-	-	4.1
2111/1/1	-	-	-	-	-	-	-	3.7	-	-	-	-	3.7
2111/2/1	-	-	-	-	-	-	-	3.7	-	-	-	-	3.7
2202/1/1	-	-	-	-	-	-	-	-	3.6	-	-	-	3.6

Table 22. Adults' consumption rates of green vegetables from the Sellafield terrestrial survey area (kg y $^{-1}$)

Person ID number	Broccoli	Brussel sprout	Cabbage	Calabrese	Cauliflower	Courgette	Cucumber	Herbs	Kale	Lettuce	Rocket	Spinach	Total
2202/2/1	-	-	-	-	-	-	-	-	3.6	-	-	-	3.6
2258/1/1	-	0.3	1.6	-	-	-	1.4	-	-	-	-	-	3.3
2258/4/1	-	0.3	1.6	-	-	-	1.4	-	-	-	-	-	3.3
2139/1/1	-	-	-	0.4	0.4	2.4	-	-	-	-	-	-	3.2
2139/2/1	-	-	-	0.4	0.4	2.4	-	-	-	-	-	-	3.2
2139/3/1	-	-	-	0.4	0.4	2.4	-	-	-	-	-	-	3.2
1847/1/1	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/1	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/2	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/3	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/4	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/5	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/6	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/7	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/8	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/9	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/10	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/11	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/12	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/13	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/14	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/15	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
1847/2/16	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
2250/3/1	-	0.3	0.3	-	0.3	0.3	-	-	0.2	0.1	-	-	1.4
2250/4/1	-	0.3	0.3	-	0.3	0.3	-	-	0.2	0.1	-	-	1.4
2250/5/1	-	0.3	0.3	-	0.3	0.3	-	-	0.2	0.1	-	-	1.4
2250/6/1	-	0.3	0.3	-	0.3	0.3	-	-	0.2	0.1	-	-	1.4
2250/7/1	-	0.3	0.3	-	0.3	0.3	-	-	0.2	0.1	-	-	1.4
2250/8/1	-	0.3	0.3	-	0.3	0.3	-	-	0.2	0.1	-	-	1.4
2256/3/1	0.2	0.2	-	-	-	-	-	-	0.1	-	-	-	0.5
2256/4/1	0.2	0.2	-	-	-	-	-	-	0.1	-	-	-	0.5
2256/5/1	0.2	0.2	-	-	-	-	-	-	0.1	-	-	-	0.5
2256/6/1	0.2	0.2	-	-	-	-	-	-	0.1	-	-	-	0.5
2256/7/1	0.2	0.2	-	-	-	-	-	-	0.1	-	-	-	0.5
2245/3/1	-	-	-	-	-	0.5	-	-	-	-	-	-	0.5
2245/4/1	-	-	-	-	-	0.5	-	-	-	-	-	-	0.5
2245/5/1	-	-	-	-	-	0.5	-	-	-	-	-	-	0.5
2245/6/1	-	-	-	-	-	0.5	-	-	-	-	-	-	0.5
2259/3/1	-	-	-	-	-	0.5	-	-	-	-	-	-	0.5

Table 22. Adults' consumption rates of green vegetables from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Broccoli	Brussel sprout	Cabbage	Calabrese	Cauliflower	Courgette	Cucumber	Herbs	Kale	Lettuce	Rocket	Spinach	Total
2259/4/1	-	-	-	-	-	0.5	-	-	-	-	-	-	0.5
2259/5/1	-	-	-	-	-	0.5	-	-	-	-	-	-	0.5
2259/6/1	-	-	-	-	-	0.5	-	-	-	-	-	-	0.5
1851/1/1	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2
1851/2/1	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables for adults based on the 15 high-rate consumers is 30.5 kg y^{-1}

The observed 97.5th percentile rate based on 83 observations is 45.6 kg y^{-1}

Table 23. Adults' consumption rates of other vegetables from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Broad bean	Chilli pepper	French bean	Mangetout	Pea	Pepper	Runner bean	Squash	Sweetcorn	Tomato	Total
2250/1/1	**2.9**	**0.1**		**-**	**4.9**	**0.7**	**2.5**	**8.7**	**3.4**	**24.0**	**49.3**
2250/2/1	**2.9**	**0.1**	**2.0**	**-**	**4.9**	**0.7**	**2.5**	**8.7**	**3.4**	**24.0**	**49.3**
2256/2/1	**2.3**	**-**	**1.3**	**-**	**0.5**	**-**	**7.3**	**-**	**3.7**	**29.2**	**44.3**
1864/1/1	**-**	**-**	**-**	**-**	**-**	**2.9**	**-**	**-**	**-**	**36.0**	**38.9**
1864/2/1	**-**	**-**	**-**	**-**	**-**	**2.9**	**-**	**-**	**-**	**36.0**	**38.9**
2023/1/1	**-**	**0.1**	**-**	**-**	**-**	**4.0**	**-**	**-**	**3.8**	**29.5**	**37.4**
2023/2/1	**-**	**0.1**	**-**	**-**	**-**	**4.0**	**-**	**-**	**3.8**	**29.5**	**37.4**
2041/1/1	**3.0**	**0.2**	**3.5**	**-**	**3.0**	**-**	**-**	**-**	**-**	**25.2**	**34.8**
2041/2/1	**3.0**	**0.2**	**3.5**	**-**	**3.0**	**-**	**-**	**-**	**-**	**25.2**	**34.8**
2140/1/1	**-**	**-**	**0.9**	**2.3**	**-**	**-**	**2.6**	**-**	**1.2**	**18.0**	**24.9**
2140/2/1	**-**	**-**	**0.9**	**2.3**	**-**	**-**	**2.6**	**-**	**1.2**	**18.0**	**24.9**
1947/1/1	**-**	**0.1**	**3.5**	**-**	**-**	**-**	**2.2**	**-**	**-**	**18.0**	**23.8**
1947/2/1	**-**	**0.1**	**3.5**	**-**	**-**	**-**	**2.2**	**-**	**-**	**18.0**	**23.8**
2153/1/1	**15.4**	**-**	**-**	**-**	**-**	**-**	**7.6**	**-**	**-**	**-**	**23.0**
2153/2/1	**15.4**	**-**	**-**	**-**	**-**	**-**	**7.6**	**-**	**-**	**-**	**23.0**
1937/1/1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**21.6**	**21.6**
2258/2/1	**4.0**	**-**	**4.8**	**-**	**4.0**	**-**	**-**	**-**	**-**	**8.0**	**20.8**
2258/3/1	**4.0**	**-**	**4.8**	**-**	**4.0**	**-**	**-**	**-**	**-**	**8.0**	**20.8**
1973/1/1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**18.1**	**18.1**
2239/2/1	-	-	-	-	6.6	-	-	-	-	9.7	16.4
2239/3/1	-	-	-	-	6.6	-	-	-	-	9.7	16.4
2239/6/1	-	-	-	-	6.6	-	-	-	-	9.7	16.4
2239/7/1	-	-	-	-	6.6	-	-	-	-	9.7	16.4
2202/1/1	-	-	-	-	-	-	-	-	-	16.2	16.2
2202/2/1	-	-	-	-	-	-	-	-	-	16.2	16.2
2225/1/1	0.3	-	0.5	-	-	-	0.3	-	0.7	9.9	11.6
2225/2/1	0.3	-	0.5	-	-	-	0.3	-	0.7	9.9	11.6
2225/4/1	0.3	-	0.5	-	-	-	0.3	-	0.7	9.9	11.6
2245/1/1	-	-	-	-	-	-	-	-	-	11.3	11.3
2245/2/1	-	-	-	-	-	-	-	-	-	11.3	11.3
2259/1/1	-	-	-	-	-	-	-	-	-	11.3	11.3
2259/2/1	-	-	-	-	-	-	-	-	-	11.3	11.3
1851/1/1	-	-	-	-	-	-	-	-	-	10.8	10.8
1851/2/1	-	-	-	-	-	-	-	-	-	10.8	10.8
2250/3/1	0.3	0.01	0.2	-	0.5	0.1	0.2	0.9	0.3	2.4	4.9
2250/4/1	0.3	0.01	0.2	-	0.5	0.1	0.2	0.9	0.3	2.4	4.9
2250/5/1	0.3	0.01	0.2	-	0.5	0.1	0.2	0.9	0.3	2.4	4.9
2250/6/1	0.3	0.01	0.2	-	0.5	0.1	0.2	0.9	0.3	2.4	4.9
2250/7/1	0.3	0.01	0.2	-	0.5	0.1	0.2	0.9	0.3	2.4	4.9
2250/8/1	0.3	0.01	0.2	-	0.5	0.1	0.2	0.9	0.3	2.4	4.9

Table 23. Adults' consumption rates of other vegetables from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Broad bean	Chilli pepper	French bean	Mangetout	Pea	Pepper	Runner bean	Squash	Sweetcorn	Tomato	Total
2114/1/1	1.7	-	0.5	-	0.2	-	2.0	-	-	-	4.5
2114/2/1	1.7	-	0.5	-	0.2	-	2.0	-	-	-	4.5
2254/1/1	-	-	-	-	-	-	-	-	-	3.8	3.8
2254/2/1	-	-	-	-	-	-	-	-	-	3.8	3.8
2254/3/1	-	-	-	-	-	-	-	-	-	3.8	3.8
2254/4/1	-	-	-	-	-	-	-	-	-	3.8	3.8
2239/4/1	-	-	-	-	1.5	-	-	-	-	2.2	3.6
2239/5/1	-	-	-	-	1.5	-	-	-	-	2.2	3.6
2258/1/1	0.6	-	0.7	-	0.6	-	-	-	-	1.2	3.2
2258/4/1	0.6	-	0.7	-	0.6	-	-	-	-	1.2	3.2
2257/1/1	-	-	-	-	-	-	-	-	-	2.5	2.5
2257/2/1	-	-	-	-	-	-	-	-	-	2.5	2.5
2261/1/1	-	-	-	-	-	-	-	-	-	2.5	2.5
2261/2/1	-	-	-	-	-	-	-	-	-	2.5	2.5
1859/1/1	-	-	-	-	-	-	-	-	-	1.2	1.2
1859/3/1	-	-	-	-	-	-	-	-	-	1.2	1.2
1859/4/1	-	-	-	-	-	-	-	-	-	1.2	1.2
1859/5/1	-	-	-	-	-	-	-	-	-	1.2	1.2
2256/3/1	0.1	-	0.03	-	0.01	-	0.2	-	0.1	0.6	1.0
2256/4/1	0.1	-	0.03	-	0.01	-	0.2	-	0.1	0.6	1.0
2256/5/1	0.1	-	0.03	-	0.01	-	0.2	-	0.1	0.6	1.0
2256/6/1	0.1	-	0.03	-	0.01	-	0.2	-	0.1	0.6	1.0
2256/7/1	0.1	-	0.03	-	0.01	-	0.2	-	0.1	0.6	1.0
2245/3/1	-	-	-	-	-	-	-	-	-	0.5	0.5
2245/4/1	-	-	-	-	-	-	-	-	-	0.5	0.5
2245/5/1	-	-	-	-	-	-	-	-	-	0.5	0.5
2245/6/1	-	-	-	-	-	-	-	-	-	0.5	0.5
2259/3/1	-	-	-	-	-	-	-	-	-	0.5	0.5
2259/4/1	-	-	-	-	-	-	-	-	-	0.5	0.5
2259/5/1	-	-	-	-	-	-	-	-	-	0.5	0.5
2259/6/1	-	-	-	-	-	-	-	-	-	0.5	0.5

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of other vegetables for adults based on the 19 high-rate consumers is 31.1 kg y^{-1}

The observed 97.5th percentile rate based on 71 observations is 45.6 kg y^{-1}

Table 24. Adults' consumption rates of root vegetables from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Beetroot	Carrot	Celery	Garlic	Leek	Onion	Parsnip	Radish	Spring onion	Swede	Turnip	Total
2153/1/1	**-**	**15.2**	**-**	**-**	**-**	**12.1**	**12.1**	**-**	**-**	**-**	**-**	**39.5**
2153/2/1	**-**	**15.2**	**-**	**-**	**-**	**12.1**	**12.1**	**-**	**-**	**-**	**-**	**39.5**
2256/2/1	**3.6**	**-**	**5.3**	**-**	**7.2**	**9.9**	**2.6**	**-**	**-**	**-**	**-**	**28.6**
2239/2/1	**-**	**3.8**	**-**	**-**	**7.4**	**9.9**	**-**	**-**	**-**	**5.1**	**-**	**26.3**
2239/3/1	**-**	**3.8**	**-**	**-**	**7.4**	**9.9**	**-**	**-**	**-**	**5.1**	**-**	**26.3**
2239/6/1	**-**	**3.8**	**-**	**-**	**7.4**	**9.9**	**-**	**-**	**-**	**5.1**	**-**	**26.3**
2239/7/1	**-**	**3.8**	**-**	**-**	**7.4**	**9.9**	**-**	**-**	**-**	**5.1**	**-**	**26.3**
2258/2/1	**10.0**	**-**	**-**	**-**	**9.6**	**4.8**	**-**	**-**	**-**	**-**	**-**	**24.4**
2258/3/1	**10.0**	**-**	**-**	**-**	**9.6**	**4.8**	**-**	**-**	**-**	**-**	**-**	**24.4**
2041/1/1	**2.5**	**-**	**-**	**-**	**10.0**	**11.0**	**-**	**-**	**-**	**-**	**-**	**23.5**
2041/2/1	**2.5**	**-**	**-**	**-**	**10.0**	**11.0**	**-**	**-**	**-**	**-**	**-**	**23.5**
2250/1/1	**2.2**	**-**	**-**	**0.7**	**5.6**	**12.2**	**-**	**-**	**-**	**-**	**-**	**20.7**
2250/2/1	**2.2**	**-**	**-**	**0.7**	**5.6**	**12.2**	**-**	**-**	**-**	**-**	**-**	**20.7**
1947/1/1	**1.8**	**0.9**	**-**	**-**	**6.0**	**5.9**	**-**	**-**	**-**	**-**	**-**	**14.6**
1947/2/1	**1.8**	**0.9**	**-**	**-**	**6.0**	**5.9**	**-**	**-**	**-**	**-**	**-**	**14.6**
2139/1/1	**-**	**11.0**	**-**	**-**	**-**	**3.3**	**-**	**-**	**-**	**-**	**-**	**14.3**
2139/2/1	**-**	**11.0**	**-**	**-**	**-**	**3.3**	**-**	**-**	**-**	**-**	**-**	**14.3**
2139/3/1	**-**	**11.0**	**-**	**-**	**-**	**3.3**	**-**	**-**	**-**	**-**	**-**	**14.3**
2023/1/1	2.0	0.9	-	-	5.5	3.6	-	-	-	-	-	12.0
2023/2/1	2.0	0.9	-	-	5.5	3.6	-	-	-	-	-	12.0
2140/1/1	0.8	1.3	-	0.3	-	5.5	1.1	0.1	0.2	-	-	9.2
2140/2/1	0.8	1.3	-	0.3	-	5.5	1.1	0.1	0.2	-	-	9.2
2239/4/1	-	0.9	-	-	1.7	2.2	-	-	-	1.1	-	5.8
2239/5/1	-	0.9	-	-	1.7	2.2	-	-	-	1.1	-	5.8
1847/1/1	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/1	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/2	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/3	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/4	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/5	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/6	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/7	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/8	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/9	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/10	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/11	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0

Table 24. Adults' consumption rates of root vegetables from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Beetroot	Carrot	Celery	Garlic	Leek	Onion	Parsnip	Radish	Spring onion	Swede	Turnip	Total
1847/2/12	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/13	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/14	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/15	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
1847/2/16	-	2.5	-	-	-	-	2.5	-	-	-	-	5.0
2257/1/1	-	-	-	-	-	-	-	-	-	-	5.0	5.0
2257/3/1	-	-	-	-	-	-	-	-	-	-	5.0	5.0
2202/1/1	-	-	-	-	4.0	-	-	-	-	-	-	4.0
2202/2/1	-	-	-	-	4.0	-	-	-	-	-	-	4.0
2258/1/1	1.5	-	-	-	1.5	0.7	-	-	-	-	-	3.8
2258/4/1	1.5	-	-	-	1.5	0.7	-	-	-	-	-	3.8
2114/1/1	-	1.0	-	-	2.4	-	-	-	-	-	-	3.4
2114/2/1	-	1.0	-	-	2.4	-	-	-	-	-	-	3.4
1864/1/1	-	-	-	-	-	2.5	-	-	-	-	-	2.5
1864/2/1	-	-	-	-	-	2.5	-	-	-	-	-	2.5
2225/1/1	-	-	-	0.8	-	1.6	-	-	-	-	-	2.4
2225/2/1	-	-	-	0.8	-	1.6	-	-	-	-	-	2.4
2225/4/1	-	-	-	0.8	-	1.6	-	-	-	-	-	2.4
2111/1/1	2.3	-	-	-	-	-	-	-	-	-	-	2.3
2111/2/1	2.3	-	-	-	-	-	-	-	-	-	-	2.3
2250/3/1	0.2	-	-	0.1	0.6	1.2	-	-	-	-	-	2.1
2250/4/1	0.2	-	-	0.1	0.6	1.2	-	-	-	-	-	2.1
2250/5/1	0.2	-	-	0.1	0.6	1.2	-	-	-	-	-	2.1
2250/6/1	0.2	-	-	0.1	0.6	1.2	-	-	-	-	-	2.1
2250/7/1	0.2	-	-	0.1	0.6	1.2	-	-	-	-	-	2.1
2250/8/1	0.2	-	-	0.1	0.6	1.2	-	-	-	-	-	2.1
1859/1/1	-	-	-	-	-	1.1	-	-	-	-	-	1.1
1859/3/1	-	-	-	-	-	1.1	-	-	-	-	-	1.1
1859/4/1	-	-	-	-	-	1.1	-	-	-	-	-	1.1
1859/5/1	-	-	-	-	-	1.1	-	-	-	-	-	1.1
2254/1/1	-	-	-	-	0.3	-	-	-	0.5	-	-	0.8
2254/2/1	-	-	-	-	0.3	-	-	-	0.5	-	-	0.8
2254/3/1	-	-	-	-	0.3	-	-	-	0.5	-	-	0.8
2254/4/1	-	-	-	-	0.3	-	-	-	0.5	-	-	0.8
2256/3/1	0.1	-	0.1	-	0.2	0.2	0.1	-	-	-	-	0.6
2256/4/1	0.1	-	0.1	-	0.2	0.2	0.1	-	-	-	-	0.6

Table 24. Adults' consumption rates of root vegetables from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Beetroot	Carrot	Celery	Garlic	Leek	Onion	Parsnip	Radish	Spring onion	Swede	Turnip	Total
2256/5/1	0.1	-	0.1	-	0.2	0.2	0.1	-	-	-	-	0.6
2256/6/1	0.1	-	0.1	-	0.2	0.2	0.1	-	-	-	-	0.6
2256/7/1	0.1	-	0.1	-	0.2	0.2	0.1	-	-	-	-	0.6

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables for adults based on the 18 high-rate consumers is 23.4 kg y^{-1}

The observed 97.5th percentile rate based on 75 observations is 30.3 kg y^{-1}

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

Person ID number	Potato
1847/1/1	**100.0**
1847/2/1	**100.0**
1847/2/2	**100.0**
1847/2/3	**100.0**
1847/2/4	**100.0**
1847/2/5	**100.0**
1847/2/6	**100.0**
1847/2/7	**100.0**
1847/2/8	**100.0**
1847/2/9	**100.0**
1847/2/10	**100.0**
1847/2/11	**100.0**
1847/2/12	**100.0**
1847/2/13	**100.0**
1847/2/14	**100.0**
1847/2/15	**100.0**
1847/2/16	**100.0**
2239/2/1	**80.6**
2239/3/1	**80.6**
2239/6/1	**80.6**
2239/7/1	**80.6**
2254/1/1	**78.2**
2254/2/1	**78.2**
2254/3/1	**78.2**
2254/4/1	**78.2**
1850/1/1	**68.3**
1850/2/1	**68.3**
2250/1/1	**59.3**
2250/2/1	**59.3**
1851/1/1	**40.0**
1851/2/1	**40.0**
2202/1/1	28.6
2202/2/1	28.6
2041/1/1	25.2
2041/2/1	25.2
2153/1/1	22.7
2153/2/1	22.7
2256/2/1	18.2
2239/4/1	17.9
2239/5/1	17.9
2139/1/1	16.0
2139/2/1	16.0
2139/3/1	16.0
2078/1/1	15.4
2078/2/1	15.4
2258/2/1	14.0
2258/3/1	14.0
2023/1/1	13.6
2023/2/1	13.6
1846/1/1	12.7
1846/2/1	12.7
1864/1/1	10.0
1864/2/1	10.0
1947/1/1	6.1
1947/2/1	6.1
2250/3/1	5.9
2250/4/1	5.9
2250/5/1	5.9
2250/6/1	5.9
2250/7/1	5.9
2250/8/1	5.9
2261/1/1	5.0
2261/2/1	5.0
2111/1/1	4.5
2111/2/1	4.5
1859/2/1	4.0
2258/1/1	2.2
2258/4/1	2.2
2225/1/1	1.9
2225/2/1	1.9
2225/4/1	1.9
2232/1/1	1.4
2232/2/1	1.4
1890/1/1	1.1
1890/2/1	1.1
2256/3/1	0.4
2256/4/1	0.4
2256/5/1	0.4
2256/6/1	0.4
2256/7/1	0.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of potato for adults based on the 31 high-rate consumers is 86.1 kg y^{-1}

The observed 97.5th percentile rate based on 80 observations is 100.0 kg y^{-1}

Table 26. Adults' consumption rates of domestic fruit from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Apple	Blackcurrant	Blueberry	Fig	Gooseberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	White currant	Total
2256/2/1	**-**	**-**	**-**	**-**	**7.4**	**-**	**-**	**-**	**15.3**	**16.3**	**-**	**18.4**	**16.3**	**73.7**
2139/1/1	**10.1**	**15.7**	**-**	**-**	**-**	**-**	**-**	**-**	**4.3**	**9.5**	**1.9**	**2.1**	**-**	**43.6**
2139/2/1	**10.1**	**15.7**	**-**	**-**	**-**	**-**	**-**	**-**	**4.3**	**9.5**	**1.9**	**2.1**	**-**	**43.6**
2139/3/1	**10.1**	**15.7**	**-**	**-**	**-**	**-**	**-**	**-**	**4.3**	**9.5**	**1.9**	**2.1**	**-**	**43.6**
2023/1/1	**14.3**	**-**	**-**	**-**	**-**	**-**	**14.3**	**-**	**0.3**	**-**	**-**	**5.5**	**-**	**34.4**
2023/2/1	**14.3**	**-**	**-**	**-**	**-**	**-**	**14.3**	**-**	**0.3**	**-**	**-**	**5.5**	**-**	**34.4**
1846/1/1	**25.0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.3**	**-**	**-**	**26.3**
1846/2/1	**25.0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.3**	**-**	**-**	**26.3**
2041/1/1	**-**	**14.2**	**-**	**-**	**4.1**	**-**	**-**	**-**	**0.6**	**4.5**	**-**	**2.0**	**-**	**25.4**
2041/2/1	**-**	**14.2**	**-**	**-**	**4.1**	**-**	**-**	**-**	**0.6**	**4.5**	**-**	**2.0**	**-**	**25.4**
1937/1/1	-	-	-	-	-	-	21.6	-	-	-	-	-	-	21.6
2202/1/1	11.9	1.0	0.3	-	-	4.3	-	-	3.0	-	-	-	-	20.5
2202/2/1	11.9	1.0	0.3	-	-	4.3	-	-	3.0	-	-	-	-	20.5
2139/6/1	-	15.7	-	-	-	-	-	-	4.3	-	-	-	-	20.0
2239/2/1	6.8	0.5	-	-	-	-	-	1.1	-	-	-	9.2	-	17.6
2239/3/1	6.8	0.5	-	-	-	-	-	1.1	-	-	-	9.2	-	17.6
2239/6/1	6.8	0.5	-	-	-	-	-	1.1	-	-	-	9.2	-	17.6
2239/7/1	6.8	0.5	-	-	-	-	-	1.1	-	-	-	9.2	-	17.6
2153/1/1	11.3	-	-	-	-	-	2.7	-	1.6	-	-	-	-	15.6
2153/2/1	11.3	-	-	-	-	-	2.7	-	1.6	-	-	-	-	15.6
2245/1/1	9.0	-	-	-	1.6	-	-	1.7	-	-	-	-	-	12.3
2245/2/1	9.0	-	-	-	1.6	-	-	1.7	-	-	-	-	-	12.3
2259/1/1	9.0	-	-	-	1.6	-	-	1.7	-	-	-	-	-	12.3
2259/2/1	9.0	-	-	-	1.6	-	-	1.7	-	-	-	-	-	12.3
2250/1/1	-	5.0	-	0.8	1.5	-	-	-	0.9	-	0.9	0.8	-	9.9
2250/2/1	-	5.0	-	0.8	1.5	-	-	-	0.9	-	0.9	0.8	-	9.9
2225/1/1	5.0	0.1	-	-	1.0	-	-	-	-	0.1	1.7	-	-	8.0
2225/2/1	5.0	0.1	-	-	1.0	-	-	-	-	0.1	1.7	-	-	8.0
2225/4/1	5.0	0.1	-	-	1.0	-	-	-	-	0.1	1.7	-	-	8.0
2078/1/1	7.7	-	-	-	-	-	-	-	-	-	-	-	-	7.7
2078/2/1	7.7	-	-	-	-	-	-	-	-	-	-	-	-	7.7
2258/2/1	-	-	-	-	-	-	-	-	4.4	-	3.2	-	-	7.6
2258/3/1	-	-	-	-	-	-	-	-	4.4	-	3.2	-	-	7.6
1973/1/1	1.1	-	-	-	0.5	-	-	1.7	1.8	1.8	-	-	-	6.9
1847/1/1	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/1	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/2	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/3	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/4	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/5	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/6	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/7	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/8	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/9	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/10	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/11	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/12	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/13	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8

Table 26. Adults' consumption rates of domestic fruit from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Apple	Blackcurrant	Blueberry	Fig	Gooseberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	White currant	Total
1847/2/14	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/15	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
1847/2/16	2.3	-	-	-	-	-	2.3	-	-	-	-	2.3	-	6.8
2257/1/1	5.0	-	-	-	-	-	-	-	0.3	-	-	-	-	5.3
2257/2/1	5.0	-	-	-	-	-	-	-	0.3	-	-	-	-	5.3
2111/1/1	-	-	-	-	1.1	-	-	-	0.4	-	2.7	-	-	4.2
2111/2/1	-	-	-	-	1.1	-	-	-	0.4	-	2.7	-	-	4.2
2239/4/1	1.5	0.1	-	-	-	-	-	0.3	-	-	-	2.0	-	3.9
2239/5/1	1.5	0.1	-	-	-	-	-	0.3	-	-	-	2.0	-	3.9
2232/1/1	1.1	-	-	-	-	-	1.1	1.1	0.1	-	-	-	-	3.5
2232/2/1	1.1	-	-	-	-	-	1.1	1.1	0.1	-	-	-	-	3.5
1947/1/1	-	0.7	-	-	-	-	-	-	-	-	1.1	1.6	-	3.4
1947/2/1	-	0.7	-	-	-	-	-	-	-	-	1.1	1.6	-	3.4
2236/1/1	-	-	-	-	-	-	-	3.0	-	-	-	-	-	3.0
2236/2/1	-	-	-	-	-	-	-	3.0	-	-	-	-	-	3.0
2236/5/1	-	-	-	-	-	-	-	3.0	-	-	-	-	-	3.0
2236/6/1	-	-	-	-	-	-	-	3.0	-	-	-	-	-	3.0
2256/3/1	-	-	-	-	0.2	-	-	-	0.3	0.4	-	0.4	0.4	1.6
2256/4/1	-	-	-	-	0.2	-	-	-	0.3	0.4	-	0.4	0.4	1.6
2256/5/1	-	-	-	-	0.2	-	-	-	0.3	0.4	-	0.4	0.4	1.6
2256/6/1	-	-	-	-	0.2	-	-	-	0.3	0.4	-	0.4	0.4	1.6
2256/7/1	-	-	-	-	0.2	-	-	-	0.3	0.4	-	0.4	0.4	1.6
2258/1/1	-	-	-	-	-	-	-	-	0.7	-	0.5	-	-	1.2
2258/4/1	-	-	-	-	-	-	-	-	0.7	-	0.5	-	-	1.2
2250/3/1	-	0.5	-	0.1	0.1	-	-	-	0.1	-	0.1	-	-	0.9
2250/4/1	-	0.5	-	0.1	0.1	-	-	-	0.1	-	0.1	-	-	0.9
2250/5/1	-	0.5	-	0.1	0.1	-	-	-	0.1	-	0.1	-	-	0.9
2250/6/1	-	0.5	-	0.1	0.1	-	-	-	0.1	-	0.1	-	-	0.9
2250/7/1	-	0.5	-	0.1	0.1	-	-	-	0.1	-	0.1	-	-	0.9
2250/8/1	-	0.5	-	0.1	0.1	-	-	-	0.1	-	0.1	-	-	0.9
1965/1/1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	0.8
1965/2/1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	0.8
1965/3/1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	0.8
2261/1/1	-	0.8	-	-	-	-	-	-	-	-	-	-	-	0.8
2261/2/1	-	0.8	-	-	-	-	-	-	-	-	-	-	-	0.8
2136/1/1	-	-	-	-	-	-	-	-	-	-	-	0.3	-	0.3
2136/2/1	-	-	-	-	-	-	-	-	-	-	-	0.3	-	0.3

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit for adults based on the 10 high-rate consumers is 37.7 kg y^{-1}

The observed 97.5th percentile rate based on 85 observations is 43.6 kg y^{-1}

Table 27. Adults' consumption rates of milk from the Sellafield terrestrial survey area (l y^{-1})

Person ID number	Cows' milk
1859/1/1	**365.0**
2234/1/1	**349.0**
2160/1/1	**243.3**
2160/2/1	**243.3**
2160/3/1	**243.3**
2245/1/1	**182.5**
2245/2/1	**182.5**
2259/1/1	**182.5**
2259/2/1	**182.5**
2234/2/1	**166.0**
2026/1/1	**138.2**
2026/3/1	**138.2**
2026/4/1	**138.2**
2026/5/1	**138.2**
2026/6/1	**138.2**
2139/1/1	115.3
2139/2/1	115.3
2139/3/1	115.3
2089/1/1	112.3
2089/2/1	112.3
2089/3/1	112.3
2089/4/1	112.3
2089/5/1	112.3
2158/1/1	103.7
2158/2/1	103.7
2245/3/1	91.3
2245/4/1	91.3
2245/5/1	91.3
2245/6/1	91.3
2259/3/1	91.3
2259/4/1	91.3
2259/5/1	91.3
2259/6/1	91.3
2234/3/1	83.0
2254/1/1	78.2
2254/2/1	78.2
2254/3/1	78.2
2254/4/1	78.2
1859/2/1	29.6
2158/3/1	4.6
2158/4/1	4.6
2158/5/1	4.6
2158/6/1	4.6

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of milk for adults based on the 15 high-rate consumers is 202.1 l y^{-1}

The observed 97.5th percentile rate based on 43 observations is 343.7 l y^{-1}

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

Person ID number	Beef
2257/1/1	**50.0**
2257/2/1	**50.0**
1869/1/1	**47.3**
1869/2/1	**47.3**
2162/1/1	**36.0**
2162/2/1	**36.0**
2162/6/1	**36.0**
1965/1/1	**18.9**
1965/2/1	**18.9**
1965/3/1	**18.9**
1965/4/1	**18.9**
1965/5/1	**18.9**
2257/3/1	11.8
1847/1/1	4.8
1847/2/1	4.8
1847/2/2	4.8
1847/2/3	4.8
1847/2/4	4.8
1847/2/5	4.8
1847/2/6	4.8
1847/2/7	4.8
1847/2/8	4.8
1847/2/9	4.8
1847/2/10	4.8
1847/2/11	4.8
1847/2/12	4.8
1847/2/13	4.8
1847/2/14	4.8
1847/2/15	4.8
1847/2/16	4.8
2261/1/1	2.5
2261/2/1	2.5

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of cattle meat for adults based on the 12 high-rate consumers is 33.1 kg y^{-1}

The observed 97.5th percentile rate based on 32 observations is 50.0 kg y^{-1}

Table 29. Adults' consumption rates of sheep meat from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Lamb
1867/1/1	**39.5**
1867/2/1	**39.5**
1867/3/1	**39.5**
1851/1/1	**27.5**
1851/2/1	**27.5**
2257/1/1	**20.0**
2257/2/1	**20.0**
1889/1/1	**18.7**
1889/2/1	**18.7**
1889/3/1	**18.7**
2236/1/1	**14.9**
2236/2/1	**14.9**
2236/5/1	**14.0**
2236/6/1	**14.0**
1854/1/1	11.3
1854/2/1	11.3
2078/1/1	7.0
2078/2/1	7.0
1965/1/1	6.8
1965/2/1	6.8
1965/3/1	6.8
1965/4/1	6.8
1965/5/1	6.8
2078/5/1	5.7
2162/1/1	5.3
2162/2/1	5.3
2162/6/1	5.3
2139/1/1	3.6
2139/2/1	3.6
2139/3/1	3.6
2083/1/1	3.4
2083/2/1	3.4
2083/3/1	3.4
2083/4/1	3.4
2083/5/1	3.4
2261/1/1	2.5
2261/2/1	2.5

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of sheep meat for adults based on the 14 high-rate consumers is 23.4 kg y^{-1}

The observed 97.5th percentile rate based on 37 observations is 39.5 kg y^{-1}

Table 30. Adults' consumption rates of poultry from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Chicken	Duck (unspecified species)	Mallard	Partridge	Pheasant	Pigeon	Turkey	Woodcock	Total
2138/1/1	**-**	**-**	**9.0**	**-**	**11.2**	**4.6**	**-**	**3.4**	**28.3**
2258/2/1	**-**	**10.8**	**-**	**-**	**10.8**	**-**	**-**	**-**	**21.6**
2261/1/1	**4.0**	**-**	**-**	**-**	**-**	**-**	**16.0**	**-**	**20.0**
2261/2/1	**4.0**	**-**	**-**	**-**	**-**	**-**	**16.0**	**-**	**20.0**
2072/1/1	**-**	**-**	**-**	**1.8**	**8.1**	**-**	**-**	**0.7**	**10.6**
2165/1/1	-	-	-	-	4.3	2.2	-	-	6.5
2165/2/1	-	-	-	-	4.3	2.2	-	-	6.5
1847/1/1	-	2.7	-	-	2.7	-	-	-	5.4
2236/5/1	-	-	-	-	4.5	-	-	-	4.5
2236/6/1	-	-	-	-	4.5	-	-	-	4.5
2225/2/1	-	-	-	-	2.7	1.4	-	-	4.1
2236/1/1	-	-	-	-	2.4	0.5	-	-	2.9
2236/2/1	-	-	-	-	2.4	-	-	-	2.4
2258/1/1	-	0.8	-	-	0.8	-	-	-	1.7
2258/4/1	-	0.8	-	-	0.8	-	-	-	1.7
2089/2/1	-	-	-	-	1.3	-	-	-	1.3
1846/1/1	-	-	-	-	0.9	-	-	-	0.9
1846/2/1	-	-	-	-	0.9	-	-	-	0.9
1850/1/1	-	-	-	-	0.7	-	-	-	0.7
2158/1/1	-	-	-	-	0.4	-	-	-	0.4
2158/2/1	-	-	-	-	0.4	-	-	-	0.4
2153/1/1	-	-	-	-	0.4	-	-	-	0.4
2153/2/1	-	-	-	-	0.4	-	-	-	0.4
2139/1/1	-	-	-	-	0.4	-	-	-	0.4
2139/2/1	-	-	-	-	0.4	-	-	-	0.4
2139/3/1	-	-	-	-	0.4	-	-	-	0.4
1965/1/1	-	-	-	-	0.3	-	-	-	0.3
1965/2/1	-	-	-	-	0.3	-	-	-	0.3
1965/3/1	-	-	-	-	0.3	-	-	-	0.3
1848/1/1	-	-	-	-	0.2	-	-	-	0.2
1848/2/1	-	-	-	-	0.2	-	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of poultry for adults based on the 5 high-rate consumers is 20.1 kg y^{-1}

The observed 97.5th percentile rate based on 31 observations is 23.3 kg y^{-1}

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

Person ID number	Chicken egg	Duck egg	Total
2202/1/1	**35.7**	**-**	**35.7**
2202/2/1	**35.7**	**-**	**35.7**
1867/1/1	**24.2**	**-**	**24.2**
1867/2/1	**24.2**	**-**	**24.2**
1867/3/1	**24.2**	**-**	**24.2**
1850/3/1	**17.8**	**-**	**17.8**
2023/1/1	9.7	-	9.7
2023/2/1	9.7	-	9.7
1850/1/1	8.9	-	8.9
2261/1/1	8.2	-	8.2
2261/2/1	8.2	-	8.2
2140/1/1	7.4	-	7.4
2140/2/1	7.4	-	7.4
2259/2/1	-	7.3	7.3
2159/1/1	7.3	-	7.3
2159/2/1	7.3	-	7.3
2245/2/1	-	7.2	7.2
2162/1/1	6.8	-	6.8
2162/2/1	6.8	-	6.8
2162/6/1	6.8	-	6.8
1848/1/1	6.7	-	6.7
1848/2/1	6.7	-	6.7
2257/1/1	6.2	-	6.2
2257/2/1	6.2	-	6.2
2259/4/1	-	5.5	5.5
2259/5/1	-	5.5	5.5
2245/4/1	-	5.4	5.4
2245/5/1	-	5.4	5.4
2232/1/1	4.2	-	4.2
2232/2/1	4.2	-	4.2
2259/1/1	-	3.6	3.6
2245/1/1	-	3.6	3.6

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of eggs for adults based on the 6 high-rate consumers is 26.9 kg y^{-1}

The observed 97.5th percentile rate based on 32 observations is 35.7 kg y^{-1}

Table 32. Adults' consumption rates of wild/free foods from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Blackberry	Crab apple	Elderberry	Total
1864/1/1	**-**	**2.5**	**2.5**	**5.0**
1864/2/1	**-**	**2.5**	**2.5**	**5.0**
2036/1/1	**5.0**	**-**	**-**	**5.0**
2036/2/1	**5.0**	**-**	**-**	**5.0**
2138/1/1	**3.0**	**-**	**-**	**3.0**
2257/1/1	**2.5**	**-**	**-**	**2.5**
2257/2/1	**2.5**	**-**	**-**	**2.5**
2139/1/1	**1.7**	**-**	**-**	**1.7**
2139/2/1	**1.7**	**-**	**-**	**1.7**
2139/3/1	**1.7**	**-**	**-**	**1.7**
1889/1/1	**1.7**	**-**	**-**	**1.7**
1889/2/1	**1.7**	**-**	**-**	**1.7**
1889/3/1	**1.7**	**-**	**-**	**1.7**
1846/1/1	1.0	-	-	1.0
1846/2/1	1.0	-	-	1.0
1854/1/1	1.0	-	-	1.0
1854/2/1	1.0	-	-	1.0
2261/1/1	0.5	0.5	-	1.0
2261/2/1	0.5	0.5	-	1.0
2078/1/1	0.9	-	-	0.9
2078/2/1	0.9	-	-	0.9
2234/2/1	0.9	-	-	0.9
2136/1/1	0.9	-	-	0.9
2136/2/1	0.9	-	-	0.9
2236/1/1	0.9	-	-	0.9
2236/2/1	0.9	-	-	0.9
2236/5/1	0.9	-	-	0.9
2236/6/1	0.9	-	-	0.9
2182/1/1	0.9	-	-	0.9
2182/2/1	0.9	-	-	0.9
2182/3/1	0.9	-	-	0.9
1965/1/1	0.8	-	-	0.8
1965/2/1	0.8	-	-	0.8
1965/3/1	0.8	-	-	0.8
2083/1/1	0.8	-	-	0.8
2083/2/1	0.8	-	-	0.8
2159/2/1	0.5	-	-	0.5
2160/1/1	0.5	-	-	0.5
2160/2/1	0.5	-	-	0.5
2202/1/1	0.5	-	-	0.5
2202/2/1	0.5	-	-	0.5
2256/2/1	0.5	-	-	0.5
1848/1/1	0.3	-	-	0.3
1848/2/1	0.3	-	-	0.3
1848/3/1	0.3	-	-	0.3
1848/4/1	0.3	-	-	0.3
2003/1/1	0.2	-	-	0.2
2296/1/1	0.2	-	-	0.2
2296/2/1	0.2	-	-	0.2
2296/5/1	0.2	-	-	0.2
2296/6/1	0.2	-	-	0.2
2026/1/1	0.2	-	-	0.2
2026/3/1	0.2	-	-	0.2
2026/4/1	0.2	-	-	0.2
2026/5/1	0.2	-	-	0.2
2026/6/1	0.2	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild/free foods for adults based on the 13 high-rate consumers is 2.9 kg y^{-1}

The observed 97.5th percentile rate based on 56 observations is 5.0 kg y^{-1}

Table 33. Adults' consumption rates of rabbits/hares from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Hare	Rabbit	Total
2138/1/1	**1.6**	**5.8**	**7.4**
2165/1/1	**-**	**4.3**	**4.3**
2165/2/1	**-**	**4.3**	**4.3**
2232/1/1	-	0.4	0.4
2232/2/1	-	0.4	0.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of rabbits/hares for adults based on the 3 high-rate consumers is 5.4 kg y^{-1}

The observed 97.5th percentile rate based on 5 observations is 7.1 kg y^{-1}

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

Person ID number	Honey
1864/1/1	**2.3**
1864/2/1	**2.3**
2245/1/1	0.7
2245/2/1	0.7
2259/1/1	0.7
2259/2/1	0.7
2261/1/1	0.5
2261/2/1	0.5
2245/3/1	0.3
2245/4/1	0.3
2245/5/1	0.3
2245/6/1	0.3
2259/3/1	0.3
2259/4/1	0.3
2259/5/1	0.3
2259/6/1	0.3
1859/1/1	0.2
1859/3/1	0.2
1859/4/1	0.2
1859/5/1	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of honey for adults based on the 2 high-rate consumers is 2.3 kg y^{-1}

The observed 97.5th percentile rate based on 20 observations is 2.3 kg y^{-1}

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

Person ID number	Mushrooms
2250/1/1	**2.5**
2250/2/1	**2.5**
2089/2/1	**2.3**
2089/5/1	**2.3**
1988/2/1	**2.0**
2257/1/1	**1.4**
2257/2/1	**1.4**
2234/2/1	**0.9**
2182/1/1	**0.9**
2182/2/1	**0.9**
2182/3/1	**0.9**
2159/1/1	0.7
2159/2/1	0.7
2225/1/1	0.6
2225/2/1	0.6
2225/4/1	0.6
2296/1/1	0.5
2296/2/1	0.5
2296/5/1	0.5
2296/6/1	0.5
2139/1/1	0.5
2139/2/1	0.5
2139/3/1	0.5
2026/1/1	0.3
2026/3/1	0.3
2026/4/1	0.3
2026/5/1	0.3
2026/6/1	0.3
1846/1/1	0.2
1846/2/1	0.2
2136/1/1	0.2
2136/2/1	0.2
2191/1/1	0.2
1848/1/1	0.1
1848/2/1	0.1
1848/3/1	0.1
1848/4/1	0.1
2245/1/1	0.1
2245/2/1	0.1
2259/1/1	0.1
2259/2/1	0.1

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild fungi for adults based on the 11 high-rate consumers is 1.6 kg y^{-1}

The observed 97.5th percentile rate based on 41 observations is 2.5 kg y^{-1}

Table 36. Adults' consumption rates of venison from the Sellafield terrestrial survey area (kg y^{-1})

Person ID number	Venison
2138/1/1	**10.0**

Notes

The emboldened observation is the high-rate consumer
The mean consumption rate of venison for adults based on the high-rate consumer is 10.0 kg y^{-1}
The observed 97.5th percentile is not applicable for 1 observation

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

Person ID number	Brown trout	Rainbow trout	Total
1864/1/1	**-**	**4.2**	**4.2**
1864/2/1	**-**	**4.2**	**4.2**
2140/1/1	0.2	-	0.2
2140/2/1	0.2	-	0.2

Notes

Emboldened observations are the high-rate consumers
The mean consumption rate of freshwater fish for adults based on the 2 high-rate consumers is 4.2 kg y^{-1}
The observed 97.5th percentile rate based on 4 observations is 4.2 kg y^{-1}

Table 38. Children's and infant's consumption rates of green vegetables from the Sellafield terrestrial survey area (kg y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Brussel sprout	Cabbage	Calabrese	Cauliflower	Courgette	Cucumber	Kale	Lettuce	Total
2225/3/1	**13**	**-**	**-**	**-**	**-**	**-**	**4.3**	**1.1**	**-**	**5.4**
2139/4/1	**10**	**-**	**-**	**0.4**	**0.4**	**2.4**	**-**	**-**	**-**	**3.2**
1847/6/1	**10**	**-**	**3.2**	**-**	**-**	**-**	**-**	**-**	**-**	**3.2**
2023/3/1	**6**	**-**	**-**	**-**	**-**	**3.1**	**-**	**-**	**-**	**3.1**
2258/6/1	**8**	**0.3**	**1.2**	**-**	**-**	**-**	**1.0**	**-**	**-**	**2.4**
2139/5/1	**8**	**-**	**-**	**0.3**	**0.3**	**1.8**	**-**	**-**	**-**	**2.4**
1847/4/1	**7**	**-**	**2.4**	**-**	**-**	**-**	**-**	**-**	**-**	**2.4**
1847/5/1	**8**	**-**	**2.4**	**-**	**-**	**-**	**-**	**-**	**-**	**2.4**
2250/9/1	14	0.3	0.3	-	0.3	0.3	-	0.2	0.1	1.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables for the child age group based on the 8 high-rate consumers is 3.1 kg y^{-1}

The observed 97.5th percentile rate based on 9 observations is 5.0 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Brussel sprout	Cabbage	Calabrese	Cauliflower	Courgette	Cucumber	Kale	Lettuce	Total
2258/5/1	**4**	**0.2**	**0.8**	**-**	**-**	**-**	**0.7**	**-**	**-**	**1.6**
1847/3/1	**5**	**-**	**1.6**	**-**	**-**	**-**	**-**	**-**	**-**	**1.6**

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables for the infant age group based on the 2 high-rate consumers is 1.6 kg y^{-1}

The observed 97.5th percentile rate based on 2 observations is 1.6 kg y^{-1}

Table 39. Children's and infant's consumption rates of other vegetables from the Sellafield terrestrial survey area (kg y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Broad bean	Chilli pepper	French bean	Pea	Pepper	Runner bean	Squash	Sweetcorn	Tomato	Total
2023/3/1	**6**	**-**	**0.1**	**-**	**-**	**3.0**	**-**	**-**	**2.8**	**22.1**	**28.0**
2225/3/1	**13**	**0.3**	**-**	**0.5**	**-**	**-**	**0.3**	**-**	**0.7**	**9.9**	**11.6**
2250/9/1	14	0.3	0.01	0.2	0.5	0.1	0.2	0.9	0.3	2.4	4.9
2258/6/1	8	0.5	-	0.6	0.5	-	-	-	-	0.9	2.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of other vegetables for the child age group based on the 2 high-rate consumers is 19.8 kg y^{-1}

The observed 97.5th percentile rate based on 4 observations is 26.8 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Broad bean	Chilli pepper	French bean	Pea	Pepper	Runner bean	Squash	Sweetcorn	Tomato	Total
2258/5/1	**4**	**0.3**	**-**	**0.4**	**0.3**	**-**	**-**	**-**	**-**	**0.6**	**1.6**

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 1.6 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

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

Children age group (6 - 15 years old)

Person ID number	Age	Beetroot	Carrot	Garlic	Leek	Onion	Parsnip	Total
2139/4/1	**10**	**-**	**11.0**	**-**	**-**	**3.3**	**-**	**14.3**
2139/5/1	**8**	**-**	**8.2**	**-**	**-**	**2.5**	**-**	**10.7**
2023/3/1	**6**	**1.5**	**0.7**	**-**	**4.1**	**2.7**	**-**	**9.0**
1847/6/1	**10**	**-**	**2.5**	**-**	**-**	**-**	**2.5**	**5.0**
1847/4/1	7	-	1.9	-	-	-	1.9	3.8
1847/5/1	8	-	1.9	-	-	-	1.9	3.8
2258/6/1	8	1.2	-	-	1.1	0.6	-	2.8
2225/3/1	13	-	-	0.8	-	1.6	-	2.4
2250/9/1	14	0.2	-	0.1	0.6	1.2	-	2.1

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables for the child age group based on the 4 high-rate consumers is 9.8 kg y^{-1}

The observed 97.5th percentile rate based on 9 observations is 13.6 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Beetroot	Carrot	Garlic	Leek	Onion	Parsnip	Total
1847/3/1	**5**	**-**	**1.3**	**-**	**-**	**-**	**1.3**	**2.5**
2258/5/1	**4**	**0.8**	**-**	**-**	**0.7**	**0.4**	**-**	**1.9**

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables for the infant age group based on the 2 high-rate consumers is 2.2 kg y^{-1}

The observed 97.5th percentile rate based on 2 observations is 2.5 kg y^{-1}

Table 41. Children's and infant's consumption rates of potatoes from the Sellafield terrestrial survey area (kg y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Potato
1847/6/1	**10**	**100.0**
1847/4/1	**7**	**75.0**
1847/5/1	**8**	**75.0**
2139/4/1	10	16.0
2139/5/1	8	12.0
2023/3/1	6	10.2
2250/9/1	14	5.9
2225/3/1	13	1.9
2258/6/1	8	1.6
2232/3/1	12	1.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of potato for the child age group based on the 3 high-rate consumers is 83.3 kg y^{-1}

The observed 97.5th percentile rate based on 10 observations is 94.4 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Potato
1847/3/1	**5**	**50.0**
2078/3/1	5	11.5
2078/4/1	5	7.7
2258/5/1	4	1.1
2232/4/1	4	0.7

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 50.0 kg y^{-1}

The observed 97.5th percentile rate based on 5 observations is 46.2 kg y^{-1}

Table 42. Children's and infant's consumption rates of domestic fruit from the Sellafield terrestrial survey area (kg y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Apple	Blackcurrant	Fig	Gooseberry	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
2139/4/1	**10**	**10.1**	**15.7**	**-**	**-**	**-**	**-**	**4.3**	**9.5**	**1.9**	**2.1**	**43.6**
2139/5/1	**8**	**7.6**	**11.7**	**-**	**-**	**-**	**-**	**3.3**	**7.1**	**1.4**	**1.6**	**32.7**
2023/3/1	**6**	**10.7**	**-**	**-**	**-**	**10.7**	**-**	**0.3**	**-**	**-**	**4.1**	**25.8**
2225/3/1	13	5.0	0.1	-	1.0	-	-	-	0.1	1.7	-	8.0
1847/6/1	10	2.3	-	-	-	2.3	-	-	-	-	2.3	6.8
1847/4/1	7	1.7	-	-	-	1.7	-	-	-	-	1.7	5.1
1847/5/1	8	1.7	-	-	-	1.7	-	-	-	-	1.7	5.1
2232/3/1	12	1.1	-	-	-	1.1	1.1	0.1	-	-	-	3.5
2250/9/1	14	-	0.5	0.1	0.1	-	-	0.1	-	0.1	-	0.9
2258/6/1	8	-	-	-	-	-	-	0.5	-	0.4	-	0.9

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit for the child age group based on the 3 high-rate consumers is 34.0 kg y^{-1}

The observed 97.5th percentile rate based on 10 observations is 41.1 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Apple	Blackcurrant	Fig	Gooseberry	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
2078/3/1	**5**	**5.8**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**5.8**
2078/4/1	**5**	**3.8**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**3.8**
1847/3/1	**5**	**1.1**	**-**	**-**	**-**	**1.1**	**-**	**-**	**-**	**-**	**1.1**	**3.4**
2232/4/1	4	0.6	-	-	-	0.6	0.6	0.04	-	-	-	1.8
2258/5/1	4	-	-	-	-	-	-	0.3	-	0.2	-	0.6

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit for the infant age group based on the 3 high-rate consumers is 4.3 kg y^{-1}

The observed 97.5th percentile rate based on 5 observations is 5.6 kg y^{-1}

Table 43. Children's and infant's consumption rates of milk from the Sellafield terrestrial survey area (kg y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Cows' milk
2026/2/1	**12**	**138.2**
2139/4/1	**10**	**115.3**
2089/6/1	**11**	**112.3**
2139/5/1	**8**	**86.4**
2158/7/1	8	3.4
2158/10/1	6	3.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of milk for the child age group based on the 4 high-rate consumers is 113.1 l y^{-1}

The observed 97.5th percentile rate based on 6 observations is 135.3 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Cows' milk
2089/7/1	**4**	**56.2**
2158/8/1	4	2.3
2158/9/1	4	2.3

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of milk for the infant age group based on the high-rate consumer is 56.2 l y^{-1}

The observed 97.5th percentile rate based on 3 observations is 53.5 kg y^{-1}

Table 44. Children's and infant's consumption rates of cattle meat from the Sellafield terrestrial survey area (kg y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Beef
2162/3/1	**9**	**27.0**
2162/4/1	**8**	**27.0**
2162/5/1	**8**	**27.0**
1847/6/1	10	4.8
1847/4/1	7	3.6
1847/5/1	8	3.6

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of cattle meat for the child age group based on the 3 high-rate consumers is 27.0 kg y^{-1}

The observed 97.5th percentile rate based on 6 observations is 27.0 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Beef
1847/3/1	**5**	**2.4**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of cattle meat for the infant age group based on the high-rate consumer is 2.4 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Table 45. Children's and infant's consumption rates of sheep meat from the Sellafield terrestrial survey area (kg y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Lamb
1867/4/1	**8**	**29.6**
1867/5/1	**6**	**29.6**
2236/4/1	**12**	**14.9**
2236/3/1	**8**	**11.2**
2162/3/1	9	4.0
2162/4/1	8	4.0
2162/5/1	8	4.0
2139/4/1	10	3.6
2139/5/1	8	2.7

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of sheep meat for the child age group based on the 4 high-rate consumers is 21.4 kg y^{-1}

The observed 97.5th percentile rate based on 9 observations is 29.6 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Lamb
2078/3/1	**5**	**5.2**
2078/4/1	**5**	**3.5**

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of sheep meat for the infant age group based on the 2 high-rate consumers is 4.3 kg y^{-1}

The observed 97.5th percentile rate based on 2 observations is 5.2 kg y^{-1}

Table 46. Children's and infant's consumption rates of poultry from the Sellafield terrestrial survey area (kg y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Duck	Pheasant	Pigeon	Total
2225/3/1	**13**	**-**	**2.7**	**1.4**	**4.1**
2236/4/1	**12**	**-**	**2.4**	**0.5**	**2.9**
2236/3/1	**8**	**-**	**1.8**	**-**	**1.8**
2089/6/1	11	-	1.3	-	1.3
2258/6/1	8	0.6	0.6	-	1.2
2139/4/1	10	-	0.4	-	0.4
2139/5/1	8	-	0.3	-	0.3

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of poultry for the child age group based on the 3 high-rate consumers is 2.9 kg y^{-1}

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

Infant age group (0 - 5 years old)

Person ID number	Age	Duck	Pheasant	Pigeon	Total
2165/3/1	**5**	**-**	**2.2**	**1.1**	**3.3**
2258/5/1	4	0.4	0.4	-	0.8

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of poultry for the infant age group based on the high-rate consumer is 3.3 kg y^{-1}

The observed 97.5th percentile rate based on 2 observations is 3.2 kg y^{-1}

Table 47. Children's and infant's consumption rates of eggs from the Sellafield terrestrial survey area (kg y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Chicken egg
1867/4/1	**8**	**18.1**
1867/5/1	**6**	**18.1**
2023/3/1	**6**	**7.3**
2159/3/1	6	5.5
2162/3/1	9	5.1
2162/4/1	8	5.1
2162/5/1	8	5.1
2232/3/1	12	4.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of eggs for the child age group based on the 3 high-rate consumers is 14.5 kg y^{-1}

The observed 97.5th percentile rate based on 8 observations is 18.1 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Chicken egg
2232/4/1	**4**	**2.1**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of eggs for the infant age group based on the high-rate consumer is 2.1 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Table 48. Children's and infant's consumption rates of wild/free foods from the Sellafield terrestrial survey area (kg y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Blackberry
2139/4/1	**10**	**1.7**
2139/5/1	**8**	**1.3**
2236/4/1	**12**	**0.9**
2236/3/1	**8**	**0.7**
2159/3/1	6	0.3
2026/2/1	12	0.2
2158/7/1	8	0.2
2158/10/1	6	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild/free foods for the child age group based on the 4 high-rate consumers is 1.1 kg y^{-1}

The observed 97.5th percentile rate based on 8 observations is 1.6 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Blackberry
2078/3/1	**5**	**0.7**
2078/4/1	**5**	**0.5**
2182/4/1	**5**	**0.4**
2158/8/1	4	0.1
2158/9/1	4	0.1

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild/free foods for the infant age group based on the 3 high-rate consumers is 0.5 kg y^{-1}

The observed 97.5th percentile rate based on 5 observations is 0.7 kg y^{-1}

Table 49. Children's and infant's consumption rates of rabbits/hares foods from the Sellafield terrestrial survey area (kg y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Rabbit
2232/3/1	**12**	**0.4**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of rabbits/hares for the child age group based on the high-rate consumer is 0.4 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Infant age group (0 - 5 years old)

Person ID number	Age	Rabbit
2165/3/1	**5**	**2.2**
2232/4/1	4	0.2

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of rabbits/hares for the infant age group based on the high-rate consumer is 2.2 kg y^{-1}

The observed 97.5th percentile rate based on 2 observations is 2.1 kg y^{-1}

Table 50. Children's and infant's consumption rates of wild fungi from the Sellafield terrestrial survey area (kg y^{-1})

Children age group (6 - 15 years old)

Person ID number	Age	Mushrooms
2225/3/1	13	0.6
2159/3/1	6	0.5
2139/4/1	10	0.5
2139/5/1	8	0.4
2026/2/1	12	0.3

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild fungi for the child age group based on the 5 high-rate consumers is 0.5 kg y^{-1}

The observed 97.5th percentile rate based on 5 observations is 0.6 kg y^{-1}

Infant age group (0 - 5 years old)

Person ID number	Age	Mushrooms
2182/4/1	5	0.4

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of wild fungi for the infant age group based on the high-rate consumer is 0.4 kg y^{-1}

The observed 97.5th percentile is not applicable for 1 observation

Table 51. Percentage contribution each food type makes to its terrestrial food group for adults

Green vegetables	
Cabbage	35.9 %
Cucumber	18.7 %
Courgette	16.4 %
Brussel sprout	11.7 %
Lettuce	5.9 %
Cauliflower	5.1 %
Kale	3.3 %
Broccoli	1.3 %
Herbs	1.2 %
Spinach	0.3 %
Calabrese	0.2 %
Rocket	0.1 %

Other vegetables	
Tomato	69.9 %
Broad bean	6.7 %
Pea	6.5 %
Runner bean	4.9 %
French bean	4.0 %
Sweetcorn	2.8 %
Squash	2.5 %
Pepper	2.0 %
Mangetout	0.5 %
Chilli pepper	0.1 %

Root vegetables	
Onion	31.3 %
Leek	21.2 %
Carrot	20.7 %
Parsnip	11.3 %
Beetroot	8.1 %
Swede	3.6 %
Turnip	1.6 %
Celery	0.9 %
Garlic	0.8 %
Spring onion	0.4 %
Radish	0.05 %

Potato	
Potato	100.0 %

Domestic fruit	
Apple	34.6 %
Strawberry	14.2 %
Blackcurrant	12.8 %
Pear	10.8 %
Raspberry	7.2 %
Redcurrant	6.8 %
Gooseberry	3.6 %
Rhubarb	3.6 %
Plum	3.1 %
White currant	2.0 %
Melon	1.0 %
Fig	0.2 %
Blueberry	0.1 %

Milk	
Cows' milk	100.0 %

Cattle meat	
Beef	100.0 %

Sheep meat	
Lamb	100.0 %

Poultry	
Pheasant	45.5 %
Turkey	21.5 %
Duck	10.2 %
Pigeon	7.3 %
Mallard	6.1 %
Chicken	5.4 %
Woodcock	2.7 %
Partridge	1.2 %

Eggs	
Chicken egg	87.0 %
Duck egg	13.0 %

Wild/free foods	
Blackberry	83.0 %
Crab apple	9.3 %
Elderberry	7.7 %

Rabbits/hares	
Rabbit	90.5 %
Hare	9.5 %

Honey	
Honey	100.0 %

Wild fungi	
Mushrooms	100.0 %

Venison	
Venison	100.0 %

Freshwater fish	
Rainbow trout	94.9 %
Brown trout	5.1 %

Notes

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

Table 52. Direct radiation occupancy rates for adults, children and infants in the Sellafield area (h y^{-1})

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
0 to 0.25 km zone				
2257/1/1	Residing	4964	3159	8123
2162/1/1	Residing	6137	1790	7927
2257/2/1	Residing	5516	2106	7622
2162/2/1	Residing	6018	1062	7080
2162/3/1	Residing	6867	202	7069
2162/4/1	Residing	6867	202	7069
2162/5/1	Residing	6867	202	7069
2035/1/1	Working	1909	954	2863
2035/1/2	Working	1909	954	2863
1918/1/1	Working	2168	22	2190
1918/1/2	Working	2168	22	2190
1918/1/3	Working	2168	22	2190
1918/1/4	Working	2168	22	2190
2247/1/1	Angling on the River Calder, maintaining the river bank and dog walking	-	213	213
1918/4/1	Working	200	9	209
1918/3/1	Working	-	204	204
1918/3/2	Working	-	204	204
1918/3/3	Working	-	204	204
2241/2/1	Working	-	82	82
1918/2/1	Working	-	48	48
1918/2/2	Working	-	48	48
1918/2/3	Working	-	48	48
1918/2/4	Working	-	48	48
1918/2/5	Working	-	48	48
1918/2/6	Working	-	48	48
1918/2/7	Working	-	48	48
2171/1/1	Walking on Sellafield beach	-	18	18
2171/2/1	Walking on Sellafield beach	-	18	18
2241/1/1	Working	-	15	15
1980/1/1	Working	-	4	4
1980/2/1	Working	-	4	4
1980/3/1	Working	-	4	4
1980/4/1	Working	-	4	4

Table 52. Direct radiation occupancy rates for adults, children and infants in the Sellafield area (h y^{-1})

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
>0.25 to 0.5 km zone				
1867/1/1	Resident	6308	2199	8507
1941/1/1	Working	261	1825	2086
1941/1/2	Working	261	1825	2086
1941/1/3	Working	261	1825	2086
1941/1/4	Working	261	1825	2086
1941/1/5	Working	261	1825	2086
1867/6/1	Farming	77	1800	1877
2190/1/1	Dog walking on Sellafield beach	-	104	104
2037/1/1	Dog walking on Sellafield beach	-	78	78
2058/1/1	Angling on Sellafield beach	-	70	70
2209/1/1	Working	-	70	70
2209/1/2	Working	-	70	70
2209/1/3	Working	-	70	70
2209/1/4	Working	-	70	70
2209/1/5	Working	-	70	70
2209/1/6	Working	-	70	70
2209/1/7	Working	-	70	70
2209/1/8	Working	-	70	70
2209/1/9	Working	-	70	70
2209/1/10	Working	-	70	70
>0.5 to 1.0 km zone				
2261/2/1	Residing	8290	182	8472
1870/1/1	Residing	7743	469	8212
1961/1/1	Residing	7271	555	7826
1961/2/1	Residing	6611	1026	7637
1944/1/1	Residing	7234	78	7312
1890/1/1	Residing	6310	993	7303
1890/2/1	Residing	6310	993	7303
1973/1/1	Residing	6488	711	7198
2261/1/1	Residing	5684	1408	7092
1893/2/1	Residing	6330	730	7060
2003/1/1	Residing	5793	1043	6836
1893/1/1	Residing	5273	1279	6552
2225/1/1	Residing	5919	444	6363
2136/2/1	Residing	5302	913	6215

Table 52. Direct radiation occupancy rates for adults, children and infants in the Sellafield area (h y^{-1})

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
>0.5 to 1.0 km zone				
2165/2/1	Residing	5384	731	6115
2136/1/1	Residing	5195	913	6108
2165/1/1	Residing	5332	731	6063
2165/3/1	Residing	5284	731	6015
1973/2/1	Residing	5621	361	5982
2260/3/1	Residing	5964	225	5964
2225/3/1	Residing	4538	1304	5842
2260/4/1	Residing	5410	296	5679
2236/3/1	Residing	5327	330	5657
2236/4/1	Residing	5563	94	5657
2260/1/1	Residing	5134	493	5627
2236/1/1	Residing	3726	660	4386
2225/2/1	Residing	3377	331	3708
2236/2/1	Residing	3206	471	3677
2234/1/1	Farming	499	2493	2992
2260/2/1	Residing (part time)	2263	461	2724
2234/2/1	Residing (part time)	1281	949	2230
2031/1/1	Working	1959	175	2134
2031/2/1	Working	1959	175	2134
2031/1/2	Working	1959	175	2134
2031/2/2	Working	1959	175	2134
2031/1/3	Working	1959	175	2134
1942/1/1	Working	2007	78	2085
1942/2/1	Working	2007	78	2085
1942/1/2	Working	2007	78	2085
1942/2/2	Working	2007	78	2085
2015/1/1	Working	1936	18	1954
1868/1/1	Residing (part time)	1065	760	1825
1868/2/1	Residing (part time)	1445	380	1825
2162/6/1	Farming	125	1700	1825
2234/3/1	Farming	782	782	1564
2236/6/1	Farming	50	1410	1460
2031/3/1	Working	1043	175	1218
2031/4/1	Working	1043	175	1218
2031/3/2	Working	1043	175	1218

Table 52. Direct radiation occupancy rates for adults, children and infants in the Sellafield area (h y^{-1})

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
>0.5 to 1.0 km zone				
2031/4/2	Working	1043	175	1218
2031/3/3	Working	1043	175	1218
2031/4/3	Working	1043	175	1218
2031/3/4	Working	1043	175	1218
2031/4/4	Working	1043	175	1218
2031/3/5	Working	1043	175	1218
2031/4/5	Working	1043	175	1218
2031/3/6	Working	1043	175	1218
2258/2/1	Tending an allotment	-	1199	1199
1942/3/1	Working	965	78	1043
1942/4/1	Working	965	78	1043
1942/3/2	Working	965	78	1043
1942/4/2	Working	965	78	1043
1942/3/3	Working	965	78	1043
1942/4/3	Working	965	78	1043
1942/3/4	Working	965	78	1043
1942/4/4	Working	965	78	1043
1942/3/5	Working	965	78	1043
1942/4/5	Working	965	78	1043
1942/3/6	Working	965	78	1043
2041/1/1	Tending an allotment	-	730	730
2256/2/1	Tending an allotment	-	627	627
1942/5/1	Working	52	574	626
2167/3/1	Playing golf	-	626	626
2167/4/1	Playing golf	-	626	626
1942/5/2	Playing golf	52	574	626
1942/5/3	Playing golf	52	574	626
1942/5/4	Playing golf	52	574	626
1942/5/5	Playing golf	52	574	626
1942/5/6	Playing golf	52	574	626
1942/5/7	Playing golf	52	574	626
1942/5/8	Playing golf	52	574	626
1942/5/9	Playing golf	52	574	626
1942/5/10	Playing golf	52	574	626
1942/5/11	Playing golf	52	574	626

Table 52. Direct radiation occupancy rates for adults, children and infants in the Sellafield area (h y^{-1})

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
>0.5 to 1.0 km zone				
1942/5/12	Playing golf	52	574	626
1942/5/13	Playing golf	52	574	626
1942/5/14	Playing golf	52	574	626
1942/5/15	Playing golf	52	574	626
1942/5/16	Playing golf	52	574	626
1942/5/17	Playing golf	52	574	626
1942/5/18	Playing golf	52	574	626
1942/5/19	Playing golf	52	574	626
1942/5/20	Playing golf	52	574	626
2250/1/1	Tending an allotment	-	548	548
2279/1/1	Dog walking on Sellafield beach	-	365	365
2015/2/1	Working	326	8	334
2153/1/1	Tending an allotment	-	274	274
2153/2/1	Tending an allotment	-	274	274
2253/1/1	Dog walking on Sellafield beach	-	241	241
2182/1/1	Angling on the River Calder and dog walking	-	213	213
2296/5/1	Dog walking on Sellafield beach	-	183	183
2174/1/1	Dog walking on Sellafield beach	-	183	183
2174/2/1	Dog walking on Sellafield beach	-	183	183
2173/1/1	Dog walking on Sellafield beach	-	182	182
2203/1/1	Quad biking and litter collecting	-	151	151
1947/1/1	Tending an allotment	-	79	79
1947/2/1	Tending an allotment	-	79	79
2149/2/1	Dog walking at Sellafield and Seascale beaches	-	74	74
2163/1/1	Dog walking at Sellafield and Seascale beaches	-	61	61
2299/1/1	Boat angling and potting	-	59	59
2299/2/1	Boat angling and potting	-	59	59
2031/5/1	Working	-	52	52
2194/1/1	Dog walking at Sellafield and Seascale beaches	-	52	52
2149/1/1	Dog walking at Sellafield and Seascale beaches	-	43	43

Table 52. Direct radiation occupancy rates for adults, children and infants in the Sellafield area (h y^{-1})

Person ID number	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
>0.5 to 1.0 km zone				
2278/1/1	Dog walking at Sellafield and Seascale beaches	-	35	35
2172/1/1	Dog walking at Sellafield and Seascale beaches	-	26	26
2159/1/1	Dog walking and walking at Sellafield and Seascale beaches	-	10	10
2159/2/1	Dog walking and walking at Sellafield and Seascale beaches	-	10	10
2159/3/1	Dog walking and walking at Sellafield and Seascale beaches	-	10	10
2185/1/1	Dog walking at Sellafield and Seascale beaches	-	1	1

Notes

Occupancy rates for NuGen employees have been calculated for the whole of 2018.

Table 53. Analysis of direct radiation occupancy rates for adults, children and infants in the Sellafield area (h y^{-1})

0 to 0.25 km zone

Number of hours	Number of observations
>8000 to 8760	1
>7000 to 8000	6
>6000 to 7000	0
>5000 to 6000	0
>4000 to 5000	0
>3000 to 4000	0
>2000 to 3000	6
>1000 to 2000	0
0 to 1000	20
0 to 8760	**33**

>0.25 to 0.5 km zone

Number of hours	Number of observations
>8000 to 8760	1
>7000 to 8000	0
>6000 to 7000	0
>5000 to 6000	0
>4000 to 5000	0
>3000 to 4000	0
>2000 to 3000	5
>1000 to 2000	1
0 to 1000	13
0 to 8760	**20**

>0.5 to 1.0 km zone

Number of hours	Number of observations
>8000 to 8760	2
>7000 to 8000	8
>6000 to 7000	8
>5000 to 6000	7
>4000 to 5000	1
>3000 to 4000	2
>2000 to 3000	12
>1000 to 2000	28
0 to 1000	51
0 to 8760	**119**

Table 54. Gamma dose rate measurements for the Sellafield direct radiation survey area (μGyh^{-1})

Residences and businesses				
Residence	**Indoor substrate**	**Indoor gamma dose rate at 1 metre [a]**	**Outdoor substrate**	**Outdoor gamma dose rate at 1 metre [a]**
Residence 1	Concrete	0.106	Grass	0.101
Residence 2	Concrete	0.099	Grass	0.100
Residence 3	-	-	Concrete	0.069
Residence 4	Concrete	0.135	Grass	0.100
Residence 5	Concrete	0.109	Grass	0.094
Residence 6	Concrete	0.041	Concrete	0.087
Residence 7	-	-	Mud and stones	0.087
Residence 8	Concrete	0.143	Concrete	0.101
Residence 9	Concrete	0.155	Grass	0.090
Residence 10	Concrete	0.100	Grass	0.093
Residence 11	Concrete	0.117	-	-
Residence 12	Concrete	0.116	Grass	0.091
Residence 13	-	-	Grass	0.083
Residence 14	-	-	Concrete	0.085
Residence 15	Concrete	0.093	Concrete	0.081
Residence 16	Concrete	0.106	-	-
Business 1	Concrete	0.121	Grass	0.085
Business 2	Concrete	0.135	-	-
Business 3	Wood	0.098	-	-

Backgrounds				
	Location	**National Grid Reference**	**Substrate**	**Gamma dose rate at 1 metre [a]**
Background 1	Near Gosforth	NY 084 041	Grass	0.103
Background 2	Near Drigg	SD 073 973	Grass	0.079
Background 3	Near Nethertown	NX 972 105	Grass	0.088

Notes

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

Table 55. Combinations of adult pathways for consideration in dose assessments in the Sellafield area

Combination number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	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
3							X			X					X	X																				
4										X	X					X		X																		
5			X						X				X																							
6							X	X	X			X							X																	
7		X					X		X	X	X																					X			X		
8								X	X	X		X																									
9							X		X	X	X		X		X																						
10							X	X				X				X			X									X									
11	X	X																										X				X				X	X
12												X			X													X									
13															X			X										X							X	X	X
14	X	X																								X		X								X	X
15								X	X																			X							X		
16																											X	X									
17							X	X	X							X						X							X								
18	X	X																							X		X		X					X	X		
19					X																							X	X								
20																												X	X					X		X	X
21																									X			X	X						X	X	X
22					X																		X										X	X			
23	X																							X		X							X				
24	X																											X					X	X			
25	X	X																							X			X					X				
26																												X					X	X		X	X
27			X																						X				X				X				
28		X	X																					X				X	X				X	X			
29																												X	X				X	X	X		
30	X	X	X																							X		X	X			X	X		X		
31							X	X			X			X																							
32							X	X		X				X																							
33	X						X	X	X	X	X				X										X			X		X			X			X	X
34							X	X			X	X				X			X	X																	
35		X	X				X	X	X	X	X				X					X						X		X								X	X
36							X	X	X	X							X		X			X															

Table 55. Combinations of adult pathways for consideration in dose assessments in the Sellafield area

Combination number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
37												X					X											X									
38							X	X	X	X	X					X	X											X									
39							X	X	X	X	X						X								X			X								X	X
40	X										X			X	X		X											X							X	X	X
41								X		X	X		X	X	X	X	X		X									X							X	X	X
42												X					X			X								X								X	X
43															X	X	X			X																	
44	X																X			X								X									
45		X															X			X								X								X	X
46																X	X			X								X								X	X
47																	X			X								X						X		X	X
48											X						X			X								X							X	X	X
49		X															X			X			X				X						X	X		X		
50								X	X		X		X	X		X	X			X																X	X
51	X	X	X				X		X	X	X	X		X	X		X			X						X			X				X				
52				X											X								X				X						X				
53		X		X											X		X	X			X																
54						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: fish, crustaceans, intertidal occupancy over mud, sand and stones, intertidal occupancy over boat on mud, occupancy on water .

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
1846/1/1	-	-	-	-	-	-	-	-	-	12.7	**26.3**	-	-	-	0.9	-	1.0	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1846/2/1	-	-	-	-	-	-	-	-	-	12.7	**26.3**	-	-	-	0.9	-	1.0	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/1/1	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/1	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/2	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/3	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/4	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/5	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/6	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/7	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/8	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/9	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/10	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/11	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/12	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/13	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/14	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/15	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/2/16	-	-	-	-	-	-	3.2	-	5.0	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1848/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	6.7	0.3	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1848/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	6.7	0.3	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1848/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1848/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1850/1/1	-	-	-	-	-	-	**30.5**	-	-	**68.3**	-	-	-	-	0.7	8.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1850/2/1	-	-	-	-	-	-	**30.5**	-	-	**68.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1850/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**17.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1851/1/1	-	-	-	-	-	-	0.2	10.8	-	**40.0**	-	-	-	**27.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1851/2/1	-	-	-	-	-	-	0.2	10.8	-	**40.0**	-	-	-	**27.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1854/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	11.3	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1854/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	11.3	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1856/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	-	-	-	-	-	-	-	-
1856/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	-	-	-	-	-	-	-	-
1857/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-
1857/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-
1859/1/1	-	-	-	-	-	-	4.4	1.2	1.1	-	-	**365.0**	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1859/2/1	-	-	-	-	-	-	4.4	-	-	4.0	-	29.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1859/3/1	-	-	-	-	-	-	4.4	1.2	1.1	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1859/4/1	-	-	-	-	-	-	4.4	1.2	1.1	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1859/5/1	-	-	-	-	-	-	4.4	1.2	1.1	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1864/1/1	-	-	-	-	-	-	8.5	**38.9**	2.5	10.0	-	-	-	-	-	-	**5.0**	-	**2.3**	-	-	**4.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1864/2/1	-	-	-	-	-	-	8.5	**38.9**	2.5	10.0	-	-	-	-	-	-	**5.0**	-	**2.3**	-	-	**4.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1867/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	**39.5**	-	**24.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6308	2199
1867/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	**39.5**	-	**24.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1867/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	**39.5**	-	**24.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1867/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	77	1800
1868/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1065	760

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
1868/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1445	380
1869/1/1	-	-	-	-	-	-	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1869/2/1	-	-	-	-	-	-	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1870/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7743	469
1873/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	196	-	-	-	-	118	-	-	-
1873/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	196	-	-	-	-	118	-	-	-
1874/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	268	-	-	-	-	52	-	-	-
1875/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91	-	-	-	-	-	-	-	-
1881/1/1	**47.6**	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	131	-	-	-	-	-	**131**	-	-	-	32	-	-
1883/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-
1889/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	**18.7**	-	-	**1.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1889/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	**18.7**	-	-	**1.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1889/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	**18.7**	-	-	**1.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1890/1/1	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6310	993
1890/2/1	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6310	993
1892/1/1	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**295**	-	-	-	-	-	-	-
1892/2/1	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-
1893/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5273	1279
1893/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6330	730
1896/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**366**	-	-	-	-	-	-	-
1896/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**366**	-	-	-	-	-	-	-
1897/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	-
1898/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
1899/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-
1902/1/1	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1902/2/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-
1904/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	274	-	-	-	-	-	-	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
1904/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	274	-	-	-	-	-	-	-	-	-
1905/1/1	24.1	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	105	-	-	105	-	-	-	-	38	-	-	-	-
1914/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	235	-	-	**511**	-	-	-	-	-	-	-	-	-
1915/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-
1916/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-
1918/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2168	22
1918/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2168	22
1918/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2168	22
1918/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2168	22
1918/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
1918/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
1918/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
1918/2/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
1918/2/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
1918/2/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
1918/2/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
1918/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	204
1918/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	204
1918/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	204
1918/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	9
1921/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365	-	-	-	-	-	-	-	-	-
1922/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-
1922/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-
1924/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-
1924/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-
1927/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
1927/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
1927/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
1927/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
1927/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
1928/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
1928/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
1929/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	6	-	-	-	-	-	-	-	-
1929/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	6	-	-	-	-	-	-	-	-
1930/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
1930/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
1930/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
1931/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	-	-	-	-	-	-	-	-	-
1932/1/1	18.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	284	67	-	-	-	150	-	-	-	-
1935/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-	-	-	-	-	-	-
1937/1/1	-	-	-	-	-	-	-	**21.6**	-	-	21.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	274	-	-	-	-	-	-	-	-	-
1940/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365	-	-	-	-	-	-	13	-	-
1941/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	1825
1941/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	1825
1941/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	1825

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
1941/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	1825
1941/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	1825
1942/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2007	78
1942/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2007	78
1942/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2007	78
1942/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2007	78
1942/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965	78
1942/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965	78
1942/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965	78
1942/3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965	78
1942/3/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965	78
1942/3/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965	78
1942/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965	78
1942/4/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965	78
1942/4/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965	78
1942/4/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965	78
1942/4/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965	78
1942/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1942/5/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	574
1944/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	7234	78
1945/1/1	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	104	-	-	-	-	-	-	-
1947/1/1	-	-	-	-	-	-	**37.0**	**23.8**	**14.6**	6.1	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79
1947/2/1	-	-	-	-	-	-	**37.0**	**23.8**	**14.6**	6.1	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79
1950/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	28	-	-	-	12	-	-	-	-
1950/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	3	-	-	-	-
1951/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-	-	-	-	-	-	-
1952/1/1	**46.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	37	-	-	-	-	-	-	-
1960/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-	-	-	-	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
1961/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7271	555
1961/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6611	1026
1965/1/1	-	-	-	-	-	-	-	-	-	-	0.8	-	**18.9**	6.8	0.3	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965/2/1	-	-	-	-	-	-	-	-	-	-	0.8	-	**18.9**	6.8	0.3	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965/3/1	-	-	-	-	-	-	-	-	-	-	0.8	-	**18.9**	6.8	0.3	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965/4/1	-	-	-	-	-	-	-	-	-	-	-	-	**18.9**	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965/5/1	-	-	-	-	-	-	-	-	-	-	-	-	**18.9**	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1972/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-
1973/1/1	-	-	-	-	-	-	10.5	**18.1**	-	-	6.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6488	711
1973/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5621	361
1979/1/1	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-
1980/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	15	22	-	-	-	-	313	-	4
1980/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	15	22	-	-	-	-	313	-	4
1980/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	15	22	-	-	-	-	313	-	4
1980/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	15	22	-	-	-	-	313	-	4
1982/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	235	-	-	14	-	-	-	-	-	-	-	-
1984/1/1	7.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**730**	-	-	-	-	1	-	-	-
1986/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365	-	-	-	-	1	-	-	-
1988/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-
1988/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
1990/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
1991/1/1	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	-	-	-	-	-	-
1992/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	-	-	-	-	-	-
1993/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-
1994/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-
1994/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-
1996/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-
1997/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	-	-	-	-	-	-	-	-
1997/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	-	-	-	-	-	-	-	-
1998/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	-	-	-	-	-	-
1999/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	4	-	-	-	-	-	-	-
1999/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	4	-	-	-	-	-	-	-
2003/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5793	1043
2004/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	3	-	-	-
2015/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1936	18
2015/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	326	8
2023/1/1	-	-	-	-	-	-	4.1	**37.4**	12.0	13.6	**34.4**	-	-	-	-	9.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2023/2/1	-	-	-	-	-	-	4.1	**37.4**	12.0	13.6	**34.4**	-	-	-	-	9.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2026/1/1	-	-	-	-	-	-	-	-	-	-	-	**138.2**	-	-	-	-	0.2	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2026/3/1	-	-	-	-	-	-	-	-	-	-	-	**138.2**	-	-	-	-	0.2	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2026/4/1	-	-	-	-	-	-	-	-	-	-	-	**138.2**	-	-	-	-	0.2	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2026/5/1	-	-	-	-	-	-	-	-	-	-	-	**138.2**	-	-	-	-	0.2	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2026/6/1	-	-	-	-	-	-	-	-	-	-	-	**138.2**	-	-	-	-	0.2	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2027/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-
2027/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2028/1/1	-	-	-	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**730**	-	-	209	-	-	-	-	-	-	-	-	-
2028/2/1	-	-	-	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2029/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	48	-	-	-	-	-	-	-	-	-
2031/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1959	175
2031/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1959	175
2031/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1959	175
2031/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1959	175
2031/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1959	175
2031/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/3/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/3/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/4/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/4/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/4/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/4/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52
2034/1/1	20.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**668**	-	-	-	86	34	-	-	-	-
2034/2/1	20.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2035/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1909	954
2035/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1909	954
2036/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2036/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2037/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-	78
2037/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**730**	-	-	-	-	-	-	-	-	-
2037/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-	-	-	-	-	-	-	-
2037/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365	-	-	-	-	-	-	-	-	-
2037/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**730**	-	-	-	-	-	-	-	-	-
2038/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**365**	-	-	-	-	-	-	-	-
2038/2/1	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	182	-	-	-	-	-	-	-	-
2039/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**527**	-	-	-	-	-	-	-	-
2040/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
2041/1/1	-	-	-	-	-	-	**21.1**	**34.8**	**23.5**	25.2	**25.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	730
2041/2/1	-	-	-	-	-	-	**21.1**	**34.8**	**23.5**	25.2	**25.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2043/1/1	0.5	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**334**	-	-	-	-	-	-	-	-
2043/2/1	0.5	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**334**	-	-	-	-	-	-	-	-
2044/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-
2045/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	168	-	-	-	-	-	-	-	-	-	-	-	-
2047/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-	-
2048/1/1	1.2	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	12	-	-	-	-	-	-	-	-	-
2049/1/1	7.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2049/2/1	7.3	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2050/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-
2050/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-
2050/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-
2050/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	-	-	-	-	-
2050/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	-	-	-	-	-
2050/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	-	-	-	-	-
2050/2/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	-	-	-	-	-
2050/2/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	-	-	-	-	-
2050/2/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	-	-	-	-	-
2050/2/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	-	-	-	-	-
2050/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
2050/6/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
2050/6/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
2050/6/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
2050/6/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
2050/6/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
2050/6/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
2050/6/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
2050/6/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
2050/6/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
2051/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	-	-	-	-	-	-	-	-
2051/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	-	-	-	-	-	-	-	-
2051/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	-	-	-	-	-	-	-	-
2052/1/1	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2052/2/1	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2052/3/1	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2053/1/1	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2053/2/1	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2056/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-
2056/1/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2056/1/18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-	-
2056/1/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-	-
2056/1/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	191	-	-	-	-	-	-	-	-	-
2058/1/1	**31.5**	**23.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	-	70	-	-	-	-	-	-	-	-	70
2058/2/1	7.8	**23.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2058/3/1	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2059/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	175	-	-	
2059/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	175	-	-	
2059/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	175	-	-	
2059/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	175	-	-	
2060/1/1	**35.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**417**	-	-	-	-	-	-	-	-	-	-	
2062/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	313	-	-	-	-	-	-	-	-	
2062/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	313	-	-	-	-	-	-	-	-	
2063/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74	-	-	-	-	-	-	-	-	
2063/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74	-	-	-	-	-	-	-	-	
2064/1/1	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**104**	-	**261**	-	-	-	-	-	-	104	-	-	-	
2064/2/1	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**104**	-	**261**	-	-	-	-	-	-	104	-	-	-	
2064/3/1	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**104**	-	**261**	-	-	-	-	-	-	104	-	-	-	
2065/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91	-	-	-	-	-	-	-	-	
2067/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-	
2068/1/1	-	-	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	6	-	-	-	
2068/2/1	-	-	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	6	-	-	-	
2070/1/1	14.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	16	-	-	-	-	-	-	-	
2071/1/1	17.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2071/2/1	17.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2072/1/1	-	-	-	**17.0**	-	-	-	-	-	-	-	-	-	-	**10.6**	-	-	-	-	-	-	-	**62**	-	-	-	8	-	-	-	-	-	70	-	-	-	
2078/1/1	-	-	-	-	-	-	-	-	-	15.4	7.7	-	-	7.0	-	-	0.9	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	
2078/2/1	-	-	-	-	-	-	-	-	-	15.4	7.7	-	-	7.0	-	-	0.9	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	
2078/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2079/1/1	19.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	146	-	-	-	52	42	-	25	-	
2079/2/1	19.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2079/3/1	9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2079/3/2	9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2079/4/1	9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2079/4/2	9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2083/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2083/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2083/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2083/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2083/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2085/1/1	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	52	-	-	-	156	-	-	-	
2085/2/1	-	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2085/3/1	-	-	**9.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	24	-	-	-	36	-	-	-	
2085/4/1	-	-	**8.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2088/1/1	5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**720**	-	-	1020	-	
2088/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**720**	-	-	1020	-	

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2089/1/1	-	-	-	-	-	-	-	-	-	-	-	112.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2089/2/1	-	-	-	-	-	-	-	-	-	-	-	112.3	-	-	1.3	-	-	-	-	**2.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2089/3/1	-	-	-	-	-	-	-	-	-	-	-	112.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2089/4/1	-	-	-	-	-	-	-	-	-	-	-	112.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2089/5/1	-	-	-	-	-	-	-	-	-	-	-	112.3	-	-	-	-	-	-	-	**2.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2111/1/1	-	1.1	-	-	-	-	3.7	-	2.3	4.5	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	146	-	-
2111/2/1	-	1.1	-	-	-	-	3.7	-	2.3	4.5	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	146	-	-
2111/7/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	168	48	-	-	-	-	-	20	-	-
2114/1/1	-	-	-	-	-	-	-	4.5	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2114/2/1	-	-	-	-	-	-	-	4.5	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125	-	-	-	-	-	63	-	-	-
2131/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-
2131/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-
2133/1/1	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**274**	-	-	-	-	-	-	-	-	-	-
2133/2/1	4.2	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**366**	-	**183**	-	0	-	-	-	-	12	16	-	-
2133/3/1	4.2	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**274**	-	-	-	-	-	-	-	16	-	-
2133/4/1	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**366**	-	**183**	-	-	-	-	-	-	-	-	-	-
2133/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-
2133/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-
2133/7/1	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	183	-	-	-	-	-	-	-	-	-	-	-	-
2133/8/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	183	-	-	-	-	-	-	-	-	-	-	-	-
2135/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35	-	-	-	-	-	52	-	-	-
2136/1/1	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	0.9	-	-	0.2	-	-	-	-	-	-	-	104	-	-	-	-	-	-	12	5195	913
2136/2/1	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	0.9	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5302	913
2136/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2138/1/1	-	7.0	-	1.4	-	-	-	-	-	-	-	-	-	-	**28.3**	-	**3.0**	**7.4**	-	-	**10.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2139/1/1	0.6	0.3	0.2	-	-	-	3.2	-	**14.3**	16.0	**43.6**	115.3	-	3.6	0.4	-	**1.7**	-	-	0.5	-	-	-	-	-	2	-	-	26	-	-	-	2	-	-	-	-
2139/2/1	0.6	0.3	0.2	-	-	-	3.2	-	**14.3**	16.0	**43.6**	115.3	-	3.6	0.4	-	**1.7**	-	-	0.5	-	-	-	-	-	2	-	-	1	-	-	-	2	-	-	-	-
2139/3/1	0.6	0.3	0.2	-	-	-	3.2	-	**14.3**	16.0	**43.6**	115.3	-	3.6	0.4	-	**1.7**	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2139/6/1	-	-	-	-	-	-	-	-	-	-	20.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2140/1/1	-	-	-	-	-	-	11.1	**24.9**	9.2	-	-	-	-	-	-	7.4	-	-	-	-	-	0.2	-	-	-	-	-	-	104	-	-	-	-	-	-	-	-
2140/2/1	-	-	-	-	-	-	11.1	**24.9**	9.2	-	-	-	-	-	-	7.4	-	-	-	-	-	0.2	-	-	-	-	-	-	104	-	-	-	-	-	-	-	-
2141/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2141/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2141/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2141/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2141/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2141/1/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2141/1/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2141/1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2141/1/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2141/1/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2141/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
2141/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
2141/2/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
2141/2/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
2141/2/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2141/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2144/1/1	**26.5**	**31.9**	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-	156	-	-
2144/2/1	**26.5**	**31.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2145/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	337	-	-	-	-	-	-	-	-	-
2145/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	337	-	-	-	-	-	-	-	-	-
2147/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	-	-	-	-	-	-	-	-	-
2147/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	-	-	-	-	-	-	-	-	-
2148/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
2149/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	226	-	-	-	-	-	-	-	-	43
2149/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240	-	-	188	-	-	-	-	-	-	-	-	74
2151/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	-	-	-	-	-	-	-	-
2152/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**456**	**456**	-	-	-	-	-	-	-	-
2152/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	274	**274**	-	-	-	-	-	-	-	-
2153/1/1	-	-	-	-	-	-	-	**23.0**	**39.5**	22.7	15.6	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-	274
2153/2/1	-	-	-	-	-	-	-	**23.0**	**39.5**	22.7	15.6	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-	274
2154/1/1	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	135	-	-	-	-	135	-	-	-	-
2155/1/1	**23.7**	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	264	-	-	-	-	72	-	-	-	-
2155/2/1	**47.7**	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2156/1/1	9.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	122	-	-	-	-	-
2156/2/1	9.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	122	-	-	-	-	-
2156/3/1	9.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	122	-	-	-	-	-
2158/1/1	-	-	-	-	-	-	-	-	-	-	-	103.7	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2158/2/1	-	-	-	-	-	-	-	-	-	-	-	103.7	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-
2158/3/1	-	-	-	-	-	-	-	-	-	-	-	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2158/4/1	-	-	-	-	-	-	-	-	-	-	-	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2158/5/1	-	-	-	-	-	-	-	-	-	-	-	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2158/6/1	-	-	-	-	-	-	-	-	-	-	-	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2159/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3	-	-	-	0.7	-	-	-	-	-	-	-	120	-	-	-	-	-	-	-	-	10
2159/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3	0.5	-	-	0.7	-	-	-	-	-	-	-	120	-	-	-	-	-	-	-	-	10
2160/1/1	-	-	-	-	-	-	-	-	-	-	-	**243.3**	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2160/2/1	-	-	-	-	-	-	-	-	-	-	-	**243.3**	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-
2160/3/1	-	-	-	-	-	-	-	-	-	-	-	**243.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2162/1/1	-	-	-	-	-	-	-	-	-	-	-	-	**36.0**	5.3	-	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6137	1790
2162/2/1	-	-	-	-	-	-	-	-	-	-	-	-	**36.0**	5.3	-	6.8	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	6018	1062
2162/6/1	-	-	-	-	-	-	-	-	-	-	-	-	**36.0**	5.3	-	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125	1700
2163/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	274	-	-	-	-	-	-	-	-	61
2165/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5	-	-	**4.3**	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	6	5332	731
2165/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5	-	-	**4.3**	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	6	5284	731
2167/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-	-	-	81	-	-	-
2167/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-
2167/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-	-	-	-	16	-	-	626
2167/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	626
2168/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365	-	-	-	-	-	-	-	-	-
2169/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66	-	-	-	-	-	-	-	-	-
2169/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66	-	-	-	-	-	-	-	-	-
2171/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	55	-	-	-	-	-	-	-	-	18

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2171/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	55	-	-	-	-	-	-	-	18
2172/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	-	-	-	-	-	-	-	26
2173/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365	-	-	-	-	-	-	-	182
2174/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	11	-	-	-	-	-	-	183
2174/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	11	-	-	-	-	9	-	183
2175/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-
2175/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-
2176/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**730**	-	-	-	-	-	-	-	-
2177/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	-	-
2177/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-
2178/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	-	-	-	-	-	15	-	-
2178/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	-	-	-	-	-	15	-	-
2179/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72	-	-
2181/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-	-	-	-	-	-
2181/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/3/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/4/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2181/5/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
2182/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	-	**0.9**	-	-	-	-	-	-	-	72	-	-	-	-	-	3	-	213
2182/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	-	**0.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2182/3/1	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	-	**0.9**	-	-	-	-	-	-	-	72	-	-	-	-	-	-	-	-
2183/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2183/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-
2185/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	106	-	-	-	-	-	-	-	1
2186/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	312	-	-	-	-	-	-	-	-
2187/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	-	-	-	-	-	-	-	-
2187/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	-	-	-	-	-	-	-	-
2188/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	-
2188/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	-
2189/1/1	-	-	-	-	**0.5**	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	195	26	-	-	-	-	-	-	-
2190/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**729**	-	-	-	-	-	-	-	104
2191/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
2193/1/1	12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**313**	-	-	**470**	-	-	-	-	**313**	-	-	-
2194/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	312	-	-	-	-	-	-	-	52
2195/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79	-	-	312	-	-	-	-	-	-	-	-
2195/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79	-	-	312	-	-	-	-	-	-	-	-
2196/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192	-	-	-	-	-	-	-	-
2196/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-
2196/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-
2196/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-
2196/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-
2196/3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-
2196/3/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-
2196/3/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-
2196/3/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-
2196/3/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-
2196/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	313	-	-	-	-	-	-	-	-
2196/10/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-
2197/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-
2198/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88	-	-	-	-	-	-	-	-
2198/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88	-	-	-	-	-	-	-	-
2199/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-
2200/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	313	-	-	-	-	-	-	-	-
2200/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	313	-	-	-	-	-	-	-	-
2201/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	-	-	-	-	-	-
2201/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	-	-	-	-	-	-
2202/1/1	-	-	-	-	-	-	3.6	16.2	4.0	28.6	20.5	-	-	-	-	**35.7**	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2202/2/1	-	-	-	-	-	-	3.6	16.2	4.0	28.6	20.5	-	-	-	-	**35.7**	0.5	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-
2203/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	151	-	-	402	-	-	-	-	-	-	-	151
2208/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**443**	-	-	-	-	-	-	-	-
2208/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**443**	-	-	-	-	-	-	-	-
2208/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**443**	-	-	-	-	-	-	-	-
2209/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
2209/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
2209/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
2209/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
2209/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
2209/1/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2209/1/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
2209/1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
2209/1/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
2209/1/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
2221/1/1	7.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2221/2/1	7.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2223/1/1	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-	-	-	-	-	-	-	-
2224/1/1	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-
2224/1/2	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-
2224/1/3	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-
2225/1/1	-	0.6	0.04	-	-	-	5.4	11.6	2.4	1.9	8.0	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5919	444
2225/2/1	-	0.6	0.04	-	-	-	5.4	11.6	2.4	1.9	8.0	-	-	-	4.1	-	-	-	-	0.6	-	-	-	-	-	4	-	4	-	-	-	-	-	-	3377	331
2225/4/1	-	-	-	-	-	-	5.4	11.6	2.4	1.9	8.0	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2232/1/1	-	-	-	-	-	-	-	-	-	1.4	3.5	-	-	-	-	4.2	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2232/2/1	-	-	-	-	-	-	-	-	-	1.4	3.5	-	-	-	-	4.2	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2234/1/1	-	-	-	-	-	-	-	-	-	-	-	**349.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	499	2493
2234/2/1	-	-	-	-	-	-	-	-	-	-	-	**166.0**	-	-	-	-	0.9	-	-	**0.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1281	949
2234/3/1	-	-	-	-	-	-	-	-	-	-	-	83.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	782	782
2236/1/1	16.3	-	-	-	-	-	-	-	-	-	3.0	-	-	**14.9**	2.9	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	3726	660
2236/2/1	-	-	-	-	-	-	-	-	-	-	3.0	-	-	**14.9**	2.4	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3206	471
2236/5/1	-	-	-	-	-	-	-	-	-	-	3.0	-	-	**14.0**	4.5	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2236/6/1	-	-	-	-	-	-	-	-	-	-	3.0	-	-	**14.0**	4.5	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	1410
2238/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	28	-	-	-	-	-	-	-	-	-
2238/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	28	-	-	-	-	-	-	-	-	-
2238/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	28	-	-	-	-	-	-	-	-	-
2238/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	28	-	-	-	-	-	-	-	-	-
2238/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	28	-	-	-	-	-	-	-	-	-
2238/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	28	-	-	-	-	-	-	-	-	-
2238/7/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	28	-	-	-	-	-	-	-	-	-
2239/2/1	-	-	-	-	-	-	**45.6**	16.4	**26.3**	**80.6**	17.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2239/3/1	-	-	-	-	-	-	**45.6**	16.4	**26.3**	**80.6**	17.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2239/4/1	-	-	-	-	-	-	10.1	3.6	5.8	17.9	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2239/5/1	-	-	-	-	-	-	10.1	3.6	5.8	17.9	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2239/6/1	-	-	-	-	-	-	**45.6**	16.4	**26.3**	**80.6**	17.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2239/7/1	-	-	-	-	-	-	**45.6**	16.4	**26.3**	**80.6**	17.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2240/1/1	-	-	-	-	-	**1.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**136**	-	-	-	-	-	-	-	-	-	-
2240/2/1	-	-	-	-	-	**1.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2240/3/1	-	-	-	-	-	**1.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2240/4/1	-	-	-	-	-	**1.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2240/5/1	-	-	-	-	-	**1.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2241/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	15
2241/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	82
2242/7/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-	-
2242/8/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-	-
2242/9/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-	-
2242/10/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2242/10/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2242/10/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2242/11/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2242/11/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2242/11/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2245/1/1	-	-	-	-	-	-	6.0	11.3	-	-	12.3	**182.5**	-	-	-	3.6	-	-	0.7	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2245/2/1	-	-	-	-	-	-	6.0	11.3	-	-	12.3	**182.5**	-	-	-	7.2	-	-	0.7	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2245/3/1	-	-	-	-	-	-	0.5	0.5	-	-	-	91.3	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
2245/4/1	-	-	-	-	-	-	0.5	0.5	-	-	-	91.3	-	-	-	5.4	-	-	0.3	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
2245/5/1	-	-	-	-	-	-	0.5	0.5	-	-	-	91.3	-	-	-	5.4	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2245/6/1	-	-	-	-	-	-	0.5	0.5	-	-	-	91.3	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2247/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**607**	-	-	-	-	21	3	-	-	213
2247/2/1	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2247/3/1	24.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2250/1/1	-	-	-	-	-	-	**15.9**	**49.3**	**20.7**	**59.3**	9.9	-	-	-	-	-	-	-	-	**2.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	548
2250/2/1	-	-	-	-	-	-	**15.9**	**49.3**	**20.7**	**59.3**	9.9	-	-	-	-	-	-	-	-	**2.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2250/3/1	-	-	-	-	-	-	1.4	4.9	2.1	5.9	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2250/4/1	-	-	-	-	-	-	1.4	4.9	2.1	5.9	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2250/5/1	-	-	-	-	-	-	1.4	4.9	2.1	5.9	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2250/6/1	-	-	-	-	-	-	1.4	4.9	2.1	5.9	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2250/7/1	-	-	-	-	-	-	1.4	4.9	2.1	5.9	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2250/8/1	-	-	-	-	-	-	1.4	4.9	2.1	5.9	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2252/1/1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	52	101	-	-	-
2252/2/1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365	-	-	-	-	-	62	-	-	-
2252/3/1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	-	-	-
2252/4/1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	-	-	-
2253/1/1	9.0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1233**	-	-	-	**354**	-	-	-	-	241
2253/2/1	9.0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2254/1/1	-	-	-	-	-	-	-	3.8	0.8	**78.2**	-	78.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2254/2/1	-	-	-	-	-	-	-	3.8	0.8	**78.2**	-	78.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2254/3/1	-	-	-	-	-	-	-	3.8	0.8	**78.2**	-	78.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2254/4/1	-	-	-	-	-	-	-	3.8	0.8	**78.2**	-	78.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2256/2/1	-	-	-	-	-	-	**23.7**	**44.3**	**28.6**	18.2	**73.7**	-	-	-	-	-	0.5	-	-	-	-	-	-	-	**274**	-	-	274	-	-	-	-	-	-	-	-	627
2256/3/1	-	-	-	-	-	-	0.5	1.0	0.6	0.4	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2256/4/1	-	-	-	-	-	-	0.5	1.0	0.6	0.4	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2256/5/1	-	-	-	-	-	-	0.5	1.0	0.6	0.4	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2256/6/1	-	-	-	-	-	-	0.5	1.0	0.6	0.4	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2256/7/1	-	-	-	-	-	-	0.5	1.0	0.6	0.4	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2257/1/1	-	-	-	-	-	-	-	2.5	5.0	-	5.3	-	**50.0**	**20.0**	-	6.2	**2.5**	-	-	**1.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4964	3159
2257/2/1	-	-	-	-	-	-	-	2.5	-	-	5.3	-	**50.0**	**20.0**	-	6.2	**2.5**	-	-	**1.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5516	2106
2257/3/1	-	-	0.1	-	-	-	-	-	5.0	-	-	-	11.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2258/1/1	1.8	-	-	-	-	-	3.3	3.2	3.8	2.2	1.2	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2258/2/1	12.9	-	-	-	-	-	**21.2**	**20.8**	**24.4**	14.0	7.6	-	-	-	**21.6**	-	-	-	-	-	-	-	-	-	**389**	-	-	**782**	-	**4**	-	-	**698**	-	-	-	1199
2258/3/1	12.9	-	-	-	-	-	**21.2**	**20.8**	**24.4**	14.0	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2258/4/1	1.8	-	-	-	-	-	3.3	3.2	3.8	2.2	1.2	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2259/1/1	-	-	-	-	-	-	6.0	11.3	-	-	12.3	**182.5**	-	-	-	3.6	-	-	0.7	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2259/2/1	-	-	-	-	-	-	6.0	11.3	-	-	12.3	**182.5**	-	-	-	7.3	-	-	0.7	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2259/3/1	-	-	-	-	-	-	0.5	0.5	-	-	-	91.3	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
2259/4/1	-	-	-	-	-	-	0.5	0.5	-	-	-	91.3	-	-	-	5.5	-	-	0.3	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
2259/5/1	-	-	-	-	-	-	0.5	0.5	-	-	-	91.3	-	-	-	5.5	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2259/6/1	-	-	-	-	-	-	0.5	0.5	-	-	-	91.3	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2260/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5134	493
2260/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2263	461
2260/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5964	225
2261/1/1	-	-	-	-	-	-	-	2.5	-	5.0	0.8	-	2.5	2.5	**20.0**	8.2	1.0	-	0.5	-	-	-	-	-	-	-	-	-	291	-	-	-	-	-	-	-	5684	1408
2261/2/1	-	-	-	-	-	-	-	2.5	-	5.0	0.8	-	2.5	2.5	**20.0**	8.2	1.0	-	0.5	-	-	-	-	-	-	-	-	-	183	-	-	-	-	-	-	-	8290	182
2262/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**365**	-	-	-	-	-	-	-	-
2263/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	337	-	-	-	-	-	-	-	-	-
2264/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	182	-	-	-	-	-	-	-	-	-
2265/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	-	-	-	-	-	-	-
2265/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	-	-	-	-	-	-	-
2266/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	-	-	-	-	-	-	-	-	-
2267/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-	-	-	-	-	-	-
2267/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-	-	-	-	-	-	-
2269/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	50	-	-	-	21	956	13	-	-
2269/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	20	-	-	-	21	17	13	-	-
2269/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	20	-	-	-	21	17	13	-	-
2269/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	20	-	-	-	21	17	13	-	-
2269/17/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	17	-	-	-	12	18	14	-	-
2269/18/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	17	-	-	-	12	12	8	-	-
2269/19/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	17	-	-	-	12	18	14	-	-
2269/20/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	17	-	-	-	12	12	8	-	-
2269/21/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	17	-	-	-	12	18	14	-	-
2269/22/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	17	-	-	-	12	12	8	-	-
2269/23/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	17	-	-	-	12	18	14	-	-
2269/24/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	17	-	-	-	12	12	8	-	-
2269/25/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	939	-	-	-
2269/26/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	939	-	-	-
2269/27/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	939	-	-	-
2269/28/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	20	-	-	-	21	17	13	-	-
2269/29/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/29/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/29/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/30/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/30/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/30/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/31/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/31/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/31/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/32/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/32/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/32/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2269/33/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/33/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/33/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/34/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/34/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/34/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-	-	-	-
2269/35/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1825	-	-
2269/36/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1825	-	-
2271/1/1	13.3	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-	-	-	-	-	-	-	-	-
2271/2/1	13.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2271/3/1	**23.5**	-	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	116	-	-	-	-	-	-	12	-	-	-
2273/1/1	**67.9**	**37.5**	1.4	-	-	-	-	-	-	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	4	-	-	-
2273/2/1	13.3	**37.5**	1.4	-	-	-	-	-	-	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2274/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/1/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/1/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/1/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/1/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/1/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/2/1	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	5	-	-	-
2274/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	5	-	-	-
2274/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/4/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/4/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/4/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/4/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/4/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/4/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/4/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/4/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/4/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-
2274/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2274/5/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2274/5/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2274/6/1	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2274/6/2	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2274/6/3	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2274/6/4	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2274/6/5	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2274/7/1	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2274/7/2	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2274/7/3	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Freshwater fish	Intertidal occupancy over mud	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2274/7/4	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2277/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-	-	-	-	-	-
2277/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-	-	-	-	-	-
2278/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350	-	-	-	-	-	-	-	35
2279/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**587**	-	-	-	-	-	92	-	365
2280/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**730**	-	-	-	-	-	14	-	-
2280/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-	-	-
2280/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365	-	-	-	-	-	4	-	-
2280/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-
2280/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-
2281/1/1	-	2.6	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	90	14	-	-	-	4	3	-	-
2281/2/1	-	2.6	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	90	10	-	-	-	-	3	-	-
2282/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**730**	24	-	-	-	24	-	-	-
2282/2/1	-	-	**12.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**730**	-	-	-	-	-	-	-	-
2283/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1095**	-	-	-	-	-	-	-	730
2286/1/1	**59.4**	**58.2**	**16.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	-	330	**576**	-	-	**434**	44	-	24	-	-
2286/2/1	**33.6**	**40.9**	4.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2286/3/1	**67.1**	**31.8**	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**146**	-	-	114	-	-	-	-	-	-	-	-
2287/1/1	11.8	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	339	-	-
2287/2/1	11.8	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	339	-	-
2293/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**532**	60	-	-	-	-	-	-	336
2293/1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**532**	60	-	-	-	-	-	-	336
2294/1/1	4.5	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	20	-	-
2295/1/1	**35.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**547**	-	-	-	-	-	-	-	-
2296/1/1	-	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.5	-	-	**-**	-	17	-	84	-	-	-	-	**1716**	**84**	-	1877	-	-
2296/2/1	-	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.5	-	-	**-**	-	17	-	84	-	-	-	-	**1716**	**84**	-	1877	-	-
2296/3/1	-	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1716**	-	-	1877	-	-
2296/4/1	-	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1716**	-	-	1877	-	-
2296/5/1	-	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.5	-	-	-	-	-	-	-	**469**	-	-	-	-	-	-	-	-	183
2296/6/1	-	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2298/1/1	-	-	-	**39.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	-	2	-	-	-	-	-	14	-	-	-	-
2299/1/1	**54.5**	**32.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	-	-	183	-	59
2299/2/1	**54.5**	**32.7**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	-	-	183	-	59

Notes

Emboldened observations are the high-rate individuals

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

Person ID number	Fish	Crustaceans	Molluscs	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Wild fungi	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
Children age group (6 - 15 years old)																										
1847/4/1	-	-	-	**2.4**	-	3.8	**75.0**	5.1	-	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/5/1	-	-	-	**2.4**	-	3.8	**75.0**	5.1	-	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1847/6/1	-	-	-	**3.2**	-	**5.0**	**100.0**	6.8	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1867/4/1	-	-	-	-	-	-	-	-	-	-	**29.6**	-	**18.1**	-	-	-	-	-	-	-	-	-	-	-	-	-
1867/5/1	-	-	-	-	-	-	-	-	-	-	**29.6**	-	**18.1**	-	-	-	-	-	-	-	-	-	-	-	-	-
1905/2/1	**24.1**	**1.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**105**	**105**	-	-	**38**	-	-	-	-
1905/3/1	**24.1**	**1.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**105**	**105**	-	-	**38**	-	-	-	-
1930/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
1930/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
1950/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	9	-	-	2	-	-	-	-
1950/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	9	-	-	2	-	-	-	-
1972/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-
1972/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-
1972/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-
1972/7/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-
1972/8/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-
1972/9/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-
1991/2/1	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
1996/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-
2004/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	3	-	-	-
2004/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	3	-	-	-
2023/3/1	-	-	-	**3.1**	**28.0**	**9.0**	10.2	**25.8**	-	-	-	-	**7.3**	-	-	-	-	-	-	-	-	-	-	-	-	-
2026/2/1	-	-	-	-	-	-	-	-	**138.2**	-	-	-	-	0.2	-	**0.3**	-	-	-	-	-	-	-	-	-	-
2050/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	-	-	-	-
2050/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	-	-	-	-
2050/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	-	-	-	-
2051/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**261**	-	-	-	-	-	-	-
2053/3/1	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2053/4/1	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2056/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**191**	-	-	-	-	-	-	-
2056/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**191**	-	-	-	-	-	-	-
2063/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63	-	-	-	10	-	-	-
2063/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63	-	-	-	10	-	-	-
2079/5/1	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2079/6/1	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Wild fungi	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2111/3/1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**180**	**2**	-	180	44	-	-
2089/6/1	-	-	-	-	-	-	-	-	**112.3**	-	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2111/4/1	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**180**	**2**	-	180	24	-	-
2111/5/1	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**180**	**2**	-	180	24	-	-
2111/6/1	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**180**	**2**	-	180	44	-	-
2126/4/1	-	-	-	-	-	-	-	-	-	-	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2139/4/1	0.6	0.3	0.02	**3.2**	-	**14.3**	16.0	**43.6**	**115.3**	-	3.6	0.4	-	**1.7**	-	**0.5**	-	-	-	25	-	-	-	-	-	-
2139/5/1	0.5	0.2	0.02	**2.4**	-	**10.7**	12.0	**32.7**	**86.4**	-	2.7	0.3	-	**1.3**	-	**0.4**	-	-	-	25	-	-	-	-	-	-
2158/7/1	-	-	-	-	-	-	-	-	3.4	-	-	-	-	0.2	-	-	-	-	10	-	-	-	-	-	-	-
2158/10/1	-	-	-	-	-	-	-	-	3.4	-	-	-	-	0.2	-	-	-	-	10	-	-	-	-	-	-	-
2159/3/1	-	-	-	-	-	-	-	-	-	-	-	-	5.5	0.3	-	**0.5**	-	-	**120**	-	-	-	-	-	0	10
2162/3/1	-	-	-	-	-	-	-	-	-	**27.0**	4.0	-	5.1	-	-	-	-	-	20	-	-	-	-	-	6867	202
2162/4/1	-	-	-	-	-	-	-	-	-	**27.0**	4.0	-	5.1	-	-	-	-	-	20	-	-	-	-	-	6867	202
2162/5/1	-	-	-	-	-	-	-	-	-	**27.0**	4.0	-	5.1	-	-	-	-	-	20	-	-	-	-	-	6867	202
2174/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-
2177/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	-
2177/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	-
2178/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	-	-	-	-	15	-	-
2178/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	-	-	-	-	15	-	-
2187/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**117**	-	-	-	-	-	-	-
2188/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-
2196/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-
2196/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-
2196/7/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-
2196/11/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-
2196/12/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-
2197/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-
2199/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-
2225/3/1	-	-	0.04	**5.4**	**11.6**	2.4	1.9	8.0	-	-	-	**4.1**	-	-	-	**0.6**	-	-	4	-	-	-	-	-	4538	1304
2232/3/1	-	-	-	-	-	-	1.4	3.5	-	-	-	-	4.2	-	**0.4**	-	-	-	-	-	-	-	-	-	-	-
2236/3/1	-	-	-	-	-	-	-	-	-	-	**11.2**	**1.8**	-	**0.7**	-	-	-	-	-	-	-	-	-	-	5327	330
2236/4/1	**16.3**	-	-	-	-	-	-	-	-	-	**14.9**	**2.9**	-	**0.9**	-	-	-	-	-	-	-	-	-	24	5563	94
2242/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2242/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2242/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2242/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2242/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Wild fungi	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2242/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2250/9/1	-	-	-	1.4	4.9	2.1	5.9	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2258/6/1	1.3	-	-	**2.4**	2.4	2.8	1.6	0.9	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2260/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5410	296
2263/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-
2263/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-
2269/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	-	12	18	126	-	-
2269/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	-	12	12	14	-	-
2269/7/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	-	12	18	8	-	-
2269/8/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	-	12	12	14	-	-
2269/9/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	-	12	18	126	-	-
2269/10/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	-	12	12	14	-	-
2269/11/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	-	12	18	131	-	-
2269/12/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	-	12	12	8	-	-
2269/13/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	-	12	18	14	-	-
2269/14/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	-	12	12	126	-	-
2269/15/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	-	12	18	14	-	-
2269/16/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	-	12	12	8	-	-
2277/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-	-	-	-	-
2277/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-	-	-	-	-
2281/4/1	-	**2.6**	**1.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4**	-	**90**	10	-	-	3	-	-	-
2281/5/1	-	**2.6**	**1.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4**	-	**90**	10	-	-	3	-	-	-
2281/6/1	-	**2.0**	**1.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4**	-	**90**	10	-	-	3	-	-	-

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

Person ID number	Fish	Crustaceans	Molluscs	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Wild fungi	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Handling fishing gear	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
Infant age group (0 - 5 years old)																										
1847/3/1	-	-	-	**1.6**	-	**2.5**	**50.0**	**3.4**	-	**2.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1896/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**366**	-	-	-	-	-	-
1896/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**366**	-	-	-	-	-	-
1931/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**52**	-	-	-	-	-	-	-
1931/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**52**	-	-	-	-	-	-	-
1972/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-
1972/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-
1994/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
1994/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-
1996/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-
2063/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**63**	-	-	-	10	-	-	-
2078/3/1	-	-	-	-	-	-	11.5	**5.8**	-	-	**5.2**	-	-	**0.7**	-	-	-	-	24	-	-	-	-	-	-	-
2078/4/1	-	-	-	-	-	-	7.7	**3.8**	-	-	**3.5**	-	-	**0.5**	-	-	-	-	24	-	-	-	-	-	-	-
2296/7/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**104**	-	-	-	-	-	-	-
2296/8/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**104**	-	-	-	-	-	-	-
2089/7/1	-	-	-	-	-	-	-	-	**56.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2158/8/1	-	-	-	-	-	-	-	-	2.3	-	-	-	-	0.1	-	-	-	-	10	-	-	-	-	-	-	-
2158/9/1	-	-	-	-	-	-	-	-	2.3	-	-	-	-	0.1	-	-	-	-	10	-	-	-	-	-	-	-
2160/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-
2160/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-
2165/3/1	-	-	-	-	-	-	-	-	-	-	-	**3.3**	-	-	**2.2**	-	-	-	6	-	-	-	-	6	5384	731
2178/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**26**	-	-	-	-	15	-	-
2178/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**26**	-	-	-	-	15	-	-
2182/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.4**	-	**0.4**	-	-	-	-	-	-	-	-	-	-
2188/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-
2196/8/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**36**	-	-	-	-	-	-	-
2196/9/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**36**	-	-	-	-	-	-	-
2232/4/1	-	-	-	-	-	-	0.7	1.8	-	-	-	-	**2.1**	-	0.2	-	-	-	-	-	-	-	-	-	-	-
2258/5/1	**0.9**	-	-	**1.6**	**1.6**	**1.9**	1.1	0.6	-	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2281/3/1	-	**1.3**	**0.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4**	-	**90**	10	-	-	3	-	-	-

Notes

Emboldened observations are the high-rate individuals

Annex 3. Qualitative and estimated data for use in dose assessments

Details of activity	Exposure pathways involved	Estimated rate
Network Rail works to bolster the Cumbrian coastline to protect the railway. Works conducted at Ravenglass in 2016 included the installation of rock armour and pitching repairs.	External exposure over intertidal substrates and ingestion/inhalation of sediments	The works took 20 working days x 10 hours per day (200 hours per person in 2016). The number of hours spent on the shore while undertaking these activities was not provided; for assessments purposes, an assumption of 100% of time spent on the shore would be the most conservative approach. For comparison, the 2016 occupancy rate for the railway workers (200 h y^{-1}) was lower than the 2016 occupancy rate of 230 h y^{-1} used in the Ravenglass Marsh User assessments in RIFE-22.
Network Rail works to bolster the Cumbrian coastline to protect the railway. Proposed sea defence work to be undertaken between Ravenglass and Walls Bridge (to the south of Ravenglass) in 2019.	External exposure over intertidal substrates and ingestion/inhalation of sediments	The proposed works are estimated to take 36 working days x 10 hours per day (360 hours per person in 2019). Occupancy rates for these workers will be included in the 2019 Sellafield Review report.

Annex 4. 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 [f]	0.450	0.150
Freshwater fish[b]	0.250	0.050
External exposure over intertidal substrates[b]	0.500	0.030

Notes

[a] Excepting notes b and c, consumption ratios were derived from Byrom et al., (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.

[f] Also applies to mushrooms grown on salt marsh

Annex 5. Consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) for women of childbearing age in the Sellafield area

Person ID number	Fish	Crustaceans	Molluscs	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Wild fungi	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
1848/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	0.1	-	-	-	-	-	-	-	-	-	-
1850/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**17.8**	-	-	-	-	-	-	-	-	-	-	-	-	-
1869/2/1	-	-	-	-	-	-	-	-	-	-	-	**47.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1889/3/1	-	-	-	-	-	-	-	-	-	-	-	-	**18.7**	-	-	**1.7**	-	-	-	-	-	-	-	-	-	-	-	-
1896/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365	-	-	-	-	-
1927/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
1927/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
1928/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
1928/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
1930/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
1965/4/1	-	-	-	-	-	-	-	-	-	-	-	**18.9**	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-
1996/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-
1999/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	4	-	-	-	-	-
2004/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	3	-	-	-
2026/4/1	-	-	-	-	-	-	-	-	-	-	**138.2**	-	-	-	-	0.2	-	0.3	-	-	-	-	-	-	-	-	-	-
2028/2/1	-	-	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2031/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1959	175
2031/2/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1959	175
2031/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/3/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2031/3/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1043	175
2037/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	0	78
2037/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-	-	-	-	-
2037/5/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**730**	-	-	-	-	-	-
2052/3/1	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2053/2/1	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2063/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74	-	-	-	-	-	-
2068/2/1	-	-	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	-	-	-	-
2078/2/1	-	-	-	-	-	-	-	-	15.4	7.7	-	-	7.0	-	-	0.9	-	-	-	-	-	24	-	-	-	-	-	-
2083/1/1	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-
2085/3/1	-	-	9.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	24	36	-	-	-	-
2085/4/1	-	-	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Annex 5. Consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) for women of childbearing age in the Sellafield area

Person ID number	Fish	Crustaceans	Molluscs	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Wild fungi	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2133/4/1	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**366**	**183**	-	-	-	-	-	-	-
2133/7/1	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	183	-	-	-	-	-	-	-	-
2152/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	274	274	-	-	-	-	-
2158/3/1	-	-	-	-	-	-	-	-	-	-	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2158/5/1	-	-	-	-	-	-	-	-	-	-	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2158/6/1	-	-	-	-	-	-	-	-	-	-	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2159/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3	-	-	0.7	-	-	-	120	-	-	-	-	0	10
2162/2/1	-	-	-	-	-	-	-	-	-	-	-	**36.0**	5.3	-	6.8	-	-	-	-	-	-	20	-	-	-	-	6018	1062
2165/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5	-	-	4.3	-	-	-	-	6	-	-	-	6	5384	731
2167/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	81	-	-	-
2167/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-	16	-	0	626
2177/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-
2178/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	-	-	-	15	-	-
2178/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	-	-	-	15	-	-
2181/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-
2181/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/3/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/3/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/3/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-

Annex 5. Consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) for women of childbearing age in the Sellafield area

Person ID number	Fish	Crustaceans	Molluscs	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Wild fungi	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2181/4/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2181/4/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
2187/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	-	-	-	-	-	-
2188/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-
2195/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	-	312	-	-	-	-	-	-
2201/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	-	-	-	-
2232/2/1	-	-	-	-	-	-	-	-	1.4	3.5	-	-	-	-	4.2	-	0.4	-	-	-	-	-	-	-	-	-	-	-
2234/1/1	-	-	-	-	-	-	-	-	-	-	**349.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	499	2493
2234/3/1	-	-	-	-	-	-	-	-	-	-	83.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	782	782
2236/2/1	-	-	-	-	-	-	-	-	-	3.0	-	-	14.9	2.4	-	0.9	-	-	-	-	-	-	-	-	-	-	3206	471
2239/4/1	-	-	-	-	-	10.1	3.6	5.8	17.9	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2240/5/1	-	-	-	-	**1.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2241/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	0	15
2242/6/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2242/8/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2242/10/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2242/10/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2242/10/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-
2247/2/1	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2250/8/1	-	-	-	-	-	1.4	4.9	2.1	5.9	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2252/3/1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	-	-	-
2252/4/1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	-	-	-
2257/3/1	-	-	0.1	-	-	-	-	5.0	-	-	-	11.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2258/4/1	1.8	-	-	-	-	3.3	3.2	3.8	2.2	1.2	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2265/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	-	-	-	-	-	-
2267/1/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-	-	-	-
2269/3/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	20	21	17	13	-	-
2269/16/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	12	12	8	-	-
2269/17/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	12	18	14	-	-
2269/18/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	12	12	8	-	-
2269/22/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	12	12	8	-	-
2269/23/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	12	18	14	-	-
2269/28/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	20	21	17	13	-	-
2269/29/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-
2269/29/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-

Annex 5. Consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) for women of childbearing age in the Sellafield area

Person ID number	Fish	Crustaceans	Molluscs	Marine plants/algae	Wild fungi growing on salt marsh	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Wild fungi	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Handling sediment	Occupancy in water	Occupancy on water	Indoor occupancy within 1 km of the licensed site boundary	Outdoor occupancy within 1 km of the licensed site boundary
2269/29/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-
2269/31/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-
2269/31/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-
2269/31/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-
2269/34/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-
2269/34/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-
2269/34/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	-	-
2274/6/1	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2274/6/2	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2274/6/3	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2274/6/4	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2274/6/5	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2277/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-	-	-	-
2280/2/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-	-	-	-	-
2280/4/1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-
2281/1/1	-	2.6	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	90	14	4	3	-	-	-
2282/2/1	-	-	**12.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**730**	-	-	-	-	-	-

Notes

[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 6. Summary of profiles for adults in the Sellafield area for use in the assessment of total dose

Profile Name	Number of individuals	Pathway Name: Crustacea	Direct	Eggs	Fish - fresh	Fish - Sea	Fruit - Domestic	Fruit and nuts - Wild	Gamma ext - Saltmarsh	Gamma ext - Sediments	Honey	Marine plants/algae	Meat - Cow	Meat - Game	Meat - Poultry	Meat - Sheep	Meat - Wildfowl	Milk	Mollusca	Mushrooms	Mushrooms growing on salt marsh	Occupancy IN water	Occupancy ON water	Plume (IN; 0-0.25km)	Plume (MID; 0.25-0.5km)	Plume (OUT; 0.5-1km)	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root
Notes:			1						2	3				4										5	5	5				
Units:		kg	-	kg	kg	kg	kg	kg	h	h	kg	kg	kg	kg	kg	kg	kg	l	kg	kg	kg	h	h	h	h	h	kg	kg	kg	kg
Crustacean Consumers	**11**	34.8	0.27	-	-	40.2	-	-	-	100	-	-	-	-	-	-	-	-	2.3	-	-	-	50	-	6	11	-	-	0.45	-
Occupants for Direct Radiation	**162**	0.67	1.00	0.54	-	1.0	0.73	0.09	-	57	<0.01	-	1.3	0.05	0.42	0.89	-	3.7	<0.01	0.07	-	<1	11	290	130	1420	0.82	1.4	0.98	1.0
Egg Consumers	**6**	-	0.17	26.9	-	-	6.8	0.15	-	4	-	-	-	-	-	19.8	-	-	-	-	-	-	-	-	1420	-	1.2	5.4	9.5	1.3
Freshwater Fish Consumers	**2**	-	-	-	4.2	-	-	5.0	-	-	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5	38.9	10.0	2.5
Sea Fish Consumers	**18**	18.3	0.17	-	-	40.6	-	-	-	130	-	-	-	-	-	-	-	-	1.5	-	-	-	32	-	4	7	-	-	0.14	-
Domestic Fruit Consumers	**10**	0.09	0.10	1.9	-	0.19	37.7	0.75	-	58	-	-	-	-	0.29	1.1	-	34.6	0.06	0.19	-	-	-	-	-	73	8.4	18.9	16.9	14.3
Wild Fruit and Nut Consumers	**13**	0.61	0.15	0.95	0.65	0.15	10.9	2.9	-	2	0.35	-	7.7	1.3	2.3	8.2	0.10	26.6	0.05	0.32	-	-	-	1210	-	-	2.1	6.4	5.2	4.1
Occupants over Saltmarsh	**5**	0.78	-	-	-	1.7	-	-	210	150	-	-	-	-	-	-	-	-	-	-	0.22	2	6	-	-	-	-	-	-	-
Occupants over Sediment	**31**	2.5	0.23	-	-	4.8	2.6	0.02	-	690	-	-	-	-	0.70	-	-	-	0.92	0.02	-	<1	4	7	3	33	1.4	2.1	1.3	1.7
Honey Consumers	**2**	-	-	-	4.2	-	-	5.0	-	-	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5	38.9	10.0	2.5
Consumers of Marine Plants and Algae	**1**	-	-	-	-	-	-	-	-	220	-	0.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cattle Meat Consumers	**12**	-	0.42	2.7	-	-	1.1	0.63	-	2	-	-	33.1	-	0.07	7.5	-	-	-	0.23	-	-	-	2560	-	150	-	0.42	-	0.42
Game Meat Consumers	**1**	7.0	-	-	-	-	-	3.0	-	-	-	-	-	17.4	28.3	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Poultry Meat Consumers	**5**	1.4	0.40	3.3	-	2.6	1.8	1.0	2	340	0.18	-	1.0	3.5	20.1	1.0	3.7	-	-	-	-	-	-	-	-	3110	4.2	5.2	4.8	4.9
Sheep Meat Consumers	**14**	-	0.43	6.1	-	1.2	1.6	0.96	-	-	-	-	7.1	-	1.0	23.4	-	-	-	0.19	-	-	2	1120	610	680	0.03	1.9	5.7	0.36
Wildfowl Consumers	**2**	-	-	-	-	-	-	-	5	38	-	-	-	-	5.3	-	28.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Milk Consumers	**15**	-	0.13	1.5	-	-	3.3	0.20	-	<1	0.20	-	-	-	-	-	-	202.1	-	0.19	-	-	-	-	-	350	1.9	3.1	-	0.07
Mollusc Consumers	**4**	14.6	-	-	-	14.9	-	-	-	420	-	-	-	-	-	-	-	-	11.8	-	-	-	6	-	-	-	-	-	-	-
Mushroom Consumers	**11**	-	0.45	1.1	-	0.79	2.8	0.77	-	13	-	-	9.1	-	0.12	3.6	-	35.5	-	1.6	-	<1	-	1430	-	270	2.9	9.4	10.8	4.2
Consumers of Mushrooms Growing on Salt Marsh	**5**	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-
Occupants In Water	**4**	-	-	-	-	-	-	-	-	23	-	-	-	-	-	-	-	-	-	-	-	940	3	-	-	-	-	-	-	-
Occupants On Water	**8**	9.2	-	-	-	0.74	-	0.06	2	24	-	-	-	-	-	-	-	-	-	0.13	-	-	1650	-	-	-	-	-	-	-
Local Inhabitants (0 - 0.25km)	**6**	-	1.00	4.3	-	-	1.8	0.83	-	3	-	-	28.7	-	-	8.4	-	-	-	0.45	-	-	-	6080	-	-	-	0.83	-	0.83
Local Inhabitants (0.25 - 0.5km)	**1**	-	1.00	24.2	-	-	-	-	-	-	-	-	-	-	-	39.5	-	-	-	-	-	-	-	-	8510	-	-	-	-	-
Local Inhabitants (0.5 - 1km)	**24**	0.05	1.00	0.68	-	0.68	1.3	0.24	-	25	0.04	-	0.21	0.36	2.6	1.5	-	14.5	<0.01	0.07	-	-	3	-	-	6330	0.89	1.9	0.67	0.20
Green Vegetable Consumers	**15**	-	0.27	0.59	-	1.7	15.8	0.03	-	110	-	-	-	-	1.5	-	-	-	-	0.33	-	-	-	-	-	96	30.5	24.5	45.8	20.0
Other Domestic Vegetable Consumers	**19**	-	0.37	1.8	0.47	1.4	15.5	0.55	-	120	0.24	-	-	-	1.2	-	-	-	-	0.26	-	-	-	-	-	480	14.3	31.1	16.8	16.9
Potato Consumers	**31**	-	0.03	0.29	-	-	6.6	-	-	-	-	-	2.6	-	0.20	1.8	-	10.1	-	0.16	-	-	-	-	-	18	10.6	6.5	86.1	7.6
Root Vegetable Consumers	**18**	0.05	0.33	-	-	1.5	22.1	0.30	-	110	-	-	-	-	1.3	0.59	-	19.2	0.03	0.36	-	-	-	-	-	110	22.6	23.0	35.7	23.4

Notes

1. Expressed as the proportion of the profile members who are exposed to direct radiation.
2. Gamma ext - saltmarsh only includes occupancy over saltmarsh.
3. Gamma ext - sediments represents occupancy over mud; mud and sand; mud, sand and stones; sand; sand and stones; stones.
4. Game meat includes venison and rabbits/hares.
5. Plume times are the sums of individuals' indoor and outdoor times.

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

Annex 7. Summary of profiles for the child age group (6 - 15 years old) in the Sellafield area for use in the assessment of total dose

Profile Name	Number of individuals	Pathway Name: Crustacea	Direct	Eggs	Fish - Sea	Fruit - Domestic	Fruit and nuts - Wild	Gamma ext - Sediments	Meat - Cow	Meat - Game	Meat - Poultry	Meat - Sheep	Milk	Mollusca	Mushrooms	Occupancy IN water	Occupancy ON water	Plume (IN; 0-0.25 km)	Plume (OUT; 0.5-1 km)	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root
Notes:			1					2		3								4	4				
Units:		kg	-	kg	kg	kg	kg	h	kg	kg	kg	kg	l	kg	kg	h	h	h	h	kg	kg	kg	kg
Crustacean Consumers	**5**	2.2	-	-	9.6	-	-	150	-	-	-	-	-	0.84	-	2	-	-	-	-	-	-	-
Occupants for Direct Radiation	**8**	-	1.00	2.6	2.0	1.0	0.23	23	10.1	-	1.1	4.8	-	<0.01	0.15	-	3	1770	3740	0.67	1.4	0.23	0.30
Egg Consumers	**3**	-	-	14.5	-	8.6	-	-	-	-	-	19.8	-	-	-	-	-	-	-	1.0	9.3	3.4	3.0
Sea Fish Consumers	**3**	1.2	0.33	-	21.5	-	0.29	140	-	-	0.95	5.0	-	-	-	-	8	-	1890	-	-	-	-
Domestic Fruit Consumers	**3**	0.18	-	2.4	0.37	34.0	0.97	17	-	-	0.22	2.1	67.2	0.09	0.28	-	-	-	-	2.9	9.3	12.8	11.4
Wild Fruit and Nut Consumers	**4**	0.14	0.50	-	4.3	19.1	1.1	13	-	-	1.3	8.1	50.4	0.07	0.21	-	6	-	2830	1.4	-	7.0	6.3
Occupants over Sediment	**14**	0.79	0.07	0.39	3.4	-	0.02	170	-	-	-	-	-	0.30	0.04	52	10	-	<1	-	-	-	-
Cattle Meat Consumers	**3**	-	1.00	5.1	-	-	-	20	27.0	-	-	4.0	-	-	-	-	-	4710	2360	-	-	-	-
Game Meat Consumers	**1**	-	-	4.2	-	3.5	-	-	-	0.39	-	-	-	-	-	-	-	-	-	-	-	1.4	-
Poultry Meat Consumers	**3**	-	1.00	-	5.4	2.7	0.51	1	-	-	2.9	8.7	-	0.01	0.21	-	8	-	5720	1.8	3.9	0.63	0.81
Sheep Meat Consumers	**4**	-	0.50	9.1	4.1	-	0.38	-	-	-	1.2	21.4	-	-	-	-	6	-	2830	-	-	-	-
Milk Consumers	**4**	0.14	-	-	0.28	19.1	0.79	13	-	-	0.50	1.6	113.1	0.07	0.28	-	-	-	-	1.4	-	7.0	6.3
Mollusc Consumers	**3**	2.4	-	-	-	-	-	100	-	-	-	-	-	1.4	-	3	-	-	-	-	-	-	-
Mushroom Consumers	**5**	0.11	0.40	1.1	0.22	16.8	0.70	35	-	-	0.95	1.2	68.0	0.06	0.46	-	-	-	1170	2.2	2.3	6.0	5.5
Occupants In Water	**4**	0.05	-	-	-	-	-	180	-	-	-	-	-	-	-	180	34	-	-	-	-	-	-
Occupants On Water	**12**	<0.01	-	-	-	-	-	36	-	-	-	-	-	-	-	38	89	-	-	-	-	-	-
Local Inhabitants (0 - 0.25 km)	**2**	-	1.00	5.1	-	-	-	20	27.0	-	-	4.0	-	-	-	-	-	7070	-	-	-	-	-
Local Inhabitants (0.5 - 1 km)	**5**	-	1.00	1.0	3.3	1.6	0.30	5	5.4	-	1.7	6.0	-	<0.01	0.13	-	5	-	5990	1.1	2.3	0.38	0.49
Green Vegetable Consumers	**8**	0.07	0.13	0.91	0.31	16.0	0.37	7	1.5	-	0.75	0.78	25.2	0.04	0.18	-	-	-	730	3.1	5.3	36.5	6.5
Other Domestic Vegetable Consumers	**2**	-	0.50	3.6	-	16.9	-	2	-	-	2.0	-	-	0.02	0.31	-	-	-	2920	4.2	19.8	6.1	5.7
Potato Consumers	**3**	-	-	-	-	5.7	-	-	4.0	-	-	-	-	-	-	-	-	-	-	2.7	-	83.3	4.2
Root Vegetable Consumers	**4**	0.14	-	1.8	0.28	27.2	0.73	13	1.2	-	0.17	1.6	50.4	0.07	0.21	-	-	-	-	3.0	7.0	34.6	9.8

Notes

1. Expressed as the proportion of the profile members who are exposed to direct radiation.
2. Gamma ext - sediments represents occupancy over mud and sand; mud, sand and stones; sand; sand and stones.
3. Game meat includes rabbits/hares.
4. Plume times are the sums of individuals' indoor and outdoor times.

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

Annex 8. Summary of profiles for the infant age group (0 - 5 years old) in the Sellafield area for use in the assessment of total dose

		Pathway Name																					
Profile Name	Number of individuals	Crustacea	Direct	Eggs	Fish - Sea	Fruit - Domestic	Fruit and nuts - Wild	Gamma ext - Sediments	Meat - Cow	Meat - Game	Meat - Poultry	Meat - Sheep	Milk	Mollusca	Mushrooms	Occupancy IN water	Occupancy ON water	Plume (OUT; 0.5-1 km)	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root
Notes:			1					2		3								4				
Units:		kg	-	kg	kg	kg	kg	h	kg	kg	kg	kg	l	kg	kg	h	h	h	kg	kg	kg	kg
Crustacean Consumers	**1**	1.3	-	-	-	-	-	100	-	-	-	-	-	0.76	-	3	-	-	-	-	-	-
Occupants for Direct Radiation	**1**	-	1.00	-	-	-	-	12	-	-	-	-	-	-	-	-	-	6020	-	-	-	-
Egg Consumers	**1**	-	-	2.1	-	1.8	-	-	-	0.19	-	-	-	-	-	-	-	-	-	-	0.71	-
Sea Fish Consumers	**1**	-	-	-	0.90	0.58	-	-	-	-	0.83	-	-	-	-	-	-	-	1.6	1.6	1.1	1.9
Domestic Fruit Consumers	**3**	-	-	-	-	4.3	0.38	16	0.79	-	-	2.9	-	-	-	-	-	-	0.53	-	23.1	0.83
Wild Fruit and Nut Consumers	**3**	-	-	-	-	3.2	0.53	16	-	-	-	2.9	-	-	0.14	-	-	-	-	-	6.4	-
Occupants over Sediment	**2**	-	-	-	-	-	-	370	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cattle Meat Consumers	**1**	-	-	-	-	3.4	-	-	2.4	-	-	-	-	-	-	-	-	-	1.6	-	50.0	2.5
Game Meat Consumers	**1**	-	-	-	-	-	-	6	-	2.2	3.3	-	-	-	-	-	6	-	-	-	-	-
Poultry Meat Consumers	**1**	-	-	-	-	-	-	6	-	2.2	3.3	-	-	-	-	-	6	-	-	-	-	-
Sheep Meat Consumers	**2**	-	-	-	-	4.8	0.58	24	-	-	-	4.3	-	-	-	-	-	-	-	-	9.6	-
Milk Consumers	**1**	-	-	-	-	-	-	-	-	-	-	-	56.2	-	-	-	-	-	-	-	-	-
Mollusc Consumers	**1**	1.3	-	-	-	-	-	100	-	-	-	-	-	0.76	-	3	-	-	-	-	-	-
Mushroom Consumers	**1**	-	-	-	-	-	0.43	-	-	-	-	-	-	-	0.43	-	-	-	-	-	-	-
Occupants In Water	**1**	-	-	-	-	-	-	63	-	-	-	-	-	-	-	10	-	-	-	-	-	-
Occupants On Water	**4**	-	-	-	-	-	-	23	-	-	-	-	-	-	-	-	27	-	-	-	-	-
Local Inhabitants (0.5 - 1 km)	**1**	-	1.00	-	-	-	-	12	-	-	-	-	-	-	-	-	-	6020	-	-	-	-
Green Vegetable Consumers	**2**	-	-	-	0.45	2.0	-	-	1.2	-	0.42	-	-	-	-	-	-	-	1.6	0.80	25.5	2.2
Other Domestic Vegetable Consumers	**1**	-	-	-	0.90	0.58	-	-	-	-	0.83	-	-	-	-	-	-	-	1.6	1.6	1.1	1.9
Potato Consumers	**1**	-	-	-	-	3.4	-	-	2.4	-	-	-	-	-	-	-	-	-	1.6	-	50.0	2.5
Root Vegetable Consumers	**2**	-	-	-	0.45	2.0	-	-	1.2	-	0.42	-	-	-	-	-	-	-	1.6	0.80	25.5	2.2

Notes

1. Expressed as the proportion of the profile members who are exposed to direct radiation.
2. Gamma ext - sediments represents occupancy over mud and sand; sand; sand and stones.
3. Game meat includes rabbits/hares.
4. Plume times are the sums of individuals' indoor and outdoor times.

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

Annex 9. Summary of profiles for women of childbearing age in the Sellafield area, for use in the assessment of total dose to the foetus

		Pathway Name																											
	Number of individuals	Crustacea	Direct	Eggs	Fish - Sea	Fruit - Domestic	Fruit and nuts - Wild	Gamma ext - Saltmarsh	Gamma ext - Sediments	Marine plants/algae	Meat - Cow	Meat - Game	Meat - Poultry	Meat - Sheep	Milk	Mollusca	Mushrooms	Mushrooms growing on salt marsh	Occupancy IN water	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			4									5	5	5				
Profile Name	**Units:**	kg	-	kg	kg	kg	kg	h	h	kg	kg	kg	kg	kg	l	kg	kg	kg	h	h	h	h	h	kg	kg	kg	kg
Crustacean Consumers	**3**	1.5	-	-	-	-	-	61	220	-	-	-	-	-	-	0.51	-	-	1	-	-	-	-	-	-	-	-
Occupants for Direct Radiation	**17**	-	1.00	0.83	-	0.18	0.05	-	21	-	2.1	0.25	0.53	1.2	25.4	-	0.04	-	<1	<1	420	5	1560	-	-	-	-
Egg Consumers	**3**	-	0.67	10.6	-	-	-	-	47	-	12.0	-	-	1.8	-	-	0.24	-	-	-	2360	-	3	-	-	-	-
Sea Fish Consumers	**3**	-	-	-	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic Fruit Consumers	**4**	-	0.25	1.1	-	4.5	0.45	-	6	-	-	0.10	0.60	5.5	-	-	-	-	-	-	-	-	920	2.5	0.91	8.7	1.5
Wild Fruit and Nut Consumers	**4**	-	0.25	-	-	2.7	1.1	-	6	-	-	-	0.60	11.0	-	-	-	-	-	-	-	-	920	-	-	3.8	-
Occupants over Saltmarsh	**1**	0.98	-	-	-	-	-	180	370	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Occupants over Sediment	**6**	0.16	-	-	-	-	-	31	520	-	-	-	-	-	-	2.1	-	-	-	-	-	-	-	-	-	-	-
Consumers of Marine Plants and Algae	**5**	-	-	-	-	-	-	-	-	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cattle Meat Consumers	**3**	-	0.33	2.3	-	-	-	-	7	-	34.1	-	-	4.0	-	-	-	-	-	-	2360	-	-	-	-	-	-
Game Meat Consumers	**1**	-	1.00	-	-	-	-	-	6	-	-	4.3	6.5	-	-	-	-	-	-	6	-	-	6120	-	-	-	-
Poultry Meat Consumers	**2**	-	1.00	-	-	1.5	0.43	-	3	-	-	2.2	4.5	7.5	-	-	-	-	-	3	-	-	4900	-	-	-	-
Sheep Meat Consumers	**4**	-	0.25	-	-	2.7	0.86	-	6	-	4.7	-	0.60	11.8	-	-	-	-	-	-	-	-	920	-	-	3.8	-
Milk Consumers	**2**	-	0.50	-	-	-	0.11	-	-	-	-	-	-	-	243.6	-	0.15	-	-	-	-	-	1500	-	-	-	-
Mollusc Consumers	**3**	-	-	-	-	-	-	-	260	-	-	-	-	-	-	10.3	-	-	-	-	-	-	-	-	-	-	-
Mushroom Consumers	**2**	-	0.50	3.6	-	-	0.11	-	60	-	-	-	-	-	69.1	-	0.51	-	-	-	-	-	5	-	-	-	-
Consumers of Mushrooms Growing on Salt Marsh	**1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-
Occupants In Water	**3**	-	-	-	0.51	-	-	-	17	-	-	-	-	-	-	-	-	-	73	-	-	-	-	-	-	-	-
Occupants On Water	**5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	78	-	-	-	-	-	-	-
Local Inhabitants (0 - 0.25 km)	**1**	-	1.00	6.8	-	-	-	-	20	-	36.0	-	-	5.3	-	-	-	-	-	-	7080	-	-	-	-	-	-
Local Inhabitants (0.25 - 0.5 km)	**1**	-	1.00	-	-	-	-	-	160	-	-	-	-	-	-	-	-	-	-	-	-	78	-	-	-	-	-
Local Inhabitants (0.5 - 1 km)	**5**	-	1.00	-	-	0.60	0.17	-	1	-	-	0.86	1.8	3.0	69.8	-	-	-	-	1	-	-	3410	-	-	-	-
Green Vegetable Consumers	**1**	-	-	-	-	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.1	3.6	17.9	5.8
Other Domestic Vegetable Consumers	**3**	-	-	-	0.60	2.0	-	-	-	-	-	-	0.55	-	-	-	-	-	-	-	-	-	-	4.9	3.9	8.7	3.9
Potato Consumers	**3**	-	-	-	-	3.9	0.31	-	8	-	-	-	-	2.3	-	-	-	-	-	-	-	-	-	3.4	1.2	13.4	1.9
Root Vegetable Consumers	**4**	-	-	-	0.45	1.5	-	-	-	-	3.0	-	0.42	-	-	0.03	-	-	-	-	-	-	-	3.7	2.9	6.5	4.2

Notes

1. Expressed as the proportion of the profile members who are exposed to direct radiation.
2. Gamma ext - saltmarsh only includes occupancy over saltmarsh.
3. 'Gamma external - Sediments' includes occupancy over mud and sand; mud, sand and stones; sand and stones; stones.
4. 'Meat - Game' includes consumption of rabbits/hares.
5. Plume times are the sums of individuals' indoor and outdoor occupancy rates in each of the direct radiation zones.

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

About us

The Centre for Environment, Fisheries and Aquaculture Science is the UK's leading and most diverse centre for applied marine and freshwater science.

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Through the application of our science and technology, we play a major role in growing the marine and freshwater economy, creating jobs, and safeguarding public health and the health of our seas and aquatic resources.

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