Cefas

Cefas contract report C2848

Radiological Habits Survey: Devonport, 2011

2012

Environment Report RL 01/12

Environment Agency

Food Standards Agency
food.gov.uk

Office for Nuclear Regulation
An agency of HSE

This page has been intentionally left blank

Environment Report RL 01/12

Final report

Radiological Habits Survey: Devonport, 2011

F.J. Clyne, C.J. Garrod, V.E. Ly and P. Rumney

Peer reviewed by G.J. Hunt
Approved for publication by W.C. Camplin

2012

The work described in this report was carried out under contract to the Environment Agency, the Food Standards Agency and the Health and Safety Executive.
Cefas contract C2848
FSA Project PAU 198 / Lot 7 / ERI006

This report should be cited as: Clyne, F.J., Garrod, C.J., Ly, V.E. and Rumney, P., 2012. Radiological Habits Survey: Devonport, 2011. RL 01/12. Cefas, Lowestoft

A copy can be obtained by downloading from the Cefas website: www.cefas.defra.gov.uk

CONTENTS

TABLES

SUMMARY

This report presents the results of a survey conducted in 2011 to determine the habits and consumption patterns of people living, working and pursuing recreational activities in the vicinity of the Devonport nuclear site. The Devonport site comprises two defence establishments: the Devonport Royal Dockyard and Her Majesty's Naval Base (HMNB) Devonport. These establishments are considered together as a single site for the purposes of this survey. Operations at the Devonport Royal Dockyard include refitting, refuelling, repairing and maintaining the Royal Navy's nuclear powered submarines. Operations at the Naval Base include the engineering, logistics and infrastructure support for the ships and submarines of the Devonport Flotilla. The site discharges gaseous radioactive waste via stacks, vents and other outlets to the atmosphere, and liquid radioactive waste into the Hamoaze and to the local sewer. The dockyard contains sources of direct radiation, although these would not be expected to result in measurable dose rates at the site boundary. 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 of 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 the direct exposure arising from gaseous releases from the site.

The following potential exposure pathways related to the site were investigated:

- The consumption of food from the aquatic survey area
- Activities and occupancy over intertidal substrates
- The handling of fishing gear and sediment
- Occupancy in close proximity to sewage sludge
- 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

Interviews were conducted with members of the public and data collected for 685 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 so identified can be used in dose assessments. Additionally, profiles of integrated habits data are presented specifically for use in total dose assessments.

The aquatic survey area

The aquatic survey area (Figure 1, page 18) was defined as all tidal waters and intertidal areas north of a line extending from Cawsand to the western end of the Plymouth Breakwater, along the breakwater and from the eastern end of the breakwater to Staddon Point. The survey area included Plymouth Sound, the Hamoaze and the tidal stretches of the rivers Lynher, Tamar, Tavy and Plym.

Foods from the aquatic survey area were consumed from the following food groups: fish; crustaceans; molluscs; wildfowl; marine plants/algae. The predominant foods consumed by the adult high-rate groups were:

- For fish; bass, cod, mackerel, thornback ray, grey mullet, pollack and herring with smaller quantities of conger eel, flounder, whiting, bream, dab and eel
- For crustaceans; brown crab, common lobster and common prawn
- For molluscs; queen scallops
- For wildfowl; Canada goose, mallard and teal
- For marine plants/algae; samphire

The mean consumption rate for the adult high-rate group for fish was 30 kg y^{-1}, for crustaceans was 2.4 kg y^{-1}, for molluscs was 0.1 kg y^{-1}, for wildfowl was 1.5 kg y^{-1} and for marine plants/algae was 0.5 kg y^{-1}. The mean consumption rates for the adult high-rate groups for fish, crustaceans and molluscs did not exceed the respective generic 97.5th percentile rates. Generic consumption rates have not been determined for wildfowl or marine plants/algae.

The activities undertaken by adults in the high-rate groups for intertidal occupancy included bait digging, angling, dog walking, collecting mussels, netting for common prawns, dip netting, wildfowling and boat maintenance. It was reported that people were living on houseboats at three boatyards/marinas, but no quantitative data were obtained. An estimated annual occupancy rate for people living on board a houseboat while it is resting on mud is presented in Annex 3 for use in dose assessments. Gamma dose rate measurements were taken at many locations in the aquatic survey area where activities were occurring.

The activity undertaken by the only member of the adult high-rate group for handling fishing gear was handling pots. The activities undertaken by adults in the high-rate group for handling sediment were collecting mussels and bait digging. The activities undertaken by people ‘in water’ and ‘on water’ included swimming, kayaking, windsurfing, diving, water skiing, sailing, coastguard duties, being on a dive boat, canoeing, ferry crew duties, charter boat skipper duties, angling, potting, pleasure cruising, rowing, steaming to mussel beds, netting for common prawns, and paddling.

The use of seaweed as a fertiliser on an allotment plot was identified but the use of seaweed as animal feed was not identified.

The Devonport site discharges liquid waste via the sewer pipes to the Camel's Head Sewage Treatment Works where it undergoes treatment. Occupancy rates were obtained for employees working in close proximity to sewage sludge at the sewage treatment works.

The terrestrial survey area

The terrestrial survey area (Figure 2, page 19) was defined as the land within 5 km of the centre of the Devonport site. Nine farms were identified that produced beef cattle, lambs, pigs, milk (from dairy cattle), chickens, chicken eggs and arable crops. The farmers and their families consumed foods that were produced on their land. Nineteen allotment sites were identified and many residents in the survey area grew fruit and vegetables in their gardens. Six beekeepers were identified who kept hives within the survey area and produced honey.

Foods from the terrestrial survey area were consumed from the following food groups: green vegetables; other vegetables; root vegetables; potato; domestic fruit; milk; cattle meat; pig meat; sheep meat; poultry; eggs; wild/free foods; rabbits/hares; honey; wild fungi; venison. Two mean consumption rates for the adult high-rate groups were found to be greater than the generic 97.5th percentile consumption rates. These were for domestic fruit and pig meat. The consumption of cereals or freshwater fish was not identified.

The consumption of well water and borehole water by humans was identified. Livestock were consuming well water, borehole water and water from an underground reservoir, and also had access to stream water.

The Devonport site did not have control measures to limit the possibility that contamination is transferred off-site since little wildlife was found on site. Routine pest control was undertaken on site but vermin were not monitored.

The direct radiation survey area

The direct radiation survey area (Figure 2, page 19) was defined as the land and sea within 1 km of the Devonport nuclear licensed site boundary. Occupancy rates were obtained for residents, visitors, employees and for children attending school and attending day care.

The occupancy rates were analysed in zones according to the distance from the Devonport nuclear licensed site boundary. The highest indoor, outdoor and total occupancy rates in the 0 – 0.25 km zone, the >0.25 – 0.5 km zone and the >0.5 – 1.0 km zone were for residents, with the exception of the highest outdoor occupancy rate in the >0.5 – 1.0 km zone which was for nine employees.

Gamma dose rate measurements were taken indoors and outdoors at all residences where interviews were conducted in the direct radiation survey area. Background readings were taken at distances beyond 5 km of the Devonport site centre.

Comparisons with the previous survey

Comparisons were made with the results from a previous habits survey undertaken around the Devonport site in 2004.

In the aquatic survey area in 2011 compared with 2004, there were slight decreases in the mean consumption rates for the adult high-rate groups for fish, from 32 kg y^{-1} in 2004 to 30 kg y^{-1} in 2011, for crustaceans, from 3.5 kg y^{-1} in 2004 to 2.4 kg y^{-1} in 2011, and for molluscs, a larger decrease, from 1.7 kg y^{-1} in 2004 to 0.1 kg y^{-1} in 2011. In 2011 there was a slight increase in the mean consumption rates for the adult high-rate group for wildfowl from 1.1 kg y^{-1} in 2004 to 1.5 kg y^{-1} in 2011. No consumption of marine plants/algae was identified in 2004, but in 2011 the mean consumption rate for the adult high-rate group was 0.5 kg y^{-1}.

In 2011, the mean intertidal occupancy rates for the adult high-rate groups for mud, for rock, for salt marsh and for sand and stones were broadly similar to those in 2004. There was a significant decrease in the mean occupancy rate for the adult high-rate group over mud, sand and stones from 980 h y^{-1} in 2004 to 400 h y^{-1} in 2011. Occupancy rates were obtained for people undertaking activities over mud and sand and over sand in 2011 but activities were not identified taking place over these substrates in 2004. Occupancy on board a houseboat that is resting on mud at low tide was recorded in 2004. It was reported that people were living on houseboats at three boatyards/marinas in 2011; however, no quantitative data were obtained. The mean rate for the adult high-rate group for handling fishing gear was broadly similar in 2011 compared with 2004. There was a significant decrease in the mean rate for the adult high-rate group for handling sediment from 800 h y^{-1} in 2004 to 340 h y^{-1} in 2011.

In the terrestrial survey area in 2011 compared with 2004, there were relatively large increases in the mean consumption rates for the adult high-rate groups for the following food groups: potato, from 88 kg y^{-1} to 110 kg y^{-1}; domestic fruit, from 44 kg y^{-1} to 81 kg y^{-1}; poultry, from 3.7 kg y^{-1} to 6.1 kg y^{-1}; eggs, from 10 kg y^{-1} to 23 kg y^{-1}; rabbits/hares, from 0.9 kg y^{-1} to 2.8 kg y^{-1}; wild fungi, from 0.1 kg y^{-1} to 1.3 kg y^{-1}. There were relatively large decreases in the mean consumption rates for the adult high-rate groups for the following food groups: root vegetables, from 71 kg y^{-1} to 19 kg y^{-1}; wild/free foods, from 8.9 kg y^{-1} to 4.9 kg y^{-1}; honey from 7.6 kg y^{-1} to 3.9 kg y^{-1}. There were small increases in the mean consumption rates for the adult high-rate groups for root vegetables and milk, and there were small decreases for green vegetables, other vegetables, cattle meat, sheep meat and venison. The consumption of pig meat was identified in 2011 but not in 2004. The consumption of cereals or freshwater fish was not identified in either survey.

In the direct radiation survey area, the highest total occupancy rate in the 0 - 0.25 km zone was the same in 2011 and 2004 at 8500 h y^{-1} (rounded data). In the >0.25 - 0.5 km zone in 2011 compared with 2004, there was a slight decrease in the highest total occupancy rate, from 8700 h y^{-1} to 8500 h y^{-1}. There was a decrease in the highest total occupancy rate in the >0.5 – 1.0 km zone in 2011 compared with 2004, from 8600 h y^{-1} to 8200 h y^{-1}. Two sets of gamma dose rate measurements taken at the same residences in 2011 and 2004 were compared.

Recommendations

Recommendations for changes to the current environmental monitoring programmes are provided. These are based on the information collected during the survey and also take into account the potential radiological significance of the various pathways that were identified. The recommendations include:

- Replacing the gamma dose rate measurement taken at Lopwell with a gamma dose rate measurement at Warleigh Point
- Replacing the sample of ballan wrasse and corkwing wrasse currently monitored with alternating samples of bass, cod or grey mullet
- Removing the samples of cockles and oysters
- Replacing the sample of shrimps currently monitored with a sample of common prawns
- Adding a one-off sample of milk

1 INTRODUCTION

The public may be exposed to radiation as a result of the operations of the Devonport nuclear licensed 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 locally by members of the public, 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 the effects of 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'. This notional individual is defined as being representative of the more highly exposed members of the population. It follows that, if the dose to the representative person is acceptable when compared to dose limits and optimization, other members of the public will receive acceptable doses, and overall protection to the public is provided from the effects of radiation. The term 'representative person' is equivalent to, and replaces, the term 'average member of the critical group' as recommended by ICRP (ICRP, 2006). The recommendations of the ICRP were updated in 2007 (ICRP, 2007) and, for the public, still include the principle of protecting the individuals most highly exposed to radiation, characterised by the representative person.

1.1 Regulatory framework

The Environment Agency regulates the discharges of waste under the Environmental Permitting Regulations (UK Parliament, 2010); prior to 6th April 2010 regulation was under the Radioactive Substances Act 1993 (RSA 93) (UK Parliament, 1993) as amended by the Environment Act 1995 (EA 95) (UK Parliament, 1995). The regulations take account of the European Union (EU) Basic Safety Standards (BSS) Directive 96/29/Euratom (CEC, 1996) which embody the recommendations of the ICRP, particularly ICRP 60 (ICRP, 1991). 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). From 1st April 2011, the Office for Nuclear Regulation (ONR), an agency of the Health and Safety Executive, implements this legislation and is also responsible for regulating, under the Ionising Radiations Regulations (IRR 99) (UK Parliament, 1999), the exposure of the public to direct radiation from the operations occurring on these sites. Prior to 1st April 2011 these functions were carried out by the Nuclear Installations Inspectorate of the Health and Safety Executive.

Appropriate discharge limits are set by the Environment Agency after wide-ranging consultations that include the Food Standards Agency. The Food Standards Agency has responsibilities 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), 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 96/29/Euratom (CEC, 1996). The public dose standards were incorporated into UK law in IRR 99. In order to implement the BSS Directive in England and Wales, the Environment Agency was issued with a direction by the Department of the Environment, Transport and the Regions in 2000 (DETR, 2000). The requirement to observe the conditions laid down in the Basic Safety Standards (BSS) in England and Wales is now incorporated in the Environmental Permitting Regulations 2010 (UK Parliament, 2010). 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), 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 assessment (i.e. assessments of potential future doses) has been provided by the National Dose Assessment Working Group (NDAWG), which consists of representatives of UK Government Bodies and other organisations with responsibilities for dose assessments (EA, SEPA, DoENI, NRPB and FSA, 2002). NDAWG has 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). This approach is being adopted in Radioactivity in Food and the Environment (RIFE) publications, (e.g. EA, NIEA, FSA and SEPA,

2011), as combined habits surveys are completed. NDAWG has also 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.

2 THE SURVEY

2.1 Site activity

The Devonport nuclear site is located in a suburb of Plymouth in Devon, on the eastern shore of the Hamoaze (see Figure 1, page 18). The Devonport site comprises two defence establishments: the Devonport Royal Dockyard and Her Majesty's Naval Base (HMNB) Devonport. The Devonport Royal Dockyard is owned and operated by Devonport Royal Dockyard Limited (DRDL), which is part of the Marine and Technology Division of the Babcock International Group, and HMNB Devonport is owned and operated by the Ministry of Defence (MoD). For the purposes of this survey these establishments will be considered together as a single site. Operations at the Devonport Royal Dockyard include refitting, refuelling, repairing and maintaining the Royal Navy's nuclear powered submarines. Submarines are also prepared for lay-up pending de-fuelling and de-equipping. Operations at HMNB Devonport include the engineering, logistics and infrastructure support for the ships and submarines of the Devonport Flotilla. At the time of the habits survey, routine operations were being undertaken at the Devonport site and a number of facilities were being dismantled on site.

DRDL is licensed to operate part of the site under NIA 65, which allows the installation and operation of certain activities. Under the Environmental Permitting Regulations, DRDL is permitted to discharge gaseous radioactive wastes via stacks, vents and other outlets to the atmosphere, and liquid radioactive wastes via an outfall into the Hamoaze and to the local sewer. Details of the amounts of gaseous and liquid radioactive waste discharged by DRDL are published in the RIFE reports, for example, EA, FSA, NIEA and SEPA, 2011.

HMNB contains an authorised site, which mirrors for the MoD the requirements of a nuclear licensed site. Operations at HMNB are regulated by the Defence Safety and Environment Authority - Defence Nuclear Safety Regulator (DSEA-DNSR), jointly, where appropriate, with the ONR. HMNB is permitted by the Environment Agency to discharge atmospheric waste and to discharge liquid waste to the local sewer on the basis of an Approval.

The Devonport site contains sources of direct radiation, although these would not be expected to result in measurable dose rates at the site boundary.

2.2 Survey objectives

The Centre for Environment, Fisheries & Aquaculture Science (Cefas) undertook the Devonport habits survey in 2011 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 Devonport 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
- Occupancy in close proximity to sewage sludge
- 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
- New or unusual exposure pathways

No additional site-specific investigations were requested by the Environment Agency, the Food Standards Agency or the Office for Nuclear Regulation.

2.3 Survey areas

The geographic extents of potential effects from liquid discharges, from deposition from gaseous releases, and from 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 area relating to liquid discharges, a terrestrial area relating to deposition from gaseous discharges, and a direct radiation area relating to ionising radiation emanating directly from the site.

The aquatic survey area, shown in Figure 1, covered the all tidal waters and intertidal areas north of a line extending from Cawsand to the western end of the Plymouth Breakwater, along the breakwater and from the eastern end of the breakwater to Staddon Point. The survey area included Plymouth Sound, the Hamoaze and the tidal stretches of the rivers Lynher, Tamar, Tavy and Plym.

The terrestrial survey area, shown in Figure 2, covered all land within 5 km of the site centre (National Grid Reference: SX 445 565), to encompass the main areas of potential deposition from gaseous discharges.

The direct radiation survey area, which is also shown in Figure 2, was defined as all 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 around the Devonport site, which was in 2004 (Tipple *et al*., 2005).

Figure1. The Devonport aquatic survey area

Limit of the aquatic survey area

Figure 2. The Devonport terrestrial (outer ring) and direct radiation (inner ring) survey areas

● = Site centre

1 = Fairmead Road Allotments

2 = Wearde Road Allotments

3 = Kendel Place Allotments

4 = West Park Terrace Allotments

5 = Chaucer Way Allotments

6 = Eliot Street Allotments

7 = Mays & Frys Allotments

8 = Fosters Field Allotments

9 = Hermon Terrace Allotments

10 = Parkside Allotments

11 = Henderson Place Allotments

12 = Peverell Park Allotments

13 = Central Park Allotments

14 = Barn Park Allotments

15 = Swarthmore Allotments

16 = Rowdens Reservoir Allotments

17 = Penlee Valley Allotments

18 = Lower Compton Allotments

19 = Seymour Road Allotments

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 Devonport site. People with local knowledge of the survey area were contacted for information relevant to the various exposure pathways. These included representatives from councils who provided information on allotment sites and the Environment Agency and the Port Health Authority who provided information on fishing 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 fieldwork was carried out from the 7th to the 17th June 2011 by a survey team of four people, according to techniques described by Leonard *et al.* (1982). During the fieldwork a meeting was held between the members of the survey team and representatives from the Devonport Royal Dockyard and HMNB Devonport. 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:

- At the time of the survey, in addition to routine operations being undertaken on the Devonport site, a number of facilities were being dismantled.
- Devonport Royal Dockyard Limited is now permitted to discharge liquid radioactive wastes to any large sewer serving the site.
- Routine pest control was undertaken on the Devonport site but no vermin were monitored. The Devonport site is located in a densely populated area and it is considered unlikely that wildlife that could enter the food chain would be found on the site.
- There is an aquatic exclusion zone around the dockyard wharfs to keep civilian boat users away from the area.
- Information about potential exposure pathways and activities in the area included: sailing in the Tamar Estuary; angling at Cornwall Beach to the south of the site; swimming at an outdoor tidal pool at Firestone Bay on the north shore of Plymouth Sound; sub-aqua diving from the shore at Eastern Kings and Firestone Bay; samphire collection near Weir Quay.

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, fishermen, anglers, sailors, people carrying out activities on intertidal areas, farmers, gardeners, beekeepers and people living, working and undertaking recreational activities close to the site. 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 all residences 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.

For practical and resource reasons, the survey did not involve the whole population in the vicinity of the Devonport 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. The '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.statistics.gov.uk) there were approximately 148,000 people living in the terrestrial survey area, although information was obtained for a significantly smaller number than this. It should be noted that the survey did not include employees or contractors at the Devonport nuclear site while they were at work. This is because dose criteria applicable to these people whilst at work and the dose assessment methods are different from those for members of the public. However, data were collected for employees and contractors while outside work if these people were encountered during the survey.

People were initially questioned about their habits relating to the survey area that their first identified activity occurred in and, where possible, they were also asked about their habits relating to the other two survey areas. For example, people in the terrestrial survey were initially questioned because it was known that they grew or produced significant quantities of terrestrial foodstuffs. However, they were also asked about habits that might lead to exposure to liquid discharges or direct radiation. During interviews with representatives from groups of people, such as employees at a business located within the direct radiation survey area, 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, the occupancy rates within the direct radiation survey area 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 habits survey database where each individual for whom information was obtained was given a unique identifier (the observation number) to assist in maintaining data quality and traceability.

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 Annexes 1 for adults and Annex 2 for children and infants, with the high-rate group members indicated in bold.

Where quantifiable data cannot be obtained from interviews but pathways are believed to exist, it is sometimes necessary to provide estimated habits data for use in dose assessments. These data are presented in Annex 3.

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 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. 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 101 (ICRP, 2007), are listed below, together with those used in reports prior to 2010, for comparison.

Age ranges used from 2010 onwards

Name of age group[a]	Age range in group
Infant	0 to 5-year-old
Child	6-year-old to 15-year-old
Adult	16-year-old and over

Age ranges used in reports prior to 2010

Name of age group	Age range in group
3-month-old	Under 1-year-old
1-year-old	1-year-old
5-year-old	2-year-old to 6-year-old
10-year-old	7-year-old to 11-year-old
15-year-old	12-year-old to 16-year-old
Adult	17-year-old and over

Notes

[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 for children since 2010 will not be directly comparable with data for children 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 direct 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. Three 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 were included in the high-rate group.

Secondly, the 97.5th percentile rate was calculated for each group by using the *Microsoft Excel* mathematical function for calculating percentiles. 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.

Thirdly, profiles have been produced that give a complete view of the habits of the individual that might lead to exposure to all the discharges and radiation from the site. The profiles are based on values calculated by the 'cut-off' method. The profiled data can be used to assess total dose integrated across all pathways of exposure.

Mean and 97.5th percentile consumption rates for adults based on national statistics have been derived by the Ministry of Agriculture, Fisheries and Food (MAFF) (now a part of the Department for Environment, Food and Rural Affairs, Defra) and the Food Standards Agency (Byrom *et al.,* 1995 and FSA, 2002), and these are referred to as generic rates in this report. The generic rates are used as a baseline for comparison with the observed rates.

The mean rates for the high-rate groups for children and infants for consumption and intertidal occupancy 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.statistics.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 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 manipulated in a purpose-built 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, and by a senior radiological consultant.
- 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 18) covered all tidal waters and intertidal areas north of a line extending from Cawsand to the western end of the Plymouth Breakwater, along the breakwater and from the eastern end of the breakwater to Staddon Point. The survey area included Plymouth Sound, the Hamoaze and the tidal stretches of the rivers Lynher, Tamar, Tavy and Plym.

Plymouth Sound is a deep inlet of the English Channel, which is approximately 5 km across at the widest point. The River Plym enters into Plymouth Sound from the north-east. The rivers Tavy, Tamar and Lynher enter into the Hamoaze, which flows into Plymouth Sound from the north-west. The shore around Plymouth Sound is predominantly rocky and the shore of the Hamoaze and the tidal reaches of the rivers are predominantly mud and sand with areas of stones or salt marsh. Numerous yachts and pleasure boats were moored at the marinas, harbours and quays throughout the survey area, as well as offshore. Various recreational water activities and associated clubs were identified in the survey area. However, there were restrictions on recreational activities in designated areas in Plymouth Sound and the Hamoaze as well as restrictions on fishing activities in many places throughout the survey area. The main locations where people were identified undertaking activities in the aquatic survey area are described below, ordered from the south-western limit of the survey area to the south-eastern limit.

Cawsand, Cremyll, Millbrook Lake and St John's Lake

Cawsand marked the south-western extent of the aquatic survey area. Cawsand is a small village with good road access and a sand and stone beach. Shore angling took place on the beach and kayaking was observed offshore (see Figure 3). The shore between Cawsand and Cremyll was rocky and largely inaccessible. The village of Cremyll was a popular tourist destination. Anglers were fishing from a grass bank above the high water mark at Cremyll but no one was observed on the sand and stone beach at the time of the survey. A small ferry operated all year round between Cremyll and Stonehouse, which is located on the northern shore of Plymouth Sound.

To the west of Cremyll there are two shallow areas of water called Millbrook Lake and St John's Lake where large areas of mud and sand are exposed at low at tide. Two marinas were located on the northern shore of Millbrook Lake. Numerous private boats were berthed at the marinas and it was reported that some boats were used as houseboats. Many sail boats and small angling boats were moored around the shore. The only activity that was identified taking place on the shore of Millbrook Lake was collecting cockles at Southdown. There was little access to the shore around St John's Lake and the only activity identified in this area was windsurfing.

Figure 3. Cawsand

Torpoint and the River Lynher

The busy town of Torpoint lies on a peninsula, with St John's Lake to the south and the Hamoaze to the east. The shore was a mixture of mud, sand and stones. The shore to the south was popular with bait diggers (see Figure 4), anglers and dog walkers. A car and passenger ferry operated daily from the eastern shore of Torpoint across to Devonport on the opposite side of the Hamoaze. Many sailboats and angling boats were moored on the eastern shore of Torpoint and boat maintenance was identified taking place in this area. There were two boatyards/marinas in Torpoint, both of which had berths for private boats and it was reported that some of these boats were used as houseboats.

The mouth of the River Lynher is located to the north of Torpoint. The northern and southern shores of the river were bordered by farmland and woodland, and access to the mud, sand and salt marsh shore was limited (see Figure 5). Wildfowling occasionally took place on the southern shore at Clift Marsh. One individual collected very small amounts of samphire from a marsh on the north shore for their own consumption. A commercial mussel fishery was in operation in the mouth of the River Lynher and the mussels were hand gathered by one person. At high tide the river was used by people who were boat angling and pleasure cruising.

Figure 4. Torpoint

Figure 5. River Lynher

Antony Passage is a hamlet with a small walled harbour located on the northern shore of the River Lynher. There were a few pleasure boats and angling boats moored in the harbour and three people were identified who were netting in the area for common prawns. The shore between Antony

Passage and the mouth of the River Lynher was predominantly mud with patches of stones and seaweed.

Wearde Quay and Saltash Waterside

Wearde Quay was located on the confluence of the River Lynher and the River Tamar. The shore either side of the small quay was sand and stones with seaweed along the high water mark. Mussels were collected from Wearde Quay and it was reported that people collected seaweed from this area to use as a fertiliser on allotment plots. Many small sailboats were moored offshore.

To the north of Wearde Quay on the western shore of the River Tamar was the town of Saltash. The waterfront area comprised a series of stone quays, pontoons, slipways and small sand and stone beaches. The area was popular with boat owners and there were many pleasure boats and angling boats moored on the shore and offshore (see Figure 6). Angling was popular from the quays and pontoons and people were undertaking boat maintenance on the shore. A large sailing club with approximately 50 dinghies and moorings for 200 yachts was based in this area.

Figure 6. Saltash Waterside

The River Tamar and the River Tavy

There was limited access to the mud, sand and salt marsh shore along the tidal sections of the River Tamar and the River Tavy as the surrounding area was predominantly farmland. Access to the shore was possible at villages or hamlets where there were quays and harbours such as at Berre Ferrers, Weir Quay and Calstock. Numerous yachts and pleasure craft were moored in the rivers at these locations. Activities being undertaken on the River Tamar were swimming, canoeing, rowing, kayaking, sailing, pleasure cruising, boat angling and bait digging. People were identified walking on the shore and sailing on the River Tavy. A wildfowling club had the shooting rights for a small area of shore along the River Tamar and the River Tavy. Angling and bait digging were indentified at Warleigh Point at the confluence of the River Tamar and the River Tavy.

Riverside and Devonport

Riverside is located near the Tamar Bridge on the eastern side of the River Tamar. There was a small beach of sand and stones with seaweed covered mud and stones on the lower shore. Dog walking, dip netting and boat maintenance were identified on the shore. To the south of the bridge there were two slipways, a sailing club and a dinghy park. Many yachts, angling boats and pleasure boats were anchored offshore.

There was limited access to the eastern shore of the Hamoaze to the south of Riverside since the land bordering the shore was occupied by the MoD. The Devonport dockyard facilities occupied approximately 4 km of this shoreline, with the nuclear licensed site in the northern part and a non-licensed area to the south. There was access to the shore via two public roads that cut through the southern area of the dockyard, one of which led to the terminal of the car and passenger ferry which operated from Devonport across to Torpoint.

Mutton Cove, Mount Wise, Stonehouse and the Hoe

East of the Devonport site, the northern shore of Plymouth Sound between Mutton Cove and the mouth of the River Plym, comprised many marinas, pontoons, boatyards, harbours, docks, piers and wharfs. There were many charter boats offering fishing trips and an array of cruises around Plymouth Sound and the Tamar Estuary. The shore was mainly rocky, with steep rocky headlands and small areas of sand and stones. At several locations, steps were cut out of the rock to allow access to the water and there were tidal sea water swimming pools at Firestone Bay (see Figure 7) and the Hoe. The following activities were identified (listed by location from west to east): angling from the jetty at Mutton Cove; swimming at Mount Wise; angling from the quay at Devil's Point, angling and swimming off the rocks at Firestone Bay; collecting seaweed at Stonehouse; angling and collecting common prawns using a basket at West Hoe; paddling, playing, swimming and canoeing at the Hoe.

Figure 7. Firestone Bay

The River Plym

A busy road ran parallel with the northern shore of the River Plym. Access to the mud and sand shore was possible to the north of Laira Bridge and this was a popular area for bait diggers who were digging for worms at low tide. Access to the southern shore was possible via a nature trail. There was a small sand beach on the southern shore that was popular with dog walkers.

Mount Batten and Jennycliff Bay

Mount Batten is a rocky peninsula located on the southern shore of the mouth of the River Plym. A large marina, a dive centre and a water sports centre offering activities such as canoeing, kayaking and power boating, were located in this area (see Figure 8). The man-made Mount Batten Breakwater extends over 200 m from the western side of the peninsula into Plymouth Sound and was a popular location for anglers. Between Mount Batten and the south-eastern limit of the survey area at Staddon Point, the shore is rocky and could only be accessed at Jennycliff Bay where there was a small sandy beach. Diving was identified offshore of Jennycliff Bay and near the Plymouth Breakwater. The divers occasionally collected lobsters and scallops for their own consumption.

Figure 8. Mount Batten

4.2 Commercial fisheries

A number of fishing restrictions apply to the aquatic survey area since the rivers are important nursery and conservation areas for commercially valuable fish species, and the Hamoaze and Plymouth Sound have a large amount of heavy shipping activity, naval activities and recreational activities. Various regulations enforced by organisations such as the Environment Agency, the Inshore Fisheries and Conservation Authority and the Port Authority overlap in the aquatic survey area, which prevent major commercial fisheries taking place.

The following fishing restrictions were identified:

- No trawling was permitted north of the Plymouth Breakwater, including all estuaries.
- No 'fixed engines' (i.e. static fish traps) were permitted in the River Plym or in the River Tamar and its subsidiary estuaries from a line drawn from Devil's Point to Wilderness Point.
- A Net Limitation Order was introduced by the Environment Agency in 2004 that aimed to conserve stocks of salmon by reducing the licensed salmon nets on the rivers Tamar, Lynher and Tavy to zero. The commercial salmon fisherman who operated on these rivers ceased netting for salmon in 2004 and sold their licences for a period of 10 years. It is not yet known whether salmon licences will be issued after 2014 but the matter is currently under review.
- A Bass Nursery Area designation covered the Tamar and its subsidiary estuaries and the River Plym to the north of a line from Mount Batten to Wilderness Point. Fishing for bass from

a vessel was prohibited in these areas. However, bass fishing from the shore was permitted in these areas.

- The Dockyard Port of Plymouth Order prohibited commercial and non-commercial fishing in designated areas in Plymouth Sound. This included the area to the north of a line from Mount Batten to Picklecombe Point, the main shipping channels and an area to the north of Plymouth Breakwater.
- Netting for eels was permitted in the rivers on application for a licence from the Environment Agency. No licences were issued in 2011.

Despite the restrictions, minor fisheries were identified within the aquatic survey area. A commercial potter based at Sutton Harbour was interviewed who was fishing for crabs and lobsters in Plymouth Sound between September and April. A few other small netting and potting vessels based at Sutton Harbour fished in Plymouth Sound occasionally. Sutton Harbour is an important fishing port with a fish market and ice plant, but all of the larger vessels based there fished exclusively outside the survey area.

There was one classified shellfish bed in the survey area where commercial gathering was permitted. This was a natural mussel bed located in the mouth of the River Lynher. One commercial mussel collector was identified who accessed the mussel bed by boat but gathered the mussels by hand since dredging was not permitted. The mussels were re-laid in Helford River near Falmouth in Cornwall for 2 months before being sold. It was reported that there were oysters in the River Lynher. However, the oyster bed was not classified and therefore the commercial collection of oysters was not permitted. It was reported in the last habits survey undertaken at Devonport that cockles were collected from Millbrook and winkles were being collected from Torpoint; this was not identified in 2011. The collection of shellfish in the rivers to the north of the Tamar Bridge and in the River Plym was prohibited.

4.3 Destination of seafood originating from the aquatic survey area

Mussels that were hand gathered from the River Lynher were sold in Cornwall and were also exported abroad. Crab and lobster were sold to wholesalers at Sutton Harbour and from there were distributed locally and nationally.

4.4 Hobby fishing, angling and non-commercial shellfish collecting

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 from boats that do not have commercial fishing licences and therefore it is illegal to offer the catch for sale. Very little hobby fishing was identified in the survey area due to the various fishing restrictions. One hobby fisherman was interviewed who set pots at Mutton Cove for crab and lobster, which were consumed by family members. The fisherman

was unable to provide information about the time spent fishing. Additionally, people were identified catching common prawns using various methods including dip nets and baskets.

Many charter angling boats operated from Plymouth but mostly fished outside of the Plymouth Breakwater. Numerous private angling boats were based at harbours, marinas and moorings throughout the survey area and angling was identified in Plymouth Sound, the Hamoaze, the River Lynher and in the estuaries in the survey area. Shore angling was identified at many locations including (listed from west to east) Cawsand, Cremyll, Torpoint, Saltash Waterfront, Warleigh Point, Mutton Cove, Devil's Point, Firestone Bay, West Hoe and the Mount Batten Breakwater. The main edible species caught by anglers were bass, cod, mackerel, thornback ray, grey mullet, pollack and herring with smaller quantities of conger eel, flounder, whiting, bream and dab. It should be noted that a large part of the survey area was a designated bass nursery area. Angling for bass from a boat was not permitted in the nursery area but angling for bass from the shore was permitted.

There was very little non-commercial collection of shellfish in the survey area. A scuba diver was interviewed who collected a small number of scallops from Plymouth Sound for their own consumption. It was reported that other scuba divers occasionally collect scallops and lobsters by hand for their own consumption from Jennycliff Bay and other locations within Plymouth Sound. There were mussels and oysters in the River Lynher but there were no reports of non-commercial collection of these species.

4.5 Camel's Head Sewage Treatment Works

Activities at the Camel's Head Sewage Treatment Works were investigated because liquid waste from the Devonport site is discharged via the sewer pipes to this sewage treatment works where it undergoes treatment. Tankers were not used to transport liquid wastes from the Devonport site to the sewage treatment works.

At the start of the sewage treatment process the thicker sewage sludge sinks to the bottom of the settlement tanks. The liquid component, following ultra-violet light treatment, is discharged via pipes straight into the Hamoaze. The sewage sludge is neutralised with lime and centrifuged to remove more liquid. The dried sludge is transported by truck to holding barns and is either delivered to farms or is collected by farmers for use as a fertiliser on arable land. No farms in the terrestrial survey area were identified that used the dried sewage sludge on their land.

Employees at the sewage treatment works spent time in close proximity (<10 metres) to the liquid sewage sludge and dried sewage sludge during procedures such as debris removal, cleaning filters, unblocking pipes, sampling, and operating machinery. Occupancy rates for these employees are presented in Section 4.12. Activities taking place in the sewer between the Devonport site and the

sewage treatment works were not considered as they were not undertaken by employees at the sewage treatment works.

4.6 Wildfowling

Very little wildfowling was identified in the aquatic survey area. One wildfowling club had the shooting rights for a short stretch of shore on the River Tamar and the River Tavy. The club had a large membership but there were only nine keen members who went wildfowling twice per year. Three individuals, who did not belong to a club, occasionally went wildfowling on the shore at Clift Marsh on the River Lynher. Wildfowl were also shot near freshwater ponds in the terrestrial survey area. The main species of wildfowl being shot were mallard, teal and Canada goose, which were consumed by the wildfowlers and their families.

4.7 Other pathways

One person collected and consumed very small quantities of samphire from salt marsh on the River Lynher. No consumption of seaweed from the survey area was noted.

One person was identified who used seaweed as a fertiliser on an allotment plot in the terrestrial survey area. The seaweed was collected from the shore at Stonehouse. It was reported that several people also collected seaweed from Wearde Quay to use as a fertiliser on allotment plots. No farms were identified using seaweed as fertiliser or animal feed.

4.8 Food consumption data

Consumption data for foods consumed from the aquatic survey area are presented in Tables 3 to 7 for adults and in Tables 8 and 9 for children and infants. The tables include the mean consumption rates for the high-rate groups and the observed 97.5th percentile rates calculated as described in Section 3.4. Consumption rates of produce that was grown on land that had been fertilised with seaweed are presented in Table 10.

Adults' consumption rates

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

Table A presents a summary of the adults' consumption rates for the following food groups: fish; crustaceans; molluscs; wildfowl; marine plants/algae. 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 rates have been determined for wildfowl or marine plants/algae.

Table A. 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	51	20	41.3	15.5	30.1	41.3	15.0	40.0
Crustaceans	12	9	3.9	1.4	2.4	3.9	3.5	10.0
Molluscs	2	2	0.1	0.1	0.1	0.1	3.5	10.0
Wildfowl	14	7	2.1	1.1	1.5	2.1	Not determined	Not determined
Marine plants/algae	1	1	0.5	0.5	0.5	NA	Not determined	Not determined

The predominant species of fish consumed by adults were bass, cod, mackerel, thornback ray, grey mullet, pollack and herring with smaller quantities of conger eel, flounder, whiting, bream, dab, eel, rays (unspecified species) and turbot. These fish were caught throughout the aquatic survey area. Of the fish consumed by the 20 people in the high-rate group, the percentage breakdown of species, rounded to the nearest 5%, was 30% bass, 15% cod, 10% mackerel, 10% thornback ray, 10% grey mullet, 10% pollack, 5% herring and 10% of a mix of conger eel, flounder, whiting, bream, dab and eel.

The species of crustaceans consumed by adults were brown crab, common lobster and common prawn. The brown crab and common lobster were caught in Plymouth Sound and at Mutton Cove. Common prawns were caught on the River Lynher and at West Hoe. Of the crustaceans consumed by the nine people in the high-rate group, the percentage breakdown of species, rounded to the nearest 5%, was 85% brown crab, 10% common lobster and 5% common prawn.

The only species of molluscs consumed by adults was queen scallops, which were caught in Plymouth Sound.

The species of wildfowl consumed by adults were mallard, teal and Canada goose, which were shot on salt marshes and mudflats of the rivers Tamar, Tavy and Lynher as well as near freshwater lakes in the terrestrial survey area. The consumption of wildfowl that had been shot on land around freshwater areas was included with the results for the wildfowl shot over salt marsh since the birds may have visited intertidal areas. Of the wildfowl consumed by the seven people in the high-rate

group, the percentage breakdown of species, rounded to the nearest 5%, was 50% mallard, 40% Canada goose and 10% teal.

The only species of marine plants/algae consumed by adults was samphire, which was collected from the salt marsh on the River Lynher.

Children's and infants' consumption rates

Table B presents a summary of children's consumption rates of fish and wildfowl and infants' consumption rates of fish from the aquatic survey area. The table includes the mean consumption rates for the high-rate groups and the observed 97.5th percentile rates. For the child age group, no consumption of crustaceans, molluscs or marine plants/algae was identified. For the infant group, no consumption of crustaceans, molluscs, wildfowl or marine plants/algae was identified. No generic rates have been determined for the child or infant age groups.

Table B. Summary of children's and infants' 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	6	2	18.1	15.5	16.8	17.8
Wildfowl	1	1	1.1	1.1	1.1	Not applicable
Infant age group (0 – 5 years old)						
Fish	1	1	2.3	2.3	2.3	Not applicable

The predominant species of fish consumed by the individuals in the child age group were cod, bass, thornback ray, grey mullet, whiting and bass, with smaller quantities of herring, conger eel, flounder and mackerel. The species of fish consumed by the individuals in the infant age group were pollack, whiting and bass.

The species of wildfowl consumed by the individuals in the child age group were mallard and teal.

4.9 Intertidal occupancy

Intertidal occupancy rates for adults and children are presented in Table 11 and Table 12, respectively. No individuals in the infant age group were identified undertaking activities over intertidal substrates in the aquatic survey area. 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 C 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.

It was reported that people were living on houseboats in three private boatyards/marinas in the aquatic survey area. However, the survey team were not permitted access to the boatyards/marinas, and therefore, quantitative data could not be obtained. An estimated annual occupancy rate for people living on board a houseboat while it is resting on mud, based on occupancy rates obtained during the last habits survey in the Devonport area in 2004, is presented in Annex 3 for use in dose assessments.

Table C. 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	12	1	520	520	378
Mud and sand	8	2	245	227	239
Mud, sand and stones	12	4	548	400	546
Rock	4	3	66	52	66
Salt marsh	4	3	6	6	6
Sand	4	4	52	42	52
Sand and stones	11	4	365	246	336

Notes
The estimated occupancy rate for living on board a houseboat while it is resting on mud is 4100 h y^{-1}. See Annex 3.

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

- For mud; bait digging and angling at Warleigh Point.
- For mud and sand; bait digging on the shores of the River Plym and the River Tamar.
- For mud, sand and stones; dog walking, bait digging and angling at Torpoint and collecting mussels on the River Lynher.
- For rock; netting for common prawns at Antony Passage on the River Lynher.
- For salt marsh; wildfowling at Clift Marsh on the River Lynher.
- For sand; dog walking along the shores of the River Plym.

- For sand and stones; dog walking and boat maintenance at Riverside and angling at Cawsand.

Children's intertidal occupancy rates

Table D presents a summary of the children's 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 children's 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	2	2	20	20	20
Mud, sand and stones	1	1	52	52	NA
Sand	1	1	15	15	NA
Sand and stones	1	1	3	3	NA

Notes
NA - Not applicable

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

- For mud and sand; walking along the shores of the River Tavy.
- For mud, sand and stones; dog walking at Torpoint.
- For sand; dog walking along the shores of the River Plym.
- For sand and stones; playing at the Hoe.

4.10 Gamma dose rate measurements

Gamma dose rate measurements were taken over seven intertidal substrates. All measurements were taken at a height of 1 metre above the substrate. The results are presented in Table 13 and are summarised below.

- Two measurements taken over mud ranged from 0.078 µGy h^{-1} to 0.093 µGy h^{-1}
- One measurement taken over mud and sand was 0.092 µGy h^{-1}
- One measurement taken over mud and stones was 0.084 µGy h^{-1}
- One measurement taken over mud, sand and stones was 0.091 µGy h^{-1}
- One measurement taken over sand was 0.105 µGy h^{-1}
- Two measurements taken over sand and stones ranged from 0.087 µGy h^{-1} to 0.090 µGy h^{-1}
- One measurement taken over stones was 0.088 µGy h^{-1}

For comparison, natural background levels have been estimated at 0.05 µGy h^{-1} over sand, 0.07 µGy h^{-1} over mud and over salt marsh, and 0.06 µGy h^{-1} over other substrates (EA, FSA, NIEA and SEPA, 2011).

4.11 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 need consideration as part of the dose limitation system (ICRP, 1991).

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.

Table 14 presents the adult handling rates of fishing gear and sediment recorded during the survey. No children or infants were identified handling fishing gear or sediment during the survey fieldwork.

Adults' handling rates of fishing gear and sediment

Table E 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 E. 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	6	1	820	820	731
Handling sediment	27	5	540	344	527

The only activity undertaken by adults in the high-rate group for handling fishing gear was handling pots, which took place in Plymouth Sound. The activities undertaken by the people in the high-rate group for handling sediment were collecting mussels in the River Lynher and bait digging at Torpoint, the River Plym, Warleigh Point and the River Tamar.

4.12 Exposure to liquid sewage sludge and dried sewage sludge

Activities at the Camel's Head Sewage Treatment Works were investigated because liquid waste from the Devonport site is discharged via the sewer pipes to this sewage treatment works where it undergoes treatment. Table 15 shows the occupancy rates in close proximity (<10 m) to liquid sewage sludge and dried sewage for the employees at the Camel's Head Sewage Treatment Works.

Two employees undertaking the same activities had occupancy rates of 970 h y^{-1} in close proximity (<10 m) to liquid sewage sludge and 510 h y^{-1} in close proximity (<10 m) to dried sewage sludge. The duties included debris removal, cleaning filters, unblocking pipes, sampling, and operating machinery.

These employees did not spend time inside the pipes or tanks. Contractors were employed to brush and clean the tanks approximately four times per year. It was estimated that three people would spend between 1 and 20 hours per time brushing and cleaning the tanks and it was not always the same people undertaking the work throughout the year. The tanks were also cleaned twice per year by contractors using hoses. One person would spend up to 1 hour twice per year inside the tanks cleaning them.

4.13 Water based activities

Activities taking place in or on the water can lead to ingestion of water and/or inhalation of spray. These pathways are generally considered to be minor 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 survey area for adults are presented in Table 16. Occupancy rates for activities taking place 'in water' and 'on water' in the survey area for children and 'in water' for infants are presented in Table 17. No individuals in the infant age group were identified spending time 'on water'.

Data for ferry crew and for members of sailing clubs and rowing clubs were gained through interviews with representatives from the organisations involved.

Activities in the water

The activities taking place in the water in the survey area were swimming, kayaking, windsurfing, diving and water skiing. Fifteen observations were recorded for adults, four observations were recorded for individuals in the child age group and one observation was recorded for the infant age group. The highest occupancy rate was 200 h y^{-1} for three adults and two individuals in the child age group who were swimming and kayaking in the River Tamar. One individual in the infant age group was swimming at Mount Wise for 9 h y^{-1}.

Activities on the water

The activities taking place on the water in the survey area included sailing, coastguard duties, being on a dive boat, canoeing, ferry crew duties, charter boat skipper duties, angling, potting, pleasure cruising, rowing, steaming to mussel beds, netting for common prawns, and paddling. Seventy-two observations were recorded for adults and 33 observations were recorded for individuals in the child age group. The highest occupancy rate for adults was 2400 h y^{-1} for eight ferry crew operating a ferry between Cremyll and Stonehouse. The highest occupancy rate for individuals in the child age group was 200 h y^{-1} for six children who were rowing on the River Tamar.

5 TERRESTRIAL RADIATION PATHWAYS

5.1 Terrestrial survey area

The terrestrial survey area (shown in Figure 2, page 19) covered all land within 5 km of the Devonport site centre (National Grid Reference: SX 445 565).

The terrestrial survey area is densely populated. Various suburbs of Plymouth occupy the land from the north-east to the south-east of the Devonport site and the towns of Saltash and Torpoint occupy the land to the north-west and south-west of the Devonport site, respectively. Areas of agricultural land were situated near the northern outer limit of the survey area and in the western and southern sections of the survey area. The survey area is bisected from north to south by the River Tamar, the Hamoaze and Plymouth Sound and to the west by the River Lynher.

Nine working farms were identified in the Devonport terrestrial survey area. Of these farms:

- One produced milk (from dairy cows)
- One produced beef cattle
- One produced beef cattle, arable crops and a small number of chickens
- One produced beef cattle and lambs
- One produced beef cattle, lambs, chicken eggs and arable crops
- One produced lambs, pigs and arable crops
- One produced lambs
- Two produced arable crops

A variety of arable crops were produced for human consumption. These included potatoes, onions, swedes, calabrese, cauliflower, wheat and cereal grain. Crops such as barley, wheat and fodder beet were produced for animal feed and were used by the farmers for their own animals or sold through national merchants.

Farmers and their families were noted to be consuming milk, beef, pork, lamb, chicken, chicken eggs and vegetables produced on their own farms. Four farmers also kept chickens for eggs for their own families' consumption. One farmer kept turkeys and geese for their own families' consumption.

Nineteen allotment sites were identified within the survey area (see Figure 2, page 19), 17 of which were located in the suburbs of Plymouth to the north-east, east and south-east of the Devonport site and two of which were located in the north-west of the survey area. The number of allotment plots on the sites ranged from 13 to 138. The allotment holders grew a wide variety of fruit and vegetables. One allotment holder collected seaweed at Stonehouse to use as a fertiliser on their allotment plot. It was reported that people also collected seaweed from Wearde Quay to use as a fertiliser on allotment

plots but this was not confirmed. People were also identified growing vegetables and fruit in their private gardens.

Six beekeepers were identified who kept hives within the survey area near Mount Edgcumbe, near Wearde Quay, north of Saltash, west of Tamerton Foliot and in Stoke. The production of honey per hive ranged from 14 kg y^{-1} to 23 kg y^{-1}. It was reported that there were other beekeepers who kept hives within the survey area but they could not be contacted.

Blackberries, mushrooms and sloes were growing wild in the survey area and these were collected and consumed. Shooting took place on several of the farms within the survey area and one organised private game shoot was identified. The shooters and their families consumed the shot pheasant, pigeon, woodcock, rabbit and venison.

The consumption of groundwater by humans and livestock was identified. One household located on the north-western outer limit of the survey area used well water as their sole domestic supply and one household in the same area used well water and mains water. One household located near the south-western outer limit of the survey area used borehole water as their sole domestic supply. Livestock were supplied with drinking water from a well, a borehole or an underground reservoir at five farms. Livestock also had access to stream water. Stream fed reservoir water was used for irrigating arable crops at one farm.

5.2 Destination of food originating from the terrestrial survey area

Milk was sold to a national dairy co-operative. Beef cattle, lambs and pigs were sold to an abattoir outside the survey area. Lambs were also sold for fattening through a market outside the survey area. A small number of chickens were sold from the door at one farm and another farmer sold chicken eggs to a supermarket. Of the arable crops produced for human consumption: potatoes, onions and swedes were sold for the production of pasties; calabrese and cauliflower were sold direct to supermarkets; wheat was sold for milling; and cereal grain was sold nationally for human consumption. Venison from an organised shoot was sold to a game dealer outside the survey area. Honey was given or sold to the family and friends of beekeepers.

5.3 The potential transfer of contamination off-site by wildlife

The 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 the Devonport site but no vermin were monitored. The Devonport site is located in a densely populated area and it is considered unlikely that wildlife that could enter the food chain would be found on the site.

5.4 Food consumption data

Consumption data for locally produced foodstuffs potentially affected by deposition of gaseous discharges are presented in Tables 18 to 33 for adults and Tables 34 to 47 for children and infants.

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 48 and the foods sampled as part of the 2010 Food Standards Agency monitoring programme (EA, FSA, NIEA and SEPA, 2011) are identified by emboldened italics in the table.

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; pig meat; sheep meat; poultry; eggs; wild/free foods; rabbits/hares; honey; wild fungi; venison. No consumption of cereals or freshwater fish was identified.

Table F presents a summary of the adults' consumption rates of foods from the terrestrial survey area. The table includes the mean consumption rates for the high-rate groups and the observed 97.5th percentile rates calculated as in Section 3.4. 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. No generic data have been determined for venison.

Two mean consumption rates for the high-rate groups were found to be greater than the generic 97.5th percentile consumption rates. These were for domestic fruit and pig meat. Eleven 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, pig meat, sheep meat, eggs and honey. Six observed 97.5th percentile consumption rates exceeded the generic 97.5th percentile consumption rates. These were for green vegetables, other vegetables, potato, cattle meat, pig meat and eggs.

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

Food group	Number of observations	Number of high-rate consumers	Observed maximum for the high-rate group (kg y^{-1} or l y^{-1})	Observed minimum for the high-rate group (kg y^{-1} or l y^{-1})	Observed mean for the high-rate group (kg y^{-1} or l y^{-1})	Observed 97.5th percentile (kg y^{-1} or l y^{-1})	Generic mean (kg y^{-1} or l y^{-1})	Generic 97.5th percentile (kg y^{-1} or l y^{-1})
Green vegetables	73	15	82.1	28.6	41.7	58.6	15.0	45.0
Other vegetables	71	19	70.4	26.7	44.8	54.1	20.0	50.0
Root vegetables	70	29	34.4	12.1	18.6	32.4	10.0	40.0
Potato	56	5	144.3	54.5	108.4	144.3	50.0	120.0
Domestic fruit	68	4	110.8	50.7	81.1	71.2	20.0	75.0
Milk	3	3	207.4	207.4	207.4	207.4	95.0	240.0
Cattle meat	5	5	47.3	31.7	37.9	47.3	15.0	45.0
Pig meat	4	4	50.6	50.6	50.6	50.6	15.0	40.0
Sheep meat	11	9	11.3	5.7	9.6	11.3	8.0	25.0
Poultry	14	9	8.2	4.6	6.1	8.2	10.0	30.0
Eggs	14	12	35.6	16.4	22.6	35.6	8.5	25.0
Wild/free foods	40	7	7.9	3.0	4.9	7.9	7.0	25.0
Rabbits/hares	5	3	2.8	2.8	2.8	2.8	6.0	15.0
Honey	17	8	5.4	2.7	3.9	5.4	2.5	9.5
Wild fungi	12	8	2.0	0.8	1.3	2.0	3.0	10.0
Venison	10	8	13.5	5.0	9.1	13.5	ND	ND

Notes
ND - Not determined

Children's and infants' consumption rates

Twenty-two individuals in the child age group and three individuals in the infant age group were identified consuming foods from the terrestrial survey area. Table G 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: milk; pig meat; honey; wild fungi; venison; cereals; freshwater fish. In the infant age group, no consumption of foods from the following food groups was identified: milk; cattle meat; pig meat; sheep meat; poultry; eggs; wild/free foods; rabbits/hares; honey; wild fungi; venison; cereals; freshwater fish.

Table G. 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})	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)						
Green vegetables	12	10	8.5	4.8	7.6	8.5
Other vegetables	9	2	19.7	19.7	19.7	19.7
Root vegetables	11	2	18.4	18.4	18.4	18.4
Potato	8	1	25.8	25.8	25.8	21.9
Domestic fruit	14	4	19.4	6.5	11.2	17.1
Cattle meat	3	3	47.3	31.7	38.2	46.7
Sheep meat	6	3	9.9	5.7	7.1	9.4
Poultry	2	1	8.2	8.2	8.2	8.0
Eggs	1	1	26.7	26.7	26.7	NA
Wild/free foods	7	6	0.7	0.3	0.5	0.7
Rabbits/hares	1	1	2.8	2.8	2.8	NA
Infant age group (0 - 5 years old)						
Green vegetables	3	3	4.2	3.2	3.8	4.2
Other vegetables	3	2	11.1	4.6	7.8	10.7
Root vegetables	3	2	3.0	2.7	2.9	3.0
Potato	2	2	1.8	0.8	1.3	1.8
Domestic fruit	3	2	3.3	2.8	3.0	3.2

Notes
NA - Not applicable

6 DIRECT RADIATION PATHWAYS

6.1 Direct radiation survey area

The direct radiation survey area (shown in Figure 2, page 19) covered all land and sea within 1 km of the Devonport nuclear licensed site boundary. The occupancy data collected from the direct radiation area is also applicable to the direct exposure arising from gaseous releases from the site.

The Devonport nuclear licensed site occupies only a part of the Devonport dockyard area. Non-licensed areas of the dockyard extend to the north, east and south of the licensed site.

The densely populated residential area of Barne Barton is located to the north of the direct radiation survey area. This area is separated from the Devonport site by Weston Mill Lake; a rectangular body of water that opens into the Hamoaze, which is used to berth naval warships. The Camel's Head Sewage Treatment Plant is located immediately to the north-east of the Devonport site, beyond which, the survey area includes small sections of the residential areas of St Budeaux, Weston Mill and North Prospect.

Residential properties, shops, a nursery school, a primary school and a college are situated along a busy main road adjacent to the eastern side of the dockyard. The densely populated residential area of Keyham is located to the east of this road and the area included recreation grounds, a park, allotment sites and a train station. The residential area of Devonport is located beyond the dockyard to the south-east, which includes shops, a park and a train station.

Directly to the south of the Devonport dockyard basins, a road leading to the Torpoint ferry terminal cuts through a non-licensed area of the dockyard and along this road there is also a small residential area comprising low-rise flats and houses. Further south, a number of private companies operate their businesses within the non-licensed part of the dockyard.

The waters of the Hamoaze cover most of the western part of the direct radiation survey area. The edge of Torpoint and a small section of the MoD depot at Yonderberry Point were located near the outer limit of the survey area, on the western shore of the Hamoaze.

Due to the densely populated nature of the direct radiation survey area, it was not possible to conduct interviews at all houses and businesses in the area. Therefore, effort was divided between the three distance zones used in habits surveys. Initially, approximately 80% of effort was concentrated in the inner zone and approximately 10% of the effort was concentrated in each of the middle and outer zones. However, there were many residents in the inner zone who did not want to participate in the

survey, and therefore, the number of interviews conducted in the three zones does not reflect the initial division of effort.

6.2 Residential activities

Interviews were conducted at 18 residences, seven of which included families with children. Seven properties were within the 0 – 0.25 km zone, five properties were within the >0.25 – 0.5 km zone and six properties were within the >0.5 – 1.0 km zone.

6.3 Leisure activities

Numerous recreation grounds, parks and sports grounds were located within the survey area. Three well used allotment sites with a combined total of 88 plots were located to the east of the dockyard. The Hamoaze, to the west of the dockyard, was a busy thoroughfare for recreational and commercial boating traffic between Plymouth Sound and the Tamar Estuary.

6.4 Commercial activities

Within the direct radiation survey area, shops and businesses were predominantly located to the east and south-east in Keyham and Devonport. Many businesses were located on the main road directly adjacent to the eastern side of the dockyard. Interviews were conducted at seven of these businesses, three of which were in the 0 – 0.25 km zone, one was in the >0.25 – 5 km zone and three were in the >0.25 – 5 km zone. The number of employees at these establishments ranged from one to five. Occupancy rates were obtained for two employees at the Camel's Head Sewage Treatment Works, located in the >0.5 – 1 km zone. The Torpoint ferry operated between Devonport and Torpoint in the >0.5 – 1 km zone to the south-west of the survey area and occupancy rates were obtained for nine ferry crew.

The activities of Devonport site employees and contractors while at work were not were not included in the direct radiation survey.

6.5 Education activities

A children's day care centre and a college campus were located in the 0 – 0.25 km zone, three primary schools were located in the >0.25 – 0.5 km zone and two primary schools and a college campus were located in the >0.5 – 1 km zone. Generic data for staff and children were obtained from representatives at the day care centre and at two primary schools. At the day care centre there were 17 staff, and 90 pupils whose ages ranged from 3 months to 5 years old. One primary school had 98 staff and 462 pupils ranging from 3 years old to 11 years old and the other primary school had 48 staff

and 205 pupils ranging from 4 years old to 11 years old. A representative number of staff and children have been included in the data analysis in this report.

6.6 Occupancy rates

Table 49 presents the indoor, outdoor and total occupancy rates for adults, children and infants. An analysis of the data by distance zones and occupancy rates is shown in Table 50. A summary of the highest occupancy rates identified in the direct radiation survey area is presented in Table H.

Table H. 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	97	8096	798	8500
>0.25 - 0.5 km	146	8318	1748	8500
>0.5 - 1.0 km	176	8136	1782	8240

0 - 0.25 km from the nuclear licensed site boundary

Occupancy data were collected for 97 individuals in the 0 - 0.25 km zone. The observations were for 21 residents, one of whom also worked in the area, 23 employees, 46 children attending day care and seven visitors. The highest indoor, outdoor and total occupancy rates were for residents.

>0.25 - 0.5 km from the nuclear licensed site boundary

Occupancy data were collected for 146 individuals in the >0.25 - 0.5 km zone. The observations were for 15 residents, 51 employees and 80 pupils. One resident had the highest indoor and total occupancy rates and another resident had the highest outdoor occupancy rate.

>0.5 - 1.0 km from the nuclear licensed site boundary

Occupancy data were collected for 176 people in the >0.5 - 1.0 km zone. The observations were for 18 residents, one visitor, 67 employees and 90 pupils. The highest indoor and total occupancy rates were for residents. The highest outdoor occupancy rate was for nine employees.

6.7 Gamma dose rate measurements

Gamma dose rate measurements were taken indoors and outdoors at all residences where interviews were conducted and at one school in the Devonport direct radiation survey area. Where possible, the outdoor measurements were taken approximately 5 to 10 metres from the nearest building. This was not always feasible owing to the heavily built-up nature of the residential areas, and therefore, many measurements were taken at distances less than 5 metres from buildings. Gamma dose rate measurements over rough grass were taken at locations at distances 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. It should be noted that the indoor and outdoor measurements have not been adjusted for background dose rates. The results are presented in Table 51 and are summarised below.

Indoor measurements

- Six measurements taken over wood ranged from 0.088 µGyh^{-1} to 0.113 µGy h^{-1}
- Thirteen measurements taken over concrete ranged from 0.053 µGy h^{-1} to 0.070 µGy h^{-1}

Outdoor measurements

- Four measurements taken over concrete ranged from 0.078 µGy h^{-1} to 0.089 µGy h^{-1}
- Eleven measurements taken over grass ranged from 0.083 µGy h^{-1} to 0.114 µGy h^{-1}
- One measurement taken over gravel was 0.076 µGy h^{-1}
- Three measurements taken over soil ranged from 0.088 µGy h^{-1} 0.089 µGy h^{-1}

Background measurements

- Four measurements taken over grass ranged from 0.074 µGy h^{-1} to 0.101 µGy h^{-1}

Comprehensive studies of background radiation have been carried out on a national scale by the Radiation Protection Division of the Health Protection Agency (previously the National Radiological Protection Board), the most recent of these being a review conducted in 2005 (Watson *et al*, 2005). The results from the 2005 review could be used for comparison with the data collected during this survey.

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 52. Each of the 23 combinations shown in Table 52 represents an actual individual (or individuals) from Annex 1 who has positive data (irrespective of the magnitude), for each pathway marked with a cross. It should be noted that combination numbers in Table 52 do not correlate directly with observation numbers in Annex 1. Other individuals from Annex 1 have combinations that are not listed in Table 52 because they have fewer pathways and a dose assessment for them would be adequately covered by one of the 23 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, 2005), 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 Devonport 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 and 44 years old (www.statistics.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 environment agencies and the Food Standards Agency have considered ways of using habits data to calculate 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 relevant matrix for the Devonport adults' profiled habits data is shown in Annex 6. The National Dose Assessment Working Group (NDAWG) has considered this approach to assessing retrospective total doses (Camplin *et al*, 2005) and has agreed that using habits profiles is an appropriate approach. Retrospective total doses around Devonport are made using these profiles and reported in the Radioactivity in Food and the Environment reports (e.g. EA, FSA, NIEA and SEPA, 2011). 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. They are not currently used in the Radioactivity in Food and the Environment reports.

Note that during the survey it was reported that people were living on houseboats in private boatyards/marinas in the aquatic survey area. However, the survey team were not permitted access to the boatyards/marinas and therefore quantitative data for occupancy on board a boat that is resting on mud was not obtained. In order to account for this pathway in the profiles, an estimated annual rate for occupancy on board a boat that is resting on mud (using occupancy rates for this pathway obtained during the habits survey in the Devonport area in 2004) has been incorporated into the adult profile and the women of childbearing age profile for 2011. See Annex 3 for the estimated occupancy rate.

8 COMPARISONS WITH THE PREVIOUS SURVEY

The results from this 2011 survey can be compared with results from the last Devonport habits survey undertaken in 2004. The comparisons of consumption, occupancy and handling rates are for adults only. The aquatic, terrestrial and direct radiation survey areas in the 2011 survey were the same as those in the 2004 survey.

8.1 Aquatic survey area

The main species of fish consumed by the adult high-rate group in 2004 were pollack, bass, cod, flounder, thornback ray and mackerel, and in 2011 the main species were bass, cod, mackerel, thornback ray, grey mullet, pollack and herring. In 2004, the species of crustaceans consumed by the adult high-rate group were brown crab, common prawn, brown shrimp and common lobster, and in 2011 the species were brown crab, common lobster and common prawn. In 2004 and 2011 the only species of molluscs consumed by the adult high-rate group was scallops. The wildfowl consumed by the adult high-rate group in 2004 were mallard and teal, and in 2011 were mallard, Canada goose and teal. In 2004, no consumption of marine plants/algae was identified, but in 2011 the consumption of samphire was identified.

A comparison between the 2004 and 2011 data for the consumption of aquatic foods is presented in Table I.

Table I. Comparison between 2004 and 2011 consumption rates of aquatic food groups for adults

	2004			2011		
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	8	59.6	31.8	20	41.3	30.1
Crustaceans	12	11.3	3.5	9	3.9	2.4
Molluscs	1	1.7	1.7	2	0.1	0.1
Wildfowl	4	1.1	1.1	7	2.1	1.5
Marine plants/algae	Not identified			1	0.5	0.5

In 2011, there were decreases in the mean consumption rates for the adult high-rate groups for fish, from 32 kg y^{-1} in 2004 to 30 kg y^{-1} in 2011, for crustaceans, from 3.5 kg y^{-1} in 2004 to 2.4 kg y^{-1} in 2011, and for molluscs, from 1.7 kg y^{-1} in 2004 to 0.1 kg y^{-1} in 2011. In 2011, there was a slight increase in the mean consumption rates for the adult high-rate group for wildfowl from 1.1 kg y^{-1} in 2004 to 1.5 kg y^{-1} in 2011. No consumption of marine plants/algae was identified in 2004, but in 2011 the mean consumption rate for the adult high-rate group was 0.5 kg y^{-1}. No specific reasons were identified for the changes in consumption rates.

For intertidal occupancy in 2004 and 2011, activities were recorded over the following five intertidal substrates:

- Mud
- Mud, sand and stones (termed mud, sand and shale in 2004)
- Rock
- Salt marsh
- Sand and stones

In 2011, activities were also recorded over mud and sand, and over sand. In 2004, occupancy rates were obtained for people living on houseboats that were resting on mud at low tide. In 2011, it was reported that people were living on houseboats at three private boatyards/marinas in the survey area. However, the survey team were not permitted access to the boatyards/marinas and therefore quantitative data could not be obtained.

The activities undertaken over intertidal substrates by the individuals in the high-rate groups in 2004 included boat maintenance, living on a houseboat, angling, bait digging, dog walking, wildfowling and sunbathing. In 2011, the activities were bait digging, angling, dog walking, collecting mussels, netting for common prawns, wildfowling and boat maintenance. The only activity undertaken by the individual in the high-rate group for handling fishing gear in 2004 was handling nets and in 2011 the only activity was handling pots. In 2004, the activities undertaken by individuals in the high-rate group for handling sediment were bait digging and boat maintenance and in 2011 were collecting mussels and bait digging.

A comparison between the 2004 and 2011 data for occupancy over intertidal substrates, handling fishing gear and handling sediment is shown in Table J.

Table J. Comparison between 2004 and 2011 intertidal occupancy rates and handling rates of fishing gear and sediment for adults

	2004			2011		
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	612	461	1	520	520
Mud and sand	Data not obtained			2	245	227
Mud, sand and stones[a]	4	1300	978	4	548	400
Rock	8	150	80	3	66	52
Salt marsh	1	4	4	3	6	6
Sand	Data not obtained			4	52	42
Sand and stones	3	365	271	4	365	246
Boat on mud[b]	13	6770	4098	Data not obtained		
Handling fishing gear	1	780	780	1	820	820
Handling sediment	2	1000	806	5	540	344

Notes

[a] Termed mud, sand and shale in 2004.

[b] In the 2004 survey report, the data for intertidal occupancy and handling were presented for adults and children combined. The only high-rate group that included children was for occupancy on a boat on mud, and therefore, the mean rate for the high-rate group for this pathway has been recalculated for adults only, for use in this comparison.

The mean intertidal occupancy rates for the high-rate groups for mud, for rock, for salt marsh and for sand and stones in 2011 were broadly similar to those in 2004. There was a significant decrease in the mean occupancy rate for the high-rate group over mud, sand and stones from 980 h y^{-1} in 2004 to 400 h y^{-1} in 2011. Activities were recorded over mud and sand, and over sand in 2011 but were not recorded over these substrates in 2004. Occupancy on board a houseboat that was resting on mud at low tide was recorded in 2004 but was not obtained in 2011. The mean rate for the high-rate group for handling fishing gear in 2011 was broadly similar to that in 2004. The mean rate for the high-rate group for handling sediment decreased significantly in 2011 and this was mainly attributed to a reduction in the hours that people spent bait digging in 2011 compared with 2004.

8.2 Terrestrial survey area

Activities in the terrestrial survey area were broadly similar in 2011 and 2004; the principal types of farm produce continued to be a mix of beef cattle, lambs, milk (from dairy cattle), and arable crops. Small changes were identified in 2011. One farmer who produced beef in 2004 had switched to growing arable crops in 2011 and one farmer who produced a small amount of geese and turkeys for sale in 2004 had switched to producing a small number of pigs in 2011. Of the 20 allotment sites that were identified in 2004, 19 were still open and one was no longer in use.

The mean consumption rates for the adult high-rate group for terrestrial food groups from the 2004 and 2011 surveys are shown in Table K.

Table K. Comparison between 2004 and 2011 mean consumption rates for the adult high-rate groups for terrestrial food groups (kg y^{-1} or l y^{-1})

Food group	2004	2011
Green vegetables	54.1	41.7
Other vegetables	60.6	44.8
Root vegetables	71.2	18.6
Potato	87.9	108.4
Domestic fruit	44.5	81.1
Milk	195.0	207.4
Cattle meat	49.0	37.9
Pig meat	Not identified	50.6
Sheep meat	12.7	9.6
Poultry	3.7	6.1
Eggs	10.0	22.6
Wild/free foods	8.9	4.9
Rabbits/hares	0.9	2.8
Honey	7.6	3.9
Wild fungi	0.1	1.3
Venison	10.0	9.1

The mean consumption rates for the adult high-rate groups increased in 2011 in the following seven food groups: potato; domestic fruit; milk; poultry; eggs; rabbits/hares; wild fungi. All of these increases were relatively large with the exception of milk. The consumption of pig meat was identified in 2011 but was not identified in 2004.

The mean consumption rates for the adult high-rate group decreased in 2011 in the following eight food groups: green vegetables; other vegetables; root vegetables; cattle meat; sheep meat; wild/free foods; honey; venison. There were relatively large decreases for root vegetables; wild/free foods; honey.

No specific reasons were identified for the changes in consumption rates. No consumption of cereals or freshwater fish was identified in either 2004 or 2011.

The human consumption of groundwater and the use of groundwater and surface water for the drinking supply for livestock was identified in both the 2004 and the 2011 surveys.

8.3 Direct radiation survey area

Activities identified in the direct radiation survey area in 2004 and 2011 were similar and included people residing, working, visiting, attending school and attending day care. A comparison between the 2004 and 2011 direct radiation occupancy rates, by zone, is presented in Table L.

Table L. Comparison between 2004 and 2011 direct radiation occupancy rates (h y^{-1})

	2004	2011
0 - 0.25 km zone		
Highest indoor	8527	8096
Highest outdoor	913	798
Highest total	8527	8500
>0.25 - 0.5 km zone		
Highest indoor	8316	8318
Highest outdoor	1627	1748
Highest total	8708	8500
>0.5 - 1 km zone		
Highest indoor	8366	8136
Highest outdoor	1460	1782
Highest total	8552	8240

In 2004 and 2011 the highest indoor, outdoor and total rates were for residents with the exception of the highest outdoor occupancy rate in the >0.5 – 0.1 km zone in 2011, which was for nine employees.

In the Devonport direct radiation survey area, two sets of gamma dose measurements taken in 2011 can be compared with those taken at the same properties in 2004. These data are shown in Table M.

Table M. Comparison between 2004 and 2011 gamma dose rates (μGy h^{-1})

	Indoor		Outdoor	
Location	**2004**	**2011**	**2004**	**2011**
Residence 6	0.068	0.058	Not measured	0.076
Residence 7	0.071	0.060	0.083	0.088

Notes
These measurements have not been adjusted for background dose rates.
The locations correspond to those in Table 51.

9 MAIN FINDINGS

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

- Discharges of liquid radioactive waste to the Hamoaze and to the local sewer
- Discharges of gaseous radioactive waste to the atmosphere
- Emissions of direct radiation

Data were collected for 685 individuals including, for example, fishermen, anglers, people spending time on intertidal substrates, farmers, allotment holders, gardeners, beekeepers and people spending time within the direct radiation survey area. These people were targeted because their habits and where they live 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. 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.

9.1 Aquatic survey area

The mean consumption rate 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:

- 30 kg y^{-1} for fish
- 2.4 kg y^{-1} for crustaceans
- 0.1 kg y^{-1} for molluscs
- 1.5 kg y^{-1} for wildfowl
- 0.5 kg y^{-1} for marine plants/algae

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

- For fish; bass, cod, mackerel, thornback ray, grey mullet, pollack and herring
- For crustaceans; brown crab, common lobster and common prawn
- For molluscs; queen scallops
- For wildfowl; mallard, Canada goose and teal
- For marine plants/algae; samphire

The use of seaweed as a fertiliser on an allotment plot was identified. The use of seaweed as an animal feed was not identified.

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

- 520 h y^{-1} for mud
- 230 h y^{-1} for mud and sand
- 400 h y^{-1} for mud, sand and stones
- 52 h y^{-1} for rock
- 6 h y^{-1} for salt marsh
- 42 h y^{-1} for sand
- 250 h y^{-1} for sand and stones

It was reported that people were living on houseboats at three private boatyards/marinas in the survey area. The survey team were not permitted access to the boatyards/marinas, and therefore, quantitative data could not be obtained. An occupancy rate of 4100 h y^{-1} for people living on board a houseboat while it is resting on mud was estimated for use in dose assessments. See Annex 3.

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

- 820 h y^{-1} for handling fishing gear
- 340 h y^{-1} for handling sediment

For workers at the Camel's Head Sewage Treatment Plant, which receives liquid waste from the Devonport site, the maximum occupancy rates in close proximity (<10 m) to sewage sludge were:

- 970 h y^{-1} for liquid sewage sludge
- 510 h y^{-1}.for dried sewage sludge

The adult maximum occupancy rates for water based activities were:

- 200 h y^{-1} for 'in water'
- 2400 h y^{-1} 'on water'

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:

- 42 kg y^{-1} for green vegetables
- 45 kg y^{-1} for other vegetables
- 19 kg y^{-1} for root vegetables
- 110 kg y^{-1} for potato
- 81 kg y^{-1} for domestic fruit
- 210 l y^{-1} for milk
- 38 kg y^{-1} for cattle meat
- 51 kg y^{-1} for pig meat
- 9.6 kg y^{-1} for sheep meat

- 6.1 kg y^{-1} for poultry
- 23 kg y^{-1} for eggs
- 4.9 kg y^{-1} for wild/free foods
- 2.8 kg y^{-1} for rabbits/hares
- 3.9 kg y^{-1} for honey
- 1.3 kg y^{-1} for wild fungi
- 9.1 kg y^{-1} for venison

No consumption of cereals or freshwater fish was identified from the survey area. The consumption of foodstuffs by individuals in the child and infant age groups was also recorded.

The consumption of groundwater by humans was identified at two households where well water or borehole water was used as the sole domestic supply and at one household where both well water and mains water were used. Livestock were supplied with water from wells, boreholes or underground reservoirs for drinking at five farms and livestock at other farms had access to stream water.

The Devonport site did not have control measures to limit the possibility that contamination is transferred off-site since little wildlife was found on site. Routine pest control was undertaken on site but vermin were not monitored.

9.3 Direct radiation survey area

Within the zones of the direct radiation survey area, the highest indoor, outdoor and total occupancy rates were for residents, with the exception of the highest outdoor occupancy rate in the >0.5 – 1 km zone, which was for nine employees. The highest indoor, outdoor and total occupancy rates recorded for all zones were:

0 - 0.25 km zone

- 8100 h y^{-1} for the indoor occupancy rate
- 800 h y^{-1} for the outdoor occupancy rate
- 8500 h y^{-1} for the total occupancy rate

>0.25 - 0.5 km zone

- 8300 h y^{-1} for the indoor occupancy rate
- 1700 h y^{-1} for the outdoor occupancy rate
- 8500 h y^{-1} for the total occupancy rate

>0.5 - 1 km zone

- 8100 h y^{-1} for the indoor occupancy rate
- 1800 h y^{-1} for the outdoor occupancy rate
- 8200 h y^{-1} for the total occupancy rate

10 RECOMMENDATIONS FOR CHANGES TO THE MONITORING PROGRAMME

The information collected during the 2011 Devonport habits survey can be used to make recommendations for changes to the current monitoring programmes.

10.1 Summary of current environmental monitoring programmes

The 2010 monitoring programmes for Devonport operated by the Environment Agency and the Food Standards Agency, and published in the RIFE report (EA, FSA, NIEA and SEPA, 2011), included the samples and measurements listed below. The location names, foods and substrate classifications are taken directly from that publication. Some of the samples and measurements taken for the monitoring programmes may be from outside the survey areas used for the 2011 Devonport habits survey.

Aquatic monitoring

Aquatic samples	
Sample	**Location**
Ballan Wrasse	Plymouth Sound
Corkwing Wrasse	Plymouth Sound
Crabs	Plymouth Sound
Shrimps	Lynher Estuary
Cockles	Southdown
Pacific oysters	Southdown
Mussels	River Lynher
Seaweed	Kinterbury
Sediment	Kinterbury
Sediment	Torpoint (south)
Sediment	Lopwell
Seawater	Torpoint (south)
Seawater	Millbrook Lake
Gamma dose rate measurements	
Substrate	**Location**
Mud and stones	Torpoint (south)
Rock and stones	Torpoint (south)
Mud and stones	Kinterbury access gate
Rock and stones	Kinterbury access gate
Mud	Lopwell
Mud and salt marsh	Lopwell

Terrestrial monitoring

Sample
Beetroot
Blackberries
Courgettes
Lettuce

10.2 Recommendations

Recommendations for changes to the current environmental monitoring programmes are made below. They are based on the findings of this survey and also take into account the potential radiological significance of the various pathways that were identified.

It is recommended that the samples and gamma dose rate measurements currently taken, which are not listed below, remain unchanged in the monitoring programmes.

Environment Agency monitoring

- The gamma dose rate measurements currently taken at Lopwell on the River Tavy could be changed to Warleigh Point, over mud, since no activities were identified at Lopwell but bait digging and angling were taking place at Warleigh Point which is also on the River Tavy.

Food Standards Agency monitoring

- Within the 'fish' food group, Ballan Wrasse and Corkwing Wrasse are currently being monitored but no consumption was identified. It is recommended that these samples are replaced with samples of bass, cod or grey mullet which could be alternated depending on the availability of species.
- Within the 'mollusc' food group, the samples of cockles and oysters currently collected could be removed, since no consumption was identified and previous assessments have shown no radiological significance.
- Within the 'crustaceans' food group, shrimps are currently being monitored but no consumption was identified. It is recommended that this sample is replaced with a sample of common prawns.
- A one-off sample of milk could be added for reassurance purposes, since this was consumed and no milk samples are currently taken. Beef was also consumed but milk would be a first indicator of uptake in cattle.

11 ACKNOWLEDGEMENTS

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

12 REFERENCES

Allott, R., 2005. Assessment of compliance with the public dose limit. Principles for the assessment of total retrospective public doses. National Dose Assessment Working Group. NDAWG/2/2005.

Byrom, J., Robinson, C., Simmonds, J.R., Walters, B. and Taylor, R.R., 1995. Food consumption rates for use in generalised radiological dose assessments. J. Radiol. Prot. 1995 Vol. 15 No 4 335-341.

Camplin, W.C., Grzechnik, M.P. and Smedley, C.A., 2005. Methods for assessment of total dose in the Radioactivity in Food and the Environment report. Presented to the *National Dose Assessments Working Group (NDAWG)*. Paper NDAWG/3/2005, 27th April 2005.

CEC, 1996. Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation. Off. J. Eur. Commun., 39(L159): 1-114.

DETR, 2000. Radioactive Substances (Basic Safety Standards) (England and Wales) Direction 2000. DETR, London.

EA, EHS, FSA and SEPA, 2006. Radioactivity in Food and the Environment, 2005. EA, EHS, FSA and SEPA, Warrington, Belfast, London and Stirling. RIFE (11).

EA, FSA, NIEA and SEPA, 2011. Radioactivity in Food and the Environment, 2010. EA, FSA, NIEA and SEPA, Warrington, London, Belfast and Stirling. RIFE (16).

EA, SEPA, DoENI, NRPB and FSA, 2002. Authorisation of discharges of radioactive waste to the environment. Principles for the assessment of prospective public doses. Interim Guidance. EA, SEPA, DoENI, NRPB and FSA, Lancaster.

FSA, 2002. Assessment Methodology for the Potential Impact on Food of Radioactive Discharges to the Environment. FSA, London.

Good Housekeeping, 1994. Good Housekeeping Cook Book. Ebury Press, London.

Hessayon, D. G., 1990. The Fruit Expert, pbi Publications, Waltham Cross.

Hessayon, D. G., 1997. The New Vegetable & Herb Expert, Expert Books, London.

Hunt, G.J., Hewett, C.J. and Shepherd, J.G., 1982. The identification of critical groups and its application to fish and shellfish consumers in the coastal area of the north-east Irish Sea. Health Physics, Vol. 43, No 6, 875-889.

IAEA, 1996. International basic safety standards for protection against ionizing radiation and for the safety of radiation sources. Saf. Ser. No. 115. IAEA, Vienna.

ICRP, 1991. 1990 Recommendations of the International Commission on Radiological Protection. Annal. ICRP 21 (1-3). Pergamon Press, Oxford, (ICRP Publ. 60).

ICRP, 2006. Assessing dose of the representative person for the purpose of radiation protection of the public. Annal. ICRP 36 (3). Elsevier Science, Oxford, (ICRP Publ. 101).

ICRP, 2007. The 2007 Recommendations of the International Commission on Radiological Protection. Annal. ICRP 37 (2-4). Elsevier Science, Oxford, (ICRP Publ. 103).

Leonard, D.R.P., Hunt, G.J. and Jones, P.G.W., 1982. Investigation of individual radiation exposures from discharges to the aquatic environment: techniques used in habits surveys. Proc. 3rd Int. Symp. Soc. Radiol. Prot., Inverness, 6 to 11 June 1982. Vol 2, 512-517. Society for Radiological Protection.

NDAWG, 2005. Position paper on the collection and use of habits data for retrospective dose assessments. National Dose Assessment Working Group. NDAWG/4/2005.

NDAWG, 2009. Acquisition and use of habits data for prospective assessments. National Dose Assessment Working Group. NDAWG/2/2009.

National Radiological Protection Board, 2005. Guidance on the application of dose coefficients for the embryo and fetus from intakes of radionuclides by the mother. Docs NRPB 16(2). NRPB, Chilton, 41pp.

Smith, K.R. and Jones, A.L., 2003. Generalised habit data for radiological assessments. NRPB-W41. NRPB, Chilton.

Tipple, J.R., McTaggart, K.A., Clyne, F.J. and Sherlock, M., 2005. Radiological Habits Survey: Devonport, 2004. RL 01/05. Cefas, Lowestoft.

UK Parliament, 1965. Nuclear Installations Act, 1965 (as amended). HMSO, London.

UK Parliament, 1993. Radioactive Substances Act, 1993. HMSO, London.

UK Parliament, 1995. Environment Act, 1995. HMSO, London.

UK Parliament, 1999. The Ionising Radiation Regulations 1999. Stat. Inst. 1999/3232. HMSO, London, 67pp.

UK Parliament, 2009. UK Strategy for Radioactive Discharges. DECC, London.

UK Parliament, 2010. Environmental Permitting (England and Wales) Regulations, 2010. Statutory Instrument 2010 No 675. HMSO, London.

Watson, S.J., Jones, A.L., Oatway, W.B. and Hughes, J.S., 2005. Ionising Radiation Exposure of the UK Population: 2005 review. HPA-RPD-001, Chilton.

www.statistics.gov.uk

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 Devonport 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**)	148000[a]	110[c]	0.07%	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**)	9800[b]	54	0.5%	Interviews were conducted at 18 residences.
	Number of people employed but not resident in the direct radiation survey area (See **(C) DIRECT RADIATION PATHWAYS**)	U	130[c]	U	Excluding people living in the direct radiation survey area and employees and contractors of the Devonport site. Eleven people who were potentially affected by liquid discharges as well as being employed in the direct radiation survey area (e.g. ferry crew) have been allocated to aquatic pathway below.
	Number of people visiting the direct radiation survey area (See **(C) DIRECT RADIATION PATHWAYS**)	U	224	U	Including 216 children attending school or attending day care.
	Number of people effected by liquid discharges (excluding those assigned to other categories above) (See **(A) AQUATIC PATHWAYS**)	U	167[c]	U	
	Total for aquatic, terrestrial and direct radiation survey areas	U	685[c]	U	
(A) AQUATIC PATHWAYS					
Commercial fishermen	Number of commercial fishermen based in the aquatic survey area	5	2	40%	
People undertaking activities in or on water (e.g. swimming, angling and sailing)	Number of people undertaking activities in or on water in the aquatic survey area	U	113	U	
People using the shore including anglers, dog walkers and people playing etc.	Number of people undertaking intertidal activities in the aquatic survey area	U	53	U	
Fish consumers	Number of people consuming fish from the aquatic survey area	U	58	U	
Shellfish consumers	Number of people consuming shellfish from the aquatic survey area	U	14	U	
Wildfowl consumers	Number of people consuming wildfowl from the aquatic survey area	U	15	U	
Marine plant consumers	Number of people consuming marine plants from the aquatic survey area	U	1	U	

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
(B) TERRESTRIAL PATHWAYS					
Farmers	Number of farmers and their family members consuming food from the terrestrial survey area	27	22	81%	Interviews were conducted at 9 working farms out of a total of 11 farms identified within the survey area.
Allotment holders	Number of allotment holders and their family members consuming food from the terrestrial survey area	2800	72	3%	Interviews were conducted with 19 allotment holders. There were approximatley 750 allotment plots at 19 allotment sites in the survey area.
Beekeepers	Number of people consuming honey produced by bee keepers in the terrestrial survey area	U	17	U	5 beekeepers were identified.
(C) DIRECT RADIATION PATHWAYS					
Residents	Number of residents in the survey area	9,800	54	0.5%	Interviews were conducted at 18 residences.
Employees	Number of people employed in the survey area	U	141	U	Excluding people living in the direct radiation survey area and employees and contractors of the Devonport site. Including 11 people who were potentially affected by liquid discharges as well as being employed in the direct radiation survey area (e.g. ferry crew).
Visitors	Number of visitors to the survey area	U	224	U	Including 216 children attending school or attending day care.
BREAKDOWN OF AGE GROUPS FOR PEOPLE RESIDENT IN THE 5 KM TERRESTRIAL SURVEY AREA					
Adult	16-year-old and over	120000[a]	394	0.3%	
Child	6-year-old to 15-year-old	18000[a]	186	1%	
Infant	0 to 5-year-old	10000[a]	105	1%	

Notes

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

[b] Estimate of the number of people resident in the 1 km direct radiation survey area based on data from www.statistics.gov.uk.

[c] 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, common 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 Devonport aquatic survey area (kg y^{-1})

Observation number	Bass	Bream	Cod	Conger eel	Dab	Eel	Flounder	Grey mullet	Herring	Mackerel	Pollack	Ray (unspecified species)	Thornback ray	Turbot	Whiting	Total
103	**29.0**	**-**	**-**	**-**	**-**	**-**	**-**	**7.3**	**-**	**5.0**	**-**	**-**	**-**	**-**	**-**	**41.3**
104	**29.0**	**-**	**-**	**-**	**-**	**-**	**-**	**7.3**	**-**	**5.0**	**-**	**-**	**-**	**-**	**-**	**41.3**
105	**29.0**	**-**	**-**	**-**	**-**	**-**	**-**	**7.3**	**-**	**5.0**	**-**	**-**	**-**	**-**	**-**	**41.3**
106	**29.0**	**-**	**-**	**-**	**-**	**-**	**-**	**7.3**	**-**	**5.0**	**-**	**-**	**-**	**-**	**-**	**41.3**
253	**5.7**	**-**	**5.7**	**-**	**-**	**1.0**	**-**	**5.7**	**5.7**	**5.7**	**5.7**	**-**	**5.7**	**-**	**-**	**40.7**
254	**5.7**	**-**	**5.7**	**-**	**-**	**1.0**	**-**	**5.7**	**5.7**	**5.7**	**5.7**	**-**	**5.7**	**-**	**-**	**40.7**
255	**5.7**	**-**	**5.7**	**-**	**-**	**1.0**	**-**	**5.7**	**5.7**	**5.7**	**5.7**	**-**	**5.7**	**-**	**-**	**40.7**
256	**5.7**	**-**	**5.7**	**-**	**-**	**1.0**	**-**	**5.7**	**5.7**	**5.7**	**5.7**	**-**	**5.7**	**-**	**-**	**40.7**
214	**7.3**	**-**	**7.3**	**3.6**	**-**	**-**	**3.6**	**3.6**	**-**	**-**	**-**	**-**	**7.3**	**-**	**3.6**	**36.3**
205	**4.5**	**2.3**	**4.5**	**-**	**2.3**	**-**	**-**	**-**	**-**	**6.8**	**4.5**	**-**	**4.5**	**-**	**-**	**29.5**
206	**4.5**	**2.3**	**4.5**	**-**	**2.3**	**-**	**-**	**-**	**-**	**6.8**	**4.5**	**-**	**4.5**	**-**	**-**	**29.5**
207	**4.5**	**2.3**	**4.5**	**-**	**2.3**	**-**	**-**	**-**	**-**	**6.8**	**4.5**	**-**	**4.5**	**-**	**-**	**29.5**
208	**4.5**	**2.3**	**4.5**	**-**	**2.3**	**-**	**-**	**-**	**-**	**6.8**	**4.5**	**-**	**4.5**	**-**	**-**	**29.5**
215	**3.6**	**-**	**3.6**	**1.8**	**-**	**-**	**1.8**	**1.8**	**-**	**-**	**-**	**-**	**3.6**	**-**	**1.8**	**18.1**
216	**3.6**	**-**	**3.6**	**1.8**	**-**	**-**	**1.8**	**1.8**	**-**	**-**	**-**	**-**	**3.6**	**-**	**1.8**	**18.1**
218	**3.6**	**-**	**3.6**	**1.8**	**-**	**-**	**1.8**	**1.8**	**-**	**-**	**-**	**-**	**3.6**	**-**	**1.8**	**18.1**
219	**3.6**	**-**	**3.6**	**1.8**	**-**	**-**	**1.8**	**1.8**	**-**	**-**	**-**	**-**	**3.6**	**-**	**1.8**	**18.1**
159	**1.1**	**-**	**6.7**	**-**	**-**	**-**	**-**	**0.5**	**2.5**	**1.7**	**1.4**	**-**	**1.5**	**-**	**-**	**15.5**
160	**1.1**	**-**	**6.7**	**-**	**-**	**-**	**-**	**0.5**	**2.5**	**1.7**	**1.4**	**-**	**1.5**	**-**	**-**	**15.5**
161	**1.1**	**-**	**6.7**	**-**	**-**	**-**	**-**	**0.5**	**2.5**	**1.7**	**1.4**	**-**	**1.5**	**-**	**-**	**15.5**
220	2.1	-	-	-	-	-	-	-	1.0	6.9	-	-	-	-	-	10.1
221	-	-	-	-	-	-	-	-	-	7.4	-	-	-	-	-	7.4
222	-	-	-	-	-	-	-	-	-	7.4	-	-	-	-	-	7.4
223	-	-	-	-	-	-	-	-	-	7.4	-	-	-	-	-	7.4
212	0.6	-	-	-	-	-	-	-	-	5.3	1.1	-	-	-	-	7.0
213	0.6	-	-	-	-	-	-	-	-	5.3	1.1	-	-	-	-	7.0
46	-	-	-	-	-	-	-	-	-	-	6.9	-	-	-	-	6.9
99	0.3	-	4.9	-	-	-	-	-	-	-	0.4	-	-	0.3	-	6.0
100	0.3	-	4.9	-	-	-	-	-	-	-	0.4	-	-	0.3	-	6.0
293	4.7	-	-	-	-	-	-	-	-	0.8	-	-	-	-	-	5.5
113	1.3	-	-	-	-	-	-	-	-	-	1.7	-	-	-	1.6	4.6

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

Observation number	Bass	Bream	Cod	Conger eel	Dab	Eel	Flounder	Grey mullet	Herring	Mackerel	Pollack	Ray (unspecified species)	Thornback ray	Turbot	Whiting	Total
114	1.3	-	-	-	-	-	-	-	-	-	1.7	-	-	-	1.6	4.6
50	1.4	-	-	-	-	-	-	-	-	-	1.4	0.9	-	-	0.9	4.5
308	1.5	-	-	-	-	-	-	-	-	1.5	1.5	-	-	-	-	4.5
310	1.5	-	-	-	-	-	-	-	-	1.5	1.5	-	-	-	-	4.5
111	1.1	-	-	-	-	-	-	-	-	-	1.4	-	-	-	1.3	3.8
112	1.1	-	-	-	-	-	-	-	-	-	1.4	-	-	-	1.3	3.8
455	0.8	-	2.6	-	-	-	-	-	-	-	-	-	-	-	-	3.4
456	0.8	-	2.6	-	-	-	-	-	-	-	-	-	-	-	-	3.4
230	-	-	0.9	-	-	-	-	-	-	0.5	0.5	-	0.5	-	0.5	2.7
231	-	-	0.9	-	-	-	-	-	-	0.5	0.5	-	0.5	-	0.5	2.7
102	0.9	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-	2.5
232	-	-	0.7	-	-	-	-	-	-	0.3	0.3	-	0.3	-	0.3	2.0
233	-	-	0.7	-	-	-	-	-	-	0.3	0.3	-	0.3	-	0.3	2.0
8	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	1.1
9	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	1.1
10	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	1.1
11	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	1.1
12	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	1.1
94	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	0.3	0.9
95	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	0.3	0.9

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of fish based on the 20 high-rate adult consumers is 30.1 kg y^{-1}

The observed 97.5th percentile rate based on 51 observations is 41.3 kg y^{-1}

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

Observation number	Brown crab	Common lobster	Common prawn[a]	Total
225	**3.6**	**0.4**	**-**	**3.9**
226	**3.6**	**0.4**	**-**	**3.9**
227	**3.6**	**0.4**	**-**	**3.9**
228	**1.8**	**0.2**	**-**	**2.0**
253	**1.4**	**0.2**	**-**	**1.6**
254	**1.4**	**0.2**	**-**	**1.6**
255	**1.4**	**0.2**	**-**	**1.6**
256	**1.4**	**0.2**	**-**	**1.6**
103	**-**	**-**	**1.4**	**1.4**
308	-	-	1.0	1.0
309	-	-	1.0	1.0
310	-	-	1.0	1.0

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of crustaceans based on the 9 high-rate adult consumers is 2.4 kg y^{-1}

The observed 97.5th percentile rate based on 12 observations is 3.9 kg y^{-1}

[a]Reported by interviewees to be common prawns, but in common usage 'prawn' and 'shrimp' are interchangeable and the species are not always identified correctly

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

Observation number	Queen scallop
44	**0.1**
45	**0.1**

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of molluscs based on the 2 high-rate adult consumers is 0.1 kg y^{-1}

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

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

Observation number	Canada goose	Mallard	Teal	Total
663	**1.4**	**0.7**	**-**	**2.1**
664	**1.4**	**0.7**	**-**	**2.1**
680	**0.7**	**0.9**	**-**	**1.6**
681	**0.7**	**0.9**	**-**	**1.6**
672	**-**	**0.8**	**0.3**	**1.1**
673	**-**	**0.8**	**0.3**	**1.1**
674	**-**	**0.8**	**0.3**	**1.1**
665	-	0.7	-	0.7
666	-	0.7	-	0.7
667	-	0.7	-	0.7
668	-	0.7	-	0.7
669	-	0.7	-	0.7
670	-	0.7	-	0.7
671	-	0.7	-	0.7

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wildfowl based on the 7 high-rate adult consumers is 1.5 kg y^{-1}

The observed 97.5th percentile rate based on 14 observations is 2.1 kg y^{-1}

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

Observation number	Samphire
282	**0.5**

Notes

The emboldened observation is the high-rate consumer

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

The observed 97.5th percentile rate is not applicable for 1 observation

Table 8. Children's and infants' consumption rates of fish from the Devonport aquatic survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Bass	Cod	Conger eel	Flounder	Grey mullet	Herring	Mackerel	Pollack	Thornback ray	Whiting	Total
217	**14**	**3.6**	**3.6**	**1.8**	**1.8**	**1.8**	**-**	**-**	**-**	**3.6**	**1.8**	**18.1**
162	**13**	**1.1**	**6.7**	**-**	**-**	**0.5**	**2.5**	**1.7**	**1.4**	**1.5**	**-**	**15.5**
115	10	1.0	-	-	-	-	-	-	1.3	-	1.2	3.5
457	15	0.8	2.6	-	-	-	-	-	-	-	-	3.4
458	13	0.8	2.6	-	-	-	-	-	-	-	-	3.4
459	11	0.8	2.6	-	-	-	-	-	-	-	-	3.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of fish for the child age group based on the 2 high-rate consumers is 16.8 kg y^{-1}

The observed 97.5th percentile rate based on 6 observations is 17.8 kg y^{-1}

Infant age group (0 - 5 years old)

Observation number	Age	Bass	Cod	Conger eel	Flounder	Grey mullet	Herring	Mackerel	Pollack	Thornback ray	Whiting	Total
116	**3**	**0.7**	**-**	**-**	**-**	**-**	**-**	**-**	**0.9**	**-**	**0.8**	**2.3**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of fish for the infant age group based on the only high-rate consumer is 2.3 kg y^{-1}

The observed 97.5th percentile rate is not applicable for 1 observation

Table 9. Children's consumption rates of wildfowl from the Devonport aquatic survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Mallard	Teal	Total
675	**14**	**0.8**	**0.3**	**1.1**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of wildfowl for the child age group based on the only high-rate consumer is 1.1 kg y^{-1}

The observed 97.5th percentile rate is not applicable for 1 observation

Table 10. Adults' consumption rates of vegetables grown on land where seaweed has been used as a fertiliser (kg y^{-1})

Observation number	Onion
1	1.0
2	1.0
3	1.0
4	1.0
5	1.0

Notes

These onions are included in the aquatic section of this report as the exposure pathway is sea to land transfer and the source of potential exposure is liquid discharge. They were grown in the terrestrial survey area and so they are also potentially subject to gaseous discharges. They are included in the 'root vegetable' food group in the terrestrial section tables and in Annex 1.

Table 11. Adults' intertidal occupancy in the Devonport aquatic survey area (h y^{-1})

Observation number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones
455	**Warleigh Point**	**Bait digging and angling**	**520**	-	-	-	-	-	-
	River Plym	**Bait digging**	-	**208**	-	-	-	-	-
	Torpoint	Bait digging	-	-	104	-	-	-	-
54	Wearde Quay	Collecting mussels	4	-	-	-	-	-	-
	Southdown	Collecting cockles	-	6	-	-	-	-	-
55	Wearde Quay	Collecting mussels	4	-	-	-	-	-	-
	Southdown	Collecting cockles	-	6	-	-	-	-	-
663	River Tamar and River Tavy	Wildfowling	4	-	-	-	-	-	-
664	River Tamar and River Tavy	Wildfowling	4	-	-	-	-	-	-
665	River Tamar and River Tavy	Wildfowling	4	-	-	-	-	-	-
666	River Tamar and River Tavy	Wildfowling	4	-	-	-	-	-	-
667	River Tamar and River Tavy	Wildfowling	4	-	-	-	-	-	-
668	River Tamar and River Tavy	Wildfowling	4	-	-	-	-	-	-
669	River Tamar and River Tavy	Wildfowling	4	-	-	-	-	-	-
670	River Tamar and River Tavy	Wildfowling	4	-	-	-	-	-	-
671	River Tamar and River Tavy	Wildfowling	4	-	-	-	-	-	-
99	**River Plym and River Tamar**	**Bait digging**	-	**245**	-	-	-	-	-
101	River Plym	Bait digging	-	24	-	-	-	-	-
102	River Plym	Bait digging	-	24	-	-	-	-	-
680	River Tavy	Walking	-	20	-	-	-	-	-
681	River Tavy	Walking	-	20	-	-	-	-	-
464	**Torpoint**	**Dog walking, bait digging and angling**	-	-	**548**	-	-	-	-
229	**River Lynher**	**Collecting mussels**	-	-	**540**	-	-	-	-
463	**Torpoint**	**Bait digging and angling**	-	-	**328**	-	-	-	-
453	**Torpoint**	**Dog walking**	-	-	**183**	-	-	-	-
466	Torpoint	Dog walking	-	-	172	-	-	-	-
281	Torpoint	Dog walking	-	-	140	-	-	-	-
294	Torpoint	Bait digging and walking	-	-	96	-	-	-	-
465	Torpoint	Angling and bait digging	-	-	90	-	-	-	-
215	Torpoint	Bait digging	-	-	60	-	-	-	-
	Riverside	Dip netting	-	-	-	-	-	-	14
454	Torpoint	Bait digging	-	-	56	-	-	-	-
	Cawsand	**Angling**	-	-	-	-	-	-	**168**
214	Torpoint	Bait digging	-	-	30	-	-	-	-
	Riverside	Dip netting	-	-	-	-	-	-	7
103	**Antony Passage**	**Netting for common prawns**	-	-	-	**66**	-	-	-
106	**Antony Passage**	**Netting for common prawns**	-	-	-	**60**	-	-	-
105	**Antony Passage**	**Netting for common prawns**	-	-	-	**30**	-	-	-
1	Stonehouse	Collecting seaweed	-	-	-	2	-	-	-

Table 11. Adults' intertidal occupancy in the Devonport aquatic survey area (h y^{-1})

Observation number	Location	Activity	Mud	Mud and sand	Mud, sand and stones	Rock	Salt marsh	Sand	Sand and stones
672	**Clift Marsh (River Lynher)**	**Wildfowling**	-	-	-	-	**6**	-	-
676	**Clift Marsh (River Lynher)**	**Wildfowling**	-	-	-	-	**6**	-	-
677	**Clift Marsh (River Lynher)**	**Wildfowling**	-	-	-	-	**6**	-	-
282	River Lynher	Collecting marine plants	-	-	-	-	1	-	-
251	**River Plym**	**Dog walking**	-	-	-	-	-	**52**	-
252	**River Plym**	**Dog walking**	-	-	-	-	-	**52**	-
96	**River Plym**	**Dog walking**	-	-	-	-	-	**31**	-
97	**River Plym**	**Dog walking**	-	-	-	-	-	**31**	-
137	**Riverside**	**Dog walking**	-	-	-	-	-	-	**365**
209	**Riverside**	**Boat maintenance**	-	-	-	-	-	-	**250**
212	**Riverside**	**Boat maintenance**	-	-	-	-	-	-	**200**
204	Saltash Waterfront	Boat maintenance	-	-	-	-	-	-	104
210	Riverside	Boat maintenance	-	-	-	-	-	-	40
211	Riverside	Boat maintenance	-	-	-	-	-	-	30
36	The Hoe	Playing	-	-	-	-	-	-	3
37	The Hoe	Playing	-	-	-	-	-	-	3

Notes

Emboldened observations are the high-rate individuals

The mean intertidal occupancy rate over mud based on 1 observation is 520 h y^{-1}

The observed 97.5th percentile rate based on 12 observations for mud is 378 h y^{-1}

The mean intertidal occupancy rate over mud and sand based on 2 high-rate observations is 227 h y^{-1}

The observed 97.5th percentile rate based on 8 observations for mud and sand is 239 h y^{-1}

The mean intertidal occupancy rate over mud, sand and stones based on 4 high-rate observations is 400 h y^{-1}

The observed 97.5th percentile rate based on 12 observations for mud, sand and stones is 546 h y^{-1}

The mean intertidal occupancy rate over rock based on 3 high-rate observations is 52 h y^{-1}

The observed 97.5th percentile rate based on 4 observations for rock is 66 h y^{-1}

The mean intertidal occupancy rate over salt marsh based on 3 high-rate observations is 6 h y^{-1}

The observed 97.5th percentile rate based on 4 observations for salt marsh is 6 h y^{-1}

The mean intertidal occupancy rate over sand based on 4 high-rate observations is 42 h y^{-1}

The observed 97.5th percentile rate based on 4 observations for sand is 52 h y^{-1}

The mean intertidal occupancy rate over sand and stones based on 4 high-rate observations is 246 h y^{-1}

The observed 97.5th percentile rate based on 11 observations for sand and stones is 336 h y^{-1}

Table 12. Children's intertidal occupancy in the Devonport aquatic survey area (h y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Location	Activity	Mud and sand	Mud, sand and stones	Sand	Sand and stones
682	**12**	**River Tavy**	**Walking**	**20**	-	-	-
683	**14**	**River Tavy**	**Walking**	**20**	-	-	-
280	**15**	**Torpoint**	**Dog walking**	-	**52**	-	-
98	**13**	**River Plym**	**Dog walking**	-	-	**15**	-
38	**9**	**The Hoe**	**Playing**	-	-	-	**3**

Notes

Emboldened observations are the high-rate individuals

The mean intertidal occupancy rate over mud and sand based on 2 high-rate observations is 20 h y^{-1}

The observed 97.5th percentile rate based on 2 observations for mud and sand is 20 h y^{-1}

The mean intertidal occupancy rate over mud, sand and stones based on the only high-rate observation is 52 h y^{-1}

The mean intertidal occupancy rate over sand based on the only high-rate observation is 15 h y^{-1}

The mean intertidal occupancy rate over sand and stones based on the only high-rate observation is 3 h y^{-1}

The observed 97.5th percentile rate is not applicable for 1 observation

Table 13. Gamma dose rate measurements over intertidal substrates in the Devonport aquatic survey area (µGy h^{-1})

Location	NGR	Substrate	Gamma dose rate at 1 metre[a]
Torpoint	SX 437 546	Sand and stones	0.087
Torpoint	SX 439 547	Mud, sand and stones	0.091
Torpoint	SX 440 552	Mud and stones	0.084
Saltash Waterfront	SX 433 586	Sand and stones	0.090
Riverside	SX 436 586	Stones	0.088
The western shore of the River Plym	SX 503 552	Mud	0.093
The eastern shore of the River Plym	SX 508 553	Sand	0.105
The eastern shore of the River Plym	SX 507 553	Mud and sand	0.092
The eastern shore of the River Plym	SX 503 543	Mud	0.078

Notes

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

Table 14. Adults' handling rates of fishing gear and sediment in the Devonport aquatic survey area (h y^{-1})

Observation number	Location	Activity	Fishing gear	Sediment
225	**Plymouth Sound**	**Handling pots**	**820**	-
103	Antony Passage	Handling nets	111	-
106	Antony Passage	Handling nets	105	-
105	Antony Passage	Handling nets	53	-
215	Riverside	Handling dip nets	14	-
	Torpoint	Bait digging	-	60
214	Riverside	Handling dip nets	7	-
	Torpoint	Bait digging	-	30
229	**River Lynher**	**Collecting mussels**	-	**540**
455	**River Plym, Torpoint and Warleigh Point**	**Bait digging**	-	**520**
99	**River Plym and River Tamar**	**Bait digging**	-	**245**
463	**Torpoint**	**Bait digging**	-	**208**
464	**Torpoint**	**Bait digging**	-	**208**
454	Torpoint	Bait digging	-	56
294	Torpoint	Bait digging	-	48
465	Torpoint	Bait digging	-	30
101	River Plym	Bait digging	-	24
102	River Plym	Bait digging	-	24
54	Southdown	Collecting cockles	-	10
	Wearde Quay	Collecting mussels	-	
55	Southdown	Collecting cockles	-	10
	Wearde Quay	Collecting mussels	-	
672	Clift Marsh (River Lynher)	Wildfowling	-	6
676	Clift Marsh (River Lynher)	Wildfowling	-	6
677	Clift Marsh (River Lynher)	Wildfowling	-	6
663	River Tamar and River Tavy	Wildfowling	-	4
664	River Tamar and River Tavy	Wildfowling	-	4
665	River Tamar and River Tavy	Wildfowling	-	4
666	River Tamar and River Tavy	Wildfowling	-	4
667	River Tamar and River Tavy	Wildfowling	-	4
668	River Tamar and River Tavy	Wildfowling	-	4
669	River Tamar and River Tavy	Wildfowling	-	4
670	River Tamar and River Tavy	Wildfowling	-	4
671	River Tamar and River Tavy	Wildfowling	-	4
1	Stonehouse	Collecting seaweed	-	2

Notes

Emboldened observations are the high-rate individuals

The mean fishing gear handling rate based on 1 observation is 820 h y^{-1}

The observed 97.5th percentile rate based on 6 observations for fishing gear is 731 h y^{-1}

The mean sediment handling rate based on 5 high-rate observations is 344 h y^{-1}

The observed 97.5th percentile rate based on 27 observations for sediment is 527 h y^{-1}

Table 15. Occupancy rates in close proximity to liquid sewage sludge and dried sewage sludge (h y^{-1})

Observation number	Activity	Occupancy in close proximity (<10 m) to liquid sewage sludge	Occupancy in close proximity (<10 m) to dried sewage sludge
684	Debris removal, cleaning filters, unblocking pumps and pipes, sampling and operating machinery	966	506
685	Debris removal, cleaning filters, unblocking pumps and pipes, sampling and operating machinery	966	506

Notes

Occupancy rates were also obtained for contractors at the sewage treatment works. See Section 4.12.

Table 16. Adults' occupancy rates in and on water in the Devonport aquatic survey area (h y^{-1})

Observation number	Location	Activity	In water	On water
132	River Tamar	Swimming and kayaking	200	-
	River Tamar	Sailing	-	150
133	River Tamar	Swimming and kayaking	200	-
	River Tamar	Sailing	-	150
295	St John's Lake	Windsurfing	70	-
296	St John's Lake	Windsurfing	70	-
465	River Tamar	Kayaking	70	-
293	Plymouth Sound	Diving and water skiing	50	-
	Plymouth Sound	Sailing	-	504
35	Mount Wise	Swimming	48	-
224	Firestone Bay	Swimming	38	-
1	The Hoe	Swimming	13	-
	Plymouth Sound	Sailing	-	196
282	Plymouth Sound	Diving	10	-
	Plymouth Sound	Sailing	-	530
	Hamoaze and Plymouth Sound	Coastguard duties	-	
79	Mount Wise	Swimming	9	-
42	Plymouth Breakwater and Jennycliff Bay	Diving	6	-
	Plymouth Breakwater and Jennycliff Bay	On a dive boat	-	4
43	Plymouth Breakwater and Jennycliff Bay	Diving	6	-
	Plymouth Breakwater and Jennycliff Bay	On a dive boat	-	4
8	Plymouth Sound	Swimming	1	-
	The Hoe	Canoeing	-	10
47	Mount Batten Point	Swimming	1	-
	Mount Batten Point	Canoeing	-	2
257	Between Cremyll and Stonehouse	Ferry crew duties	-	2390
258	Between Cremyll and Stonehouse	Ferry crew duties	-	2390
259	Between Cremyll and Stonehouse	Ferry crew duties	-	2390
260	Between Cremyll and Stonehouse	Ferry crew duties	-	2390
261	Between Cremyll and Stonehouse	Ferry crew duties	-	2390
262	Between Cremyll and Stonehouse	Ferry crew duties	-	2390
263	Between Cremyll and Stonehouse	Ferry crew duties	-	2390
264	Between Cremyll and Stonehouse	Ferry crew duties	-	2390
467	Between Torpoint and Devonport	Ferry crew duties	-	2020
468	Between Torpoint and Devonport	Ferry crew duties	-	2020
469	Between Torpoint and Devonport	Ferry crew duties	-	2020
470	Between Torpoint and Devonport	Ferry crew duties	-	2020
471	Between Torpoint and Devonport	Ferry crew duties	-	2020
472	Between Torpoint and Devonport	Ferry crew duties	-	2020
473	Between Torpoint and Devonport	Ferry crew duties	-	2020
474	Between Torpoint and Devonport	Ferry crew duties	-	2020
475	Between Torpoint and Devonport	Ferry crew duties	-	2020
44	Plymouth Sound, River Lynher and River Tamar	Charter boat skipper duties	-	1284

Table 16. Adults' occupancy rates in and on water in the Devonport aquatic survey area (h y^{-1})

Observation number	Location	Activity	In water	On water
99	Plymouth Sound	Angling	-	920
225	Plymouth Sound	Potting	-	820
205	All estuaries in the survey area	Angling	-	624
206	All estuaries in the survey area	Angling	-	624
212	River Tamar and River Lynher	Pleasure cruising and angling	-	600
213	River Tamar and River Lynher	Pleasure cruising and angling	-	600
138	River Tamar	Rowing	-	550
139	River Tamar	Rowing	-	500
140	River Tamar	Rowing	-	500
215	Hamoaze	Angling	-	416
283	Hamoaze	Sailing	-	324
284	Hamoaze	Sailing	-	324
285	Hamoaze	Sailing	-	324
286	Hamoaze	Sailing	-	324
287	Hamoaze	Sailing	-	324
288	Hamoaze	Sailing	-	324
289	Hamoaze	Sailing	-	324
290	Hamoaze	Sailing	-	324
291	Hamoaze	Sailing	-	324
292	Hamoaze	Sailing	-	324
210	River Tamar and River Lynher	Pleasure cruising	-	320
209	River Tamar and River Lynher	Pleasure cruising	-	300
141	River Tamar	Rowing	-	250
142	River Tamar	Rowing	-	250
229	River Lyner, Hamoaze and Plymouth Sound	Steaming to mussel beds	-	240
214	Hamoaze	Angling	-	208
204	All estuaries in the survey area	Pleasure cruising	-	200
211	River Tamar and River Lynher	Pleasure cruising	-	180
120	River Tamar, Hamoaze and Plymouth Sound	Sailing	-	156
121	River Tamar, Hamoaze and Plymouth Sound	Sailing	-	156
107	River Tamar	Canoeing	-	104
108	River Tamar	Canoeing	-	104
109	River Tamar	Canoeing	-	104
103	Antony Passage	Netting for common prawns	-	97
	All estuaries in the survey area	Pleasure cruising	-	
	River Lynher	Angling	-	
117	River Tamar	Canoeing	-	65
118	River Tamar	Canoeing	-	65
455	Plymouth Sound	Angling	-	64
294	Plymouth Sound	Angling	-	48
680	River Tavy	Sailing	-	30
681	River Tavy	Sailing	-	30

Table 16. Adults' occupancy rates in and on water in the Devonport aquatic survey area (h y^{-1})

Observation number	Location	Activity	In water	On water
106	Antony Passage	Netting for common prawns	-	27
	All estuaries in the survey area	Pleasure cruising	-	
105	Antony Passage	Netting for common prawns	-	20
	All estuaries in the survey area	Pleasure cruising	-	
104	All estuaries in the survey area	Pleasure cruising	-	12
36	The Hoe	Paddling	-	3
37	The Hoe	Paddling	-	3

Table 17. Children's and infants' occupancy rates in and on water in the Devonport aquatic survey area (h y^{-1})

Observation number	Age	Location	Activity	In water	On water
Child age group (6 - 15 years old)					
134	15	River Tamar	Swimming and kayaking	200	-
		River Tamar	Sailing	-	150
135	14	River Tamar	Swimming and kayaking	200	-
		River Tamar	Sailing	-	150
136	11	River Tamar	Swimming and kayaking	200	-
		River Tamar	Sailing	-	150
38	9	The Hoe	Swimming	3	-
143	15	River Tamar	Rowing	-	200
144	14	River Tamar	Rowing	-	200
145	13	River Tamar	Rowing	-	200
151	15	River Tamar	Rowing	-	200
152	14	River Tamar	Rowing	-	200
153	13	River Tamar	Rowing	-	200
122	15	River Tamar, Hamoaze and Plymouth Sound	Sailing	-	156
123	15	River Tamar, Hamoaze and Plymouth Sound	Sailing	-	156
124	14	River Tamar, Hamoaze and Plymouth Sound	Sailing	-	156
125	14	River Tamar, Hamoaze and Plymouth Sound	Sailing	-	156
126	13	River Tamar, Hamoaze and Plymouth Sound	Sailing	-	156
127	13	River Tamar, Hamoaze and Plymouth Sound	Sailing	-	156
128	12	River Tamar, Hamoaze and Plymouth Sound	Sailing	-	156
129	12	River Tamar, Hamoaze and Plymouth Sound	Sailing	-	156
130	11	River Tamar, Hamoaze and Plymouth Sound	Sailing	-	156
131	11	River Tamar, Hamoaze and Plymouth Sound	Sailing	-	156
110	10	River Tamar	Canoeing	-	104
146	12	River Tamar	Rowing	-	104
147	11	River Tamar	Rowing	-	104
148	10	River Tamar	Rowing	-	104
149	9	River Tamar	Rowing	-	104
150	8	River Tamar	Rowing	-	104
154	12	River Tamar	Rowing	-	104
155	11	River Tamar	Rowing	-	104
156	10	River Tamar	Rowing	-	104
157	9	River Tamar	Rowing	-	104
158	8	River Tamar	Rowing	-	104
119	10	River Tamar	Canoeing	-	65
682	12	River Tavy	Sailing	-	30
683	14	River Tavy	Sailing	-	30
Infant age group (0 - 5 years old)					
80	2	Mount Wise	Swimming	9	-

Table 18. Adults' consumption rates of green vegetables from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Artichoke	Broccoli	Brussel sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Herbs	Kale	Lettuce	Marrow	Pak choi	Rocket	Spinach	Total
75	**-**	**12.6**	**16.8**	**15.7**	**-**	**6.7**	**-**	**10.3**	**-**	**-**	**16.8**	**3.2**	**-**	**-**	**-**	**-**	**82.1**
20	**-**	**5.6**	**6.8**	**0.4**	**-**	**3.7**	**-**	**10.1**	**16.6**	**-**	**3.0**	**2.4**	**9.9**	**-**	**-**	**-**	**58.6**
21	**-**	**5.6**	**6.8**	**0.4**	**-**	**3.7**	**-**	**10.1**	**16.6**	**-**	**3.0**	**2.4**	**9.9**	**-**	**-**	**-**	**58.6**
92	**14.6**	**14.5**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**14.5**	**43.6**
93	**14.6**	**14.5**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**14.5**	**43.6**
39	**13.1**	**-**	**12.3**	**3.7**	**2.2**	**-**	**1.0**	**-**	**5.7**	**-**	**-**	**0.9**	**-**	**-**	**-**	**-**	**38.8**
40	**13.1**	**-**	**12.3**	**3.7**	**2.2**	**-**	**1.0**	**-**	**5.7**	**-**	**-**	**0.9**	**-**	**-**	**-**	**-**	**38.8**
41	**13.1**	**-**	**12.3**	**3.7**	**2.2**	**-**	**1.0**	**-**	**5.7**	**-**	**-**	**0.9**	**-**	**-**	**-**	**-**	**38.8**
19	**-**	**-**	**7.7**	**14.5**	**-**	**-**	**-**	**9.2**	**-**	**-**	**-**	**1.6**	**-**	**2.5**	**-**	**-**	**35.5**
87	**-**	**4.0**	**-**	**13.5**	**-**	**7.4**	**-**	**4.4**	**-**	**-**	**-**	**2.5**	**-**	**-**	**0.4**	**1.8**	**34.0**
88	**-**	**4.0**	**-**	**13.5**	**-**	**7.4**	**-**	**4.4**	**-**	**-**	**-**	**2.5**	**-**	**-**	**0.4**	**1.8**	**34.0**
33	**1.8**	**-**	**3.0**	**-**	**3.6**	**1.8**	**-**	**17.8**	**-**	**-**	**-**	**1.0**	**-**	**-**	**-**	**2.2**	**31.2**
34	**1.8**	**-**	**3.0**	**-**	**3.6**	**1.8**	**-**	**17.8**	**-**	**-**	**-**	**1.0**	**-**	**-**	**-**	**2.2**	**31.2**
31	**-**	**8.5**	**-**	**14.9**	**-**	**3.7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.5**	**28.6**
32	**-**	**8.5**	**-**	**14.9**	**-**	**3.7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.5**	**28.6**
73	-	3.4	-	-	-	-	-	22.1	-	-	-	-	-	-	-	0.9	26.3
74	-	3.4	-	-	-	-	-	22.1	-	-	-	-	-	-	-	0.9	26.3
6	-	1.0	4.0	6.6	-	-	-	0.8	9.6	-	-	0.2	3.6	-	-	-	25.8
7	-	1.0	4.0	6.6	-	-	-	0.8	9.6	-	-	0.2	3.6	-	-	-	25.8
56	-	-	-	13.7	-	-	-	1.8	-	-	-	-	5.0	-	-	-	20.5
57	-	-	-	13.7	-	-	-	1.8	-	-	-	-	5.0	-	-	-	20.5
81	-	-	6.9	6.2	-	-	-	-	-	-	-	-	5.4	-	-	-	18.5
82	-	-	6.9	6.2	-	-	-	-	-	-	-	-	5.4	-	-	-	18.5
83	-	-	6.9	6.2	-	-	-	-	-	-	-	-	5.4	-	-	-	18.5
84	-	-	6.9	6.2	-	-	-	-	-	-	-	-	5.4	-	-	-	18.5
8	-	3.7	-	3.4	-	-	-	3.7	3.1	0.4	-	-	-	0.9	-	1.7	16.8
9	-	3.7	-	3.4	-	-	-	3.7	3.1	0.4	-	-	-	0.9	-	1.7	16.8
10	-	3.7	-	3.4	-	-	-	3.7	3.1	0.4	-	-	-	0.9	-	1.7	16.8
11	-	3.7	-	3.4	-	-	-	3.7	3.1	0.4	-	-	-	0.9	-	1.7	16.8
12	-	3.7	-	3.4	-	-	-	3.7	3.1	0.4	-	-	-	0.9	-	1.7	16.8
90	-	-	-	5.7	-	-	-	8.2	-	-	-	1.2	-	-	-	1.4	16.5
91	-	-	-	5.7	-	-	-	8.2	-	-	-	1.2	-	-	-	1.4	16.5
22	-	2.2	2.7	0.3	-	1.5	-	4.0	2.0	-	2.1	-	-	-	-	-	15.0
23	-	2.2	2.7	0.3	-	1.5	-	4.0	2.0	-	2.1	-	-	-	-	-	15.0

Table 18. Adults' consumption rates of green vegetables from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Artichoke	Broccoli	Brussel sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Herbs	Kale	Lettuce	Marrow	Pak choi	Rocket	Spinach	Total
29	-	-	4.1	5.7	-	-	-	-	-	-	-	-	-	-	-	1.1	11.0
30	-	-	4.1	5.7	-	-	-	-	-	-	-	-	-	-	-	1.1	11.0
35	-	-	-	-	-	-	-	9.2	-	-	-	0.4	-	-	1.0	-	10.6
13	-	-	-	9.3	-	-	-	-	-	-	-	0.9	-	-	-	-	10.2
14	-	-	-	9.3	-	-	-	-	-	-	-	0.9	-	-	-	-	10.2
15	-	-	1.9	3.6	-	-	-	2.3	-	-	-	0.4	-	0.6	-	-	8.9
16	-	-	1.9	3.6	-	-	-	2.3	-	-	-	0.4	-	0.6	-	-	8.9
17	-	-	1.9	3.6	-	-	-	2.3	-	-	-	0.4	-	0.6	-	-	8.9
18	-	-	1.9	3.6	-	-	-	2.3	-	-	-	0.4	-	0.6	-	-	8.9
265	-	-	-	-	6.1	2.4	-	-	-	-	-	-	-	-	-	-	8.5
266	-	-	-	-	6.1	2.4	-	-	-	-	-	-	-	-	-	-	8.5
63	-	-	2.7	0.4	-	-	-	1.5	2.0	-	1.5	0.3	-	-	-	-	8.4
64	-	-	2.7	0.4	-	-	-	1.5	2.0	-	1.5	0.3	-	-	-	-	8.4
65	-	-	2.7	0.4	-	-	-	1.5	2.0	-	1.5	0.3	-	-	-	-	8.4
66	-	-	2.7	0.4	-	-	-	1.5	2.0	-	1.5	0.3	-	-	-	-	8.4
68	-	-	2.7	0.4	-	-	-	1.5	2.0	-	1.5	0.3	-	-	-	-	8.4
69	-	-	2.7	0.4	-	-	-	1.5	2.0	-	1.5	0.3	-	-	-	-	8.4
58	-	-	-	5.5	-	-	-	0.7	-	-	-	-	2.0	-	-	-	8.2
59	-	-	-	5.5	-	-	-	0.7	-	-	-	-	2.0	-	-	-	8.2
274	-	1.6	-	-	-	-	-	6.0	-	-	-	-	-	-	-	-	7.6
275	-	1.6	-	-	-	-	-	6.0	-	-	-	-	-	-	-	-	7.6
308	-	-	-	7.4	-	-	-	-	-	-	-	-	-	-	-	-	7.4
309	-	-	-	7.4	-	-	-	-	-	-	-	-	-	-	-	-	7.4
310	-	-	-	7.4	-	-	-	-	-	-	-	-	-	-	-	-	7.4
37	-	-	-	-	-	-	-	6.6	-	-	-	-	-	-	-	-	6.6
36	-	-	-	-	-	-	-	5.2	-	-	-	-	-	-	1.5	-	6.6
249	-	4.1	-	-	-	-	-	-	-	-	-	1.2	-	-	-	-	5.3
250	-	4.1	-	-	-	-	-	-	-	-	-	1.2	-	-	-	-	5.3
89	-	0.4	-	1.4	-	0.7	-	0.4	-	-	-	0.3	-	-	0.04	0.2	3.4
27	-	-	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-	3.0
28	-	-	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-	3.0
1	-	-	-	-	-	-	-	-	2.1	0.4	-	-	-	-	-	0.05	2.6
2	-	-	-	-	-	-	-	-	2.1	0.4	-	-	-	-	-	0.05	2.6
3	-	-	-	-	-	-	-	-	1.4	0.3	-	-	-	-	-	0.03	1.8

Table 18. Adults' consumption rates of green vegetables from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Artichoke	Broccoli	Brussel sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Herbs	Kale	Lettuce	Marrow	Pak choi	Rocket	Spinach	Total
4	-	-	-	-	-	-	-	-	1.4	0.3	-	-	-	-	-	0.03	1.8
5	-	-	-	-	-	-	-	-	1.4	0.3	-	-	-	-	-	0.03	1.8
312	-	-	-	-	-	-	-	-	-	-	-	0.7	-	-	-	-	0.7
313	-	-	-	-	-	-	-	-	-	-	-	0.7	-	-	-	-	0.7
314	-	-	-	-	-	-	-	-	-	-	-	0.7	-	-	-	-	0.7

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables based on the 15 high-rate adult consumers is 41.7 kg y^{-1}

The observed 97.5th percentile rate based on 73 observations is 58.6 kg y^{-1}

Table 19. Adults' consumption rates of other vegetables from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Aubergine	Broad bean	Chilli pepper	French bean	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	White kidney bean	Total
20	**-**	**-**	**-**	**3.6**	**9.0**	**-**	**-**	**2.0**	**10.1**	**4.8**	**40.3**	**0.5**	**70.4**
21	**-**	**-**	**-**	**3.6**	**9.0**	**-**	**-**	**2.0**	**10.1**	**-**	**40.3**	**0.5**	**65.6**
33	**-**	**17.7**	**-**	**-**	**2.9**	**-**	**0.9**	**26.5**	**-**	**2.2**	**-**	**-**	**50.3**
34	**-**	**17.7**	**-**	**-**	**2.9**	**-**	**0.9**	**26.5**	**-**	**2.2**	**-**	**-**	**50.3**
39	**2.7**	**16.4**	**1.3**	**-**	**0.1**	**0.7**	**-**	**3.1**	**6.1**	**-**	**19.2**	**-**	**49.5**
40	**2.7**	**16.4**	**1.3**	**-**	**0.1**	**0.7**	**-**	**3.1**	**6.1**	**-**	**19.2**	**-**	**49.5**
41	**2.7**	**16.4**	**1.3**	**-**	**0.1**	**0.7**	**-**	**3.1**	**6.1**	**-**	**19.2**	**-**	**49.5**
56	**-**	**-**	**-**	**9.7**	**-**	**-**	**-**	**20.4**	**10.1**	**-**	**9.0**	**-**	**49.2**
57	**-**	**-**	**-**	**9.7**	**-**	**-**	**-**	**20.4**	**10.1**	**-**	**9.0**	**-**	**49.2**
81	**-**	**9.2**	**-**	**-**	**9.1**	**-**	**-**	**25.7**	**-**	**1.1**	**-**	**-**	**45.1**
82	**-**	**9.2**	**-**	**-**	**9.1**	**-**	**-**	**25.7**	**-**	**1.1**	**-**	**-**	**45.1**
83	**-**	**9.2**	**-**	**-**	**9.1**	**-**	**-**	**25.7**	**-**	**1.1**	**-**	**-**	**45.1**
84	**-**	**9.2**	**-**	**-**	**9.1**	**-**	**-**	**25.7**	**-**	**1.1**	**-**	**-**	**45.1**
90	**-**	**11.1**	**-**	**-**	**3.6**	**-**	**-**	**22.0**	**-**	**1.9**	**-**	**-**	**38.6**
91	**-**	**11.1**	**-**	**-**	**3.6**	**-**	**-**	**22.0**	**-**	**1.9**	**-**	**-**	**38.6**
31	**-**	**6.4**	**-**	**-**	**-**	**-**	**-**	**6.1**	**-**	**-**	**15.3**	**0.1**	**27.9**
32	**-**	**6.4**	**-**	**-**	**-**	**-**	**-**	**6.1**	**-**	**-**	**15.3**	**0.1**	**27.9**
36	**-**	**10.5**	**-**	**0.6**	**0.1**	**-**	**-**	**5.4**	**-**	**-**	**10.1**	**-**	**26.7**
37	**-**	**10.5**	**-**	**0.6**	**0.1**	**-**	**-**	**5.4**	**-**	**-**	**10.1**	**-**	**26.7**
87	-	7.4	-	1.0	2.2	-	-	12.2	-	-	-	-	22.7
88	-	7.4	-	1.0	2.2	-	-	12.2	-	-	-	-	22.7
13	-	-	-	-	-	-	-	22.7	-	-	-	-	22.7
14	-	-	-	-	-	-	-	22.7	-	-	-	-	22.7
27	-	3.4	-	1.1	1.5	3.9	-	6.6	-	-	4.5	-	21.0
28	-	3.4	-	1.1	1.5	3.9	-	6.6	-	-	4.5	-	21.0
58	-	-	-	3.9	-	-	-	8.2	4.0	-	3.6	-	19.7
59	-	-	-	3.9	-	-	-	8.2	4.0	-	3.6	-	19.7
75	-	-	2.7	2.1	-	1.4	-	5.7	0.3	7.2	-	-	19.5
29	-	-	-	-	0.4	-	-	18.4	-	-	-	-	18.8

Table 19. Adults' consumption rates of other vegetables from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Aubergine	Broad bean	Chilli pepper	French bean	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	White kidney bean	Total
30	-	-	-	-	0.4	-	-	18.4	-	-	-	-	18.8
274	-	7.5	-	-	-	-	-	7.5	-	-	1.6	-	16.6
275	-	7.5	-	-	-	-	-	7.5	-	-	1.6	-	16.6
6	-	0.3	-	0.5	0.1	-	-	1.8	-	0.3	12.2	-	15.1
7	-	0.3	-	0.5	0.1	-	-	1.8	-	0.3	12.2	-	15.1
312	-	-	-	-	0.4	-	-	7.1	-	-	6.0	-	13.6
313	-	-	-	-	0.4	-	-	7.1	-	-	6.0	-	13.6
314	-	-	-	-	0.4	-	-	7.1	-	-	6.0	-	13.6
249	-	-	-	-	-	-	-	-	-	-	10.8	-	10.8
250	-	-	-	-	-	-	-	-	-	-	10.8	-	10.8
8	0.8	0.4	0.2	0.2	0.2	1.2	-	2.0	-	2.1	2.2	-	9.4
9	0.8	0.4	0.2	0.2	0.2	1.2	-	2.0	-	2.1	2.2	-	9.4
10	0.8	0.4	0.2	0.2	0.2	1.2	-	2.0	-	2.1	2.2	-	9.4
11	0.8	0.4	0.2	0.2	0.2	1.2	-	2.0	-	2.1	2.2	-	9.4
12	0.8	0.4	0.2	0.2	0.2	1.2	-	2.0	-	2.1	2.2	-	9.4
73	-	-	-	-	5.4	-	-	3.1	-	-	-	-	8.5
74	-	-	-	-	5.4	-	-	3.1	-	-	-	-	8.5
92	-	-	-	-	-	-	-	-	-	-	8.1	-	8.1
93	-	-	-	-	-	-	-	-	-	-	8.1	-	8.1
19	-	-	-	0.9	0.3	-	-	-	-	6.9	-	-	8.1
15	-	5.5	-	0.2	0.1	-	-	-	-	1.7	-	-	7.6
16	-	5.5	-	0.2	0.1	-	-	-	-	1.7	-	-	7.6
17	-	5.5	-	0.2	0.1	-	-	-	-	1.7	-	-	7.6
18	-	5.5	-	0.2	0.1	-	-	-	-	1.7	-	-	7.6
64	-	0.2	-	0.1	-	0.8	-	2.0	-	0.3	3.8	-	7.2
2	0.5	-	0.1	0.1	0.3	-	-	0.5	-	0.1	4.5	-	6.2
1	0.5	-	-	0.1	0.3	-	-	0.5	-	0.1	4.5	-	6.1
308	-	-	-	-	-	-	-	1.8	-	-	4.1	-	5.8
309	-	-	-	-	-	-	-	1.8	-	-	4.1	-	5.8

Table 19. Adults' consumption rates of other vegetables from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Aubergine	Broad bean	Chilli pepper	French bean	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	White kidney bean	Total
310	-	-	-	-	-	-	-	1.8	-	-	4.1	-	5.8
63	-	0.2	-	0.1	-	0.8	-	0.2	-	0.3	3.8	-	5.4
65	-	0.2	-	0.1	-	0.8	-	0.2	-	0.3	3.8	-	5.4
66	-	0.2	-	0.1	-	0.8	-	0.2	-	0.3	3.8	-	5.4
68	-	0.2	-	0.1	-	0.8	-	0.2	-	0.3	3.8	-	5.4
69	-	0.2	-	0.1	-	0.8	-	0.2	-	0.3	3.8	-	5.4
3	0.3	-	0.1	0.1	0.2	-	-	0.3	-	0.1	3.1	-	4.2
4	0.3	-	0.1	0.1	0.2	-	-	0.3	-	0.1	3.1	-	4.2
5	0.3	-	0.1	0.1	0.2	-	-	0.3	-	0.1	3.1	-	4.2
89	-	0.7	-	0.1	0.2	-	-	1.2	-	-	-	-	2.3
22	-	-	-	1.4	-	-	-	0.8	-	-	-	-	2.3
23	-	-	-	1.4	-	-	-	0.8	-	-	-	-	2.3
35	-	-	-	-	0.2	-	-	-	-	-	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of other vegetables based on the 19 high-rate adult consumers is 44.8 kg y^{-1}

The observed 97.5th percentile rate based on 71 observations is 54.1 kg y^{-1}

Table 20. Adults' consumption rates of root vegetables from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Beetroot	Carrot	Celeriac	Garlic	Jerusalem artichoke	Leek	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Turnip	Total
20	2.3	12.2	3.2	-	-	9.0	-	-	-	-	1.0	6.8	-	34.4
21	2.3	12.2	3.2	-	-	9.0	-	-	-	-	1.0	6.8	-	34.4
75	1.9	1.3	-	0.4	-	-	2.5	1.0	-	-	-	24.6	-	31.6
81	-	2.3	-	-	-	-	5.5	-	-	4.9	-	6.9	2.7	22.2
82	-	2.3	-	-	-	-	5.5	-	-	4.9	-	6.9	2.7	22.2
83	-	2.3	-	-	-	-	5.5	-	-	4.9	-	6.9	2.7	22.2
84	-	2.3	-	-	-	-	5.5	-	-	4.9	-	6.9	2.7	22.2
87	2.4	3.4	-	0.2	-	3.6	5.8	0.4	1.5	1.7	0.2	-	-	19.3
88	2.4	3.4	-	0.2	-	3.6	5.8	0.4	1.5	1.7	0.2	-	-	19.3
33	2.9	4.4	-	0.6	-	-	3.2	3.5	-	-	-	4.4	-	19.1
34	2.9	4.4	-	0.6	-	-	3.2	3.5	-	-	-	4.4	-	19.1
265	-	-	-	-	-	-	12.2	-	-	-	-	6.1	-	18.4
266	-	-	-	-	-	-	12.2	-	-	-	-	6.1	-	18.4
92	-	-	-	-	6.3	-	10.8	-	-	-	-	-	-	17.1
93	-	-	-	-	6.3	-	10.8	-	-	-	-	-	-	17.1
8	5.4	4.6	-	-	-	3.6	2.2	-	-	-	0.5	-	-	16.3
9	5.4	4.6	-	-	-	3.6	2.2	-	-	-	0.5	-	-	16.3
10	5.4	4.6	-	-	-	3.6	2.2	-	-	-	0.5	-	-	16.3
11	5.4	4.6	-	-	-	3.6	2.2	-	-	-	0.5	-	-	16.3
12	5.4	4.6	-	-	-	3.6	2.2	-	-	-	0.5	-	-	16.3
27	-	-	-	-	9.1	-	5.9	-	-	-	-	-	-	15.0
28	-	-	-	-	9.1	-	5.9	-	-	-	-	-	-	15.0
56	2.3	2.3	-	-	-	-	2.7	-	-	-	-	6.8	-	14.0
57	2.3	2.3	-	-	-	-	2.7	-	-	-	-	6.8	-	14.0
73	-	0.3	-	-	-	6.8	5.9	0.5	-	-	-	-	-	13.5
74	-	0.3	-	-	-	6.8	5.9	0.5	-	-	-	-	-	13.5
39	2.1	2.3	-	0.3	-	-	6.5	-	-	1.0	-	-	-	12.1
40	2.1	2.3	-	0.3	-	-	6.5	-	-	1.0	-	-	-	12.1
41	2.1	2.3	-	0.3	-	-	6.5	-	-	1.0	-	-	-	12.1

Table 20. Adults' consumption rates of root vegetables from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Beetroot	Carrot	Celeriac	Garlic	Jerusalem artichoke	Leek	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Turnip	Total
31	2.0	-	-	-	-	7.2	1.4	-	-	-	-	-	-	10.6
32	2.0	-	-	-	-	7.2	1.4	-	-	-	-	-	-	10.6
19	-	1.6	-	0.3	-	2.3	2.8	-	-	0.7	-	-	-	7.6
58	0.9	0.9	-	-	-	-	1.1	-	-	-	-	2.7	-	5.6
59	0.9	0.9	-	-	-	-	1.1	-	-	-	-	2.7	-	5.6
63	0.7	0.7	-	0.04	-	-	1.8	0.4	-	0.5	-	1.4	-	5.5
64	0.7	0.7	-	0.04	-	-	1.8	0.4	-	0.5	-	1.4	-	5.5
65	0.7	0.7	-	0.04	-	-	1.8	0.4	-	0.5	-	1.4	-	5.5
66	0.7	0.7	-	0.04	-	-	1.8	0.4	-	0.5	-	1.4	-	5.5
68	0.7	0.7	-	0.04	-	-	1.8	0.4	-	0.5	-	1.4	-	5.5
69	0.7	0.7	-	0.04	-	-	1.8	0.4	-	0.5	-	1.4	-	5.5
1	0.4	-	-	0.02	3.3	-	1.0	-	-	0.3	0.1	-	-	5.0
2	0.4	-	-	0.02	3.3	-	1.0	-	-	0.3	0.1	-	-	5.0
36	4.3	-	-	-	-	-	-	-	-	-	-	-	-	4.3
22	0.9	-	-	-	-	-	-	-	-	-	-	2.7	-	3.6
23	0.9	-	-	-	-	-	-	-	-	-	-	2.7	-	3.6
15	-	0.4	-	0.1	-	0.6	0.7	-	0.4	0.2	1.3	-	-	3.5
16	-	0.4	-	0.1	-	0.6	0.7	-	0.4	0.2	1.3	-	-	3.5
17	-	0.4	-	0.1	-	0.6	0.7	-	0.4	0.2	1.3	-	-	3.5
18	-	0.4	-	0.1	-	0.6	0.7	-	0.4	0.2	1.3	-	-	3.5
3	0.3	-	-	0.01	2.2	-	0.7	-	-	0.2	0.1	-	-	3.4
4	0.3	-	-	0.01	2.2	-	0.7	-	-	0.2	0.1	-	-	3.4
5	0.3	-	-	0.01	2.2	-	0.7	-	-	0.2	0.1	-	-	3.4
6	1.1	-	-	-	-	0.3	0.7	-	-	-	0.1	-	0.6	2.8
7	1.1	-	-	-	-	0.3	0.7	-	-	-	0.1	-	0.6	2.8
89	0.2	0.3	-	0.02	-	0.4	0.6	0.04	0.1	0.2	0.02	-	-	1.9
249	0.9	0.5	-	-	-	-	-	-	0.2	-	0.1	-	-	1.7
250	0.9	0.5	-	-	-	-	-	-	0.2	-	0.1	-	-	1.7
13	-	-	-	-	-	-	1.4	-	-	-	-	-	-	1.4

Table 20. Adults' consumption rates of root vegetables from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Beetroot	Carrot	Celeriac	Garlic	Jerusalem artichoke	Leek	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Turnip	Total
14	-	-	-	-	-	-	1.4	-	-	-	-	-	-	1.4
90	-	-	-	-	-	-	-	-	-	1.3	-	-	-	1.3
91	-	-	-	-	-	-	-	-	-	1.3	-	-	-	1.3
29	1.0	-	-	-	-	-	-	-	0.2	-	-	-	-	1.2
30	1.0	-	-	-	-	-	-	-	0.2	-	-	-	-	1.2
35	0.8	-	-	-	-	-	-	-	0.1	-	0.2	-	-	1.1
308	-	-	-	-	-	0.3	-	-	-	-	-	-	-	0.3
309	-	-	-	-	-	0.3	-	-	-	-	-	-	-	0.3
310	-	-	-	-	-	0.3	-	-	-	-	-	-	-	0.3
312	-	-	-	-	-	-	-	-	-	-	0.1	-	-	0.1
313	-	-	-	-	-	-	-	-	-	-	0.1	-	-	0.1
314	-	-	-	-	-	-	-	-	-	-	0.1	-	-	0.1

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables based on the 29 high-rate adult consumers is 18.6 kg y^{-1}

The observed 97.5th percentile rate based on 70 observations is 32.4 kg y^{-1}

Table 21. Adults' consumption rates of potato from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Potato
460	**144.3**
461	**144.3**
462	**144.3**
20	**54.5**
21	**54.5**
75	38.2
13	36.0
14	36.0
33	29.6
34	29.6
81	25.8
82	25.8
83	25.8
84	25.8
85	25.8
31	22.0
32	22.0
92	21.2
93	21.2
19	17.7
29	10.4
30	10.4
87	9.8
88	9.8
56	9.1
57	9.1
15	8.8
16	8.8
17	8.8
18	8.8
90	8.7
91	8.7
36	6.8
37	6.8
73	4.6
74	4.6
58	3.6
59	3.6
6	2.6
7	2.6
35	2.5
308	2.3
309	2.3
310	2.3
63	1.6
64	1.6
65	1.6

Table 21. Adults' consumption rates of potato from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Potato
66	1.6
68	1.6
69	1.6
1	1.5
2	1.5
3	1.0
4	1.0
5	1.0
89	1.0

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of potato based on the 5 high-rate adult consumers is 108.4 kg y^{-1}

The observed 97.5th percentile rate based on 56 observations is 144.3 kg y^{-1}

Table 22. Adults' consumption rates of domestic fruit from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Apple	Blackberry	Blackcurrant	Blueberry	Cherry	Gogi berry	Gooseberry	Grape	Loganberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Tayberry	Whitecurrant	Total
92	**13.6**	**5.1**	**8.5**	**-**	**-**	**-**	**6.1**	**-**	**-**	**-**	**-**	**10.2**	**6.8**	**6.8**	**3.5**	**25.5**	**17.9**	**6.8**	**110.8**
93	**13.6**	**5.1**	**8.5**	**-**	**-**	**-**	**6.1**	**-**	**-**	**-**	**-**	**10.2**	**6.8**	**6.8**	**3.5**	**25.5**	**17.9**	**6.8**	**110.8**
36	**-**	**-**	**10.2**	**-**	**-**	**-**	**-**	**-**	**11.9**	**-**	**-**	**-**	**10.2**	**8.2**	**1.4**	**10.2**	**-**	**-**	**52.1**
37	**-**	**-**	**10.2**	**-**	**-**	**-**	**-**	**-**	**11.9**	**-**	**-**	**-**	**10.2**	**8.2**	**-**	**10.2**	**-**	**-**	**50.7**
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	34.0	-	-	35.7
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	34.0	-	-	35.7
8	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	20.4	-	-	27.2
20	-	-	14.2	-	-	-	6.1	-	-	-	-	-	3.4	-	-	3.4	-	-	27.1
33	-	-	5.7	-	-	-	2.0	-	-	-	-	-	6.6	2.3	-	8.2	-	2.3	27.0
34	-	-	5.7	-	-	-	2.0	-	-	-	-	-	6.6	2.3	-	8.2	-	2.3	27.0
31	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-	4.6	5.1	-	-	23.9
32	-	-	14.2	-	-	-	-	-	-	-	-	-	-	-	4.6	5.1	-	-	23.9
21	-	-	14.2	-	-	-	-	-	-	-	-	-	3.4	-	-	3.4	-	-	21.0
19	0.7	-	8.5	-	-	1.0	-	0.7	-	-	-	-	-	-	-	6.8	-	-	17.7
73	-	-	7.7	-	-	-	-	-	-	-	-	-	6.1	-	-	3.7	-	-	17.5
74	-	-	7.7	-	-	-	-	-	-	-	-	-	6.1	-	-	3.7	-	-	17.5
81	2.3	0.2	4.3	-	-	-	2.0	-	-	-	2.3	-	-	-	0.9	4.8	-	-	16.7
82	2.3	0.2	4.3	-	-	-	2.0	-	-	-	2.3	-	-	-	0.9	4.8	-	-	16.7
83	2.3	0.2	4.3	-	-	-	2.0	-	-	-	2.3	-	-	-	0.9	4.8	-	-	16.7
84	2.3	0.2	4.3	-	-	-	2.0	-	-	-	2.3	-	-	-	0.9	4.8	-	-	16.7
56	-	2.8	-	-	-	-	-	-	-	-	-	-	6.1	-	4.6	2.7	-	-	16.3
57	-	2.8	-	-	-	-	-	-	-	-	-	-	6.1	-	4.6	2.7	-	-	16.3
460	15.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.1
461	15.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.1
462	15.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.1
75	-	-	-	-	-	-	-	1.6	-	-	-	-	4.8	-	3.2	4.8	-	-	14.3
27	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	-	-	-	14.2

Table 22. Adults' consumption rates of domestic fruit from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Apple	Blackberry	Blackcurrant	Blueberry	Cherry	Gogi berry	Gooseberry	Grape	Loganberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Tayberry	Whitecurrant	Total
28	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	-	-	-	14.2
39	-	-	1.9	-	-	-	2.7	-	-	-	-	-	2.7	-	1.9	4.5	-	-	13.8
40	-	-	1.9	-	-	-	2.7	-	-	-	-	-	2.7	-	1.9	4.5	-	-	13.8
41	-	-	1.9	-	-	-	2.7	-	-	-	-	-	2.7	-	1.9	4.5	-	-	13.8
85	2.3	0.2	-	-	-	-	2.0	-	-	-	2.3	-	-	-	0.9	4.8	-	-	12.4
15	0.7	-	2.1	1.4	-	0.3	1.0	0.7	-	-	-	-	1.4	-	-	1.7	-	-	9.2
16	0.7	-	2.1	1.4	-	0.3	1.0	0.7	-	-	-	-	1.4	-	-	1.7	-	-	9.2
17	0.7	-	2.1	1.4	-	0.3	1.0	0.7	-	-	-	-	1.4	-	-	1.7	-	-	9.2
18	0.7	-	2.1	1.4	-	0.3	1.0	0.7	-	-	-	-	1.4	-	-	1.7	-	-	9.2
274	-	-	-	-	-	-	-	-	-	-	-	-	7.9	-	-	-	-	-	7.9
275	-	-	-	-	-	-	-	-	-	-	-	-	7.9	-	-	-	-	-	7.9
58	-	1.1	-	-	-	-	-	-	-	-	-	-	2.4	-	1.8	1.1	-	-	6.5
59	-	1.1	-	-	-	-	-	-	-	-	-	-	2.4	-	1.8	1.1	-	-	6.5
63	-	-	0.6	-	-	-	0.4	-	-	-	-	-	1.4	-	0.5	2.9	-	-	5.7
64	-	-	0.6	-	-	-	0.4	-	-	-	-	-	1.4	-	0.5	2.9	-	-	5.7
65	-	-	0.6	-	-	-	0.4	-	-	-	-	-	1.4	-	0.5	2.9	-	-	5.7
66	-	-	0.6	-	-	-	0.4	-	-	-	-	-	1.4	-	0.5	2.9	-	-	5.7
68	-	-	0.6	-	-	-	0.4	-	-	-	-	-	1.4	-	0.5	2.9	-	-	5.7
69	-	-	0.6	-	-	-	0.4	-	-	-	-	-	1.4	-	0.5	2.9	-	-	5.7
1	0.9	-	0.3	-	0.9	-	0.2	-	-	-	-	-	0.3	0.2	0.2	2.0	-	-	5.1
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	3.4
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	3.4
2	-	-	0.3	-	-	-	0.2	-	-	-	-	-	0.3	0.2	0.2	2.0	-	-	3.3
4	-	-	0.2	-	-	-	0.1	-	-	-	-	-	0.2	0.2	0.2	1.4	-	-	2.2
5	-	-	0.2	-	-	-	0.1	-	-	-	-	-	0.2	0.2	0.2	1.4	-	-	2.2
87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	-	-	2.1
88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	-	-	2.1

Table 22. Adults' consumption rates of domestic fruit from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Apple	Blackberry	Blackcurrant	Blueberry	Cherry	Gogi berry	Gooseberry	Grape	Loganberry	Melon	Pear	Plum	Raspberry	Redcurrant	Rhubarb	Strawberry	Tayberry	Whitecurrant	Total
6	-	-	-	-	-	-	-	-	-	1.2	-	-	-	-	0.5	-	-	-	1.7
7	-	-	-	-	-	-	-	-	-	1.2	-	-	-	-	0.5	-	-	-	1.7
234	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	-	1.2
235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	-	1.2
3	-	-	0.2	-	-	-	0.1	-	-	-	-	-	0.2	0.2	0.2	-	-	-	0.8
308	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
309	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
310	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	-	-	0.7
250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	-	-	0.7
163	-	-	-	0.2	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	0.3
164	-	-	-	0.2	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	0.3
165	-	-	-	0.2	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	0.3
89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit based on the 4 high-rate adult consumers is 81.1 kg y^{-1}

The observed 97.5th percentile rate based on 68 observations is 71.2 kg y^{-1}

Table 23. Adults' consumption rates of milk from the Devonport terrestrial survey area (l y^{-1})

Observation number	Milk
460	207.4
461	207.4
462	207.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of milk based on the 3 high-rate adult consumers is 207.4 l y^{-1}

The observed 97.5th percentile rate based on 3 observations is 207.4 l y^{-1}

Table 24. Adults' consumption rates of cattle meat from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Beef
680	47.3
681	47.3
270	31.7
271	31.7
273	31.7

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of cattle meat based on the 5 high-rate adult consumers is 37.9 kg y^{-1}

The observed 97.5th percentile rate based on 5 observations is 47.3 kg y^{-1}

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

Observation number	Pork
276	50.6
277	50.6
278	50.6
279	50.6

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of pig meat based on the 4 high-rate adult consumers is 50.6 kg y^{-1}

The observed 97.5th percentile rate based on 4 observations is 50.6 kg y^{-1}

Table 26. Adults' consumption rates of sheep meat from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Lamb
276	**11.3**
277	**11.3**
278	**11.3**
279	**11.3**
270	**9.9**
271	**9.9**
273	**9.9**
680	**5.7**
681	**5.7**
265	2.7
266	2.7

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of sheep meat based on the 9 high-rate adult consumers is 9.6 kg y^{-1}

The observed 97.5th percentile rate based on 11 observations is 11.3 kg y^{-1}

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

Observation number	Chicken	Goose	Pheasant	Pigeon	Turkey	Woodcock	Total
672	**-**	**-**	**6.2**	**2.0**	**-**	**-**	**8.2**
673	**-**	**-**	**6.2**	**2.0**	**-**	**-**	**8.2**
674	**-**	**-**	**6.2**	**2.0**	**-**	**-**	**8.2**
274	**6.0**	**-**	**-**	**0.1**	**-**	**-**	**6.1**
275	**6.0**	**-**	**-**	**0.1**	**-**	**-**	**6.1**
276	**0.8**	**0.6**	**1.1**	**-**	**2.2**	**-**	**4.6**
277	**0.8**	**0.6**	**1.1**	**-**	**2.2**	**-**	**4.6**
278	**0.8**	**0.6**	**1.1**	**-**	**2.2**	**-**	**4.6**
279	**0.8**	**0.6**	**1.1**	**-**	**2.2**	**-**	**4.6**
680	-	-	2.3	-	-	0.1	2.4
681	-	-	2.3	-	-	0.1	2.4
270	-	-	0.8	-	-	-	0.8
271	-	-	0.8	-	-	-	0.8
273	-	-	0.8	-	-	-	0.8

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of poultry based on the 9 high-rate adult consumers is 6.1 kg y^{-1}

The observed 97.5th percentile rate based on 14 observations is 8.2 kg y^{-1}

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

Observation number	Chicken egg
274	**35.6**
275	**35.6**
270	**26.7**
271	**26.7**
273	**26.7**
276	**17.8**
277	**17.8**
278	**17.8**
279	**17.8**
460	**16.4**
461	**16.4**
462	**16.4**
13	8.7
14	8.7

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of eggs based on the 12 high-rate adult consumers is 22.6 kg y^{-1}

The observed 97.5th percentile rate based on 14 observations is 35.6 kg y^{-1}

Table 29. Adults' consumption rates of wild/free foods from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Blackberry	Sloe	Total
274	**7.9**	**-**	**7.9**
275	**7.9**	**-**	**7.9**
73	**4.5**	**-**	**4.5**
74	**4.5**	**-**	**4.5**
460	**3.0**	**-**	**3.0**
461	**3.0**	**-**	**3.0**
462	**3.0**	**-**	**3.0**
15	1.7	-	1.7
16	1.7	-	1.7
17	1.7	-	1.7
18	1.7	-	1.7
1	0.9	-	0.9
63	0.9	-	0.9
680	0.7	-	0.7
681	0.7	-	0.7
6	0.5	-	0.5
7	0.5	-	0.5
27	0.5	-	0.5
28	0.5	-	0.5
90	0.5	-	0.5
91	0.5	-	0.5
304	0.5	-	0.5
305	0.5	-	0.5
306	0.5	-	0.5
308	0.5	-	0.5
309	0.5	-	0.5
310	0.5	-	0.5
8	0.4	-	0.4
9	0.4	-	0.4
10	0.4	-	0.4
11	0.4	-	0.4
12	0.4	-	0.4
13	0.4	-	0.4
14	0.4	-	0.4
265	0.3	-	0.3
266	0.3	-	0.3
36	0.3	-	0.3
37	0.3	-	0.3
92	-	0.2	0.2
93	-	0.2	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild/free foods based on the 7 high-rate adult consumers is 4.9 kg y^{-1}

The observed 97.5th percentile rate based on 40 observations is 7.9 kg y^{-1}

Table 30. Adults' consumption rates of rabbits/hares from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Rabbit
672	**2.8**
673	**2.8**
674	**2.8**
274	0.2
275	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of rabbits/hares based on the 3 high-rate adult consumers is 2.8 kg y^{-1}

The observed 97.5th percentile rate based on 5 observations is 2.8 kg y^{-1}

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

Observation number	Honey
658	**5.4**
659	**5.4**
660	**3.9**
661	**3.9**
662	**3.9**
678	**3.4**
274	**2.7**
275	**2.7**
270	1.4
271	1.4
273	1.4
680	1.4
681	1.4
679	1.1
460	0.2
461	0.2
462	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of honey based on the 8 high-rate adult consumers is 3.9 kg y^{-1}

The observed 97.5th percentile rate based on 17 observations is 5.4 kg y^{-1}

Table 32. Adults' consumption rates of wild fungi from the Devonport terrestrial survey area (kg y^{-1})

Observation number	Mushrooms
270	**2.0**
271	**2.0**
273	**2.0**
680	**1.1**
681	**1.1**
460	**0.8**
461	**0.8**
462	**0.8**
13	0.5
14	0.5
33	0.2
34	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild fungi based on the 8 high-rate adult consumers is 1.3 kg y^{-1}

The observed 97.5th percentile rate based on 12 observations is 2.0 kg y^{-1}

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

Observation number	Venison
274	**13.5**
275	**13.5**
672	**10.3**
673	**10.3**
674	**10.3**
270	**5.0**
271	**5.0**
273	**5.0**
680	4.1
681	4.1

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of venison based on the 8 high-rate adult consumers is 9.1 kg y^{-1}

The observed 97.5th percentile rate based on 10 observations is 13.5 kg y^{-1}

Table 34. Children's and infants' consumption rates of green vegetables from the Devonport terrestrial survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Broccoli	Brussel sprout	Cabbage	Calabrese	Cauliflower	Courgette	Cucumber	Kale	Lettuce	Marrow	Total
267	**15**	**-**	**-**	**-**	**6.1**	**2.4**	**-**	**-**	**-**	**-**	**-**	**8.5**
268	**14**	**-**	**-**	**-**	**6.1**	**2.4**	**-**	**-**	**-**	**-**	**-**	**8.5**
70	**15**	**-**	**2.7**	**0.4**	**-**	**-**	**1.5**	**2.0**	**1.5**	**0.3**	**-**	**8.4**
71	**11**	**-**	**2.7**	**0.4**	**-**	**-**	**1.5**	**2.0**	**1.5**	**0.3**	**-**	**8.4**
67	**13**	**-**	**2.7**	**0.4**	**-**	**-**	**1.5**	**2.0**	**1.5**	**0.3**	**-**	**8.4**
60	**11**	**-**	**-**	**5.5**	**-**	**-**	**0.7**	**-**	**-**	**-**	**2.0**	**8.2**
61	**10**	**-**	**-**	**5.5**	**-**	**-**	**0.7**	**-**	**-**	**-**	**2.0**	**8.2**
311	**13**	**-**	**-**	**7.4**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**7.4**
24	**9**	**0.8**	**1.0**	**0.1**	**-**	**0.6**	**1.5**	**-**	**0.8**	**-**	**-**	**4.8**
25	**6**	**0.8**	**1.0**	**0.1**	**-**	**0.6**	**1.5**	**-**	**0.8**	**-**	**-**	**4.8**
269	10	-	-	-	1.5	0.6	-	-	-	-	-	2.1
38	9	-	-	-	-	-	1.9	-	-	-	-	1.9

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables for the child age group based on the 10 high-rate consumers is 7.6 kg y^{-1}

The observed 97.5th percentile rate based on 12 observations is 8.5 kg y^{-1}

Infant age group (0 - 5 years old)

Observation number	Age	Broccoli	Brussel sprout	Cabbage	Calabrese	Cauliflower	Courgette	Cucumber	Kale	Lettuce	Marrow	Total
72	**3**	**-**	**1.4**	**0.2**	**-**	**-**	**0.7**	**1.0**	**0.7**	**0.1**	**-**	**4.2**
62	**5**	**-**	**-**	**2.7**	**-**	**-**	**0.4**	**-**	**-**	**-**	**1.0**	**4.1**
26	**4**	**0.6**	**0.7**	**0.1**	**-**	**0.4**	**1.0**	**-**	**0.5**	**-**	**-**	**3.2**

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables for the infant age group based on the 3 high-rate consumers is 3.8 kg y^{-1}

The observed 97.5th percentile rate based on 3 observations is 4.2 kg y^{-1}

Table 35. Children's and infants' consumption rates of other vegetables from the Devonport terrestrial survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Broad bean	French bean	Pea	Pepper	Runner bean	Squash	Sweetcorn	Tomato	Total
60	**11**	**-**	**3.9**	**-**	**-**	**8.2**	**4.0**	**-**	**3.6**	**19.7**
61	**10**	**-**	**3.9**	**-**	**-**	**8.2**	**4.0**	**-**	**3.6**	**19.7**
311	13	-	-	-	-	1.8	-	-	4.1	5.8
67	13	0.2	0.1	-	0.8	0.2	-	0.3	3.8	5.4
70	15	0.2	0.1	-	0.8	0.2	-	0.3	3.8	5.4
71	11	0.2	0.1	-	0.8	0.2	-	0.3	3.8	5.4
24	9	-	0.5	-	-	0.3	-	-	-	0.9
25	6	-	0.5	-	-	0.3	-	-	-	0.9
38	9	-	-	0.04	-	-	-	-	-	0.04

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 19.7 kg y^{-1}

The observed 97.5th percentile rate based on 9 observations is 19.7 kg y^{-1}

Infant age group (0 - 5 years old)

Observation number	Age	Broad bean	French bean	Pea	Pepper	Runner bean	Squash	Sweetcorn	Tomato	Total
62	**5**	**-**	**2.3**	**-**	**-**	**4.9**	**2.0**	**-**	**1.8**	**11.1**
72	**3**	**0.1**	**0.1**	**-**	**0.4**	**2.0**	**-**	**0.1**	**1.9**	**4.6**
26	4	-	0.4	-	-	0.2	-	-	-	0.6

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of other vegetables for the infant age group based on the 2 high-rate consumers is 7.8 kg y^{-1}

The observed 97.5th percentile rate based on 3 observations is 10.7 kg y^{-1}

Table 36. Children's and infants' consumption rates of root vegetables from the Devonport terrestrial survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Beetroot	Carrot	Garlic	Leek	Onion	Parsnip	Shallot	Swede	Total
267	**15**	**-**	**-**	**-**	**-**	**12.2**	**-**	**-**	**6.1**	**18.4**
268	**14**	**-**	**-**	**-**	**-**	**12.2**	**-**	**-**	**6.1**	**18.4**
60	11	0.9	0.9	-	-	1.1	-	-	2.7	5.6
61	10	0.9	0.9	-	-	1.1	-	-	2.7	5.6
67	13	0.7	0.7	0.04	-	1.8	0.4	0.5	1.4	5.5
70	15	0.7	0.7	0.04	-	1.8	0.4	0.5	1.4	5.5
71	11	0.7	0.7	0.04	-	1.8	0.4	0.5	1.4	5.5
269	10	-	-	-	-	3.1	-	-	1.5	4.6
24	9	0.3	-	-	-	-	-	-	1.0	1.4
25	6	0.3	-	-	-	-	-	-	1.0	1.4
311	13	-	-	-	0.3	-	-	-	-	0.3

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables for the child age group based on the 2 high-rate consumers is 18.4 kg y^{-1}

The observed 97.5th percentile rate based on 11 observations is 18.4 kg y^{-1}

Infant age group (0 - 5 years old)

Observation number	Age	Beetroot	Carrot	Garlic	Leek	Onion	Parsnip	Shallot	Swede	Total
62	**5**	**0.5**	**0.5**	**-**	**-**	**0.6**	**-**	**-**	**1.4**	**3.0**
72	**3**	**0.4**	**0.3**	**0.02**	**-**	**0.9**	**0.2**	**0.3**	**0.7**	**2.7**
26	4	0.2	-	-	-	-	-	-	0.7	0.9

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 2.9 kg y^{-1}

The observed 97.5th percentile rate based on 3 observations is 3.0 kg y^{-1}

Table 37. Children's and infants' consumption rates of potato from the Devonport terrestrial survey

Child age group (6 - 15 years old)

Observation number	Age	Potato
86	**9**	**25.8**
60	11	3.6
61	10	3.6
38	9	2.5
311	13	2.3
67	13	1.6
70	15	1.6
71	11	1.6

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of potato for the child age group based on the only high-rate consumer is 25.8 kg y^{-1}

The observed 97.5th percentile rate based on 8 observations is 21.9 kg y^{-1}

Infant age group (0 - 5 years old)

Observation number	Age	Potato
62	**5**	**1.8**
72	**3**	**0.8**

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of potato for the infant age group based on the 2 high-rate consumers is 1.3 kg y^{-1}

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

Table 38. Children's and infants' consumption rates of domestic fruit from the Devonport terrestrial survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Apple	Blackberry	Blackcurrant	Gooseberry	Loganberry	Pear	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
38	**9**	**-**	**-**	**3.8**	**-**	**4.5**	**-**	**3.8**	**3.1**	**0.4**	**3.8**	**19.4**
86	**9**	**2.3**	**0.2**	**-**	**2.0**	**-**	**2.3**	**-**	**-**	**0.9**	**4.8**	**12.4**
60	**11**	**-**	**1.1**	**-**	**-**	**-**	**-**	**2.4**	**-**	**1.8**	**1.1**	**6.5**
61	**10**	**-**	**1.1**	**-**	**-**	**-**	**-**	**2.4**	**-**	**1.8**	**1.1**	**6.5**
67	13	-	-	0.6	0.4	-	-	1.4	-	0.5	2.9	5.7
70	15	-	-	0.6	0.4	-	-	1.4	-	0.5	2.9	5.7
71	11	-	-	0.6	0.4	-	-	1.4	-	0.5	2.9	5.7
24	9	-	-	-	-	-	-	-	-	-	1.3	1.3
25	6	-	-	-	-	-	-	-	-	-	1.3	1.3
236	15	-	-	-	-	-	-	-	-	-	1.2	1.2
237	14	-	-	-	-	-	-	-	-	-	1.2	1.2
238	12	-	-	-	-	-	-	-	-	-	1.2	1.2
239	9	-	-	-	-	-	-	-	-	-	1.2	1.2
311	13	0.7	-	-	-	-	-	-	-	-	-	0.7

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit for the child age group based on the 4 high-rate consumers is 11.2 kg y^{-1}

The observed 97.5th percentile rate based on 14 observations is 17.1 kg y^{-1}

Infant age group (0 - 5 years old)

Observation number	Age	Apple	Blackberry	Blackcurrant	Gooseberry	Loganberry	Pear	Raspberry	Redcurrant	Rhubarb	Strawberry	Total
62	**5**	**-**	**0.6**	**-**	**-**	**-**	**-**	**1.2**	**-**	**0.9**	**0.5**	**3.3**
72	**3**	**-**	**-**	**0.3**	**0.2**	**-**	**-**	**0.7**	**-**	**0.2**	**1.4**	**2.8**
26	4	-	-	-	-	-	-	-	-	-	0.9	0.9

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit for the infant age group based on the 2 high-rate consumers is 3.0 kg y^{-1}

The observed 97.5th percentile rate based on 3 observations is 3.2 kg y^{-1}

Table 39. Children's consumption rates of cattle meat from the Devonport terrestrial survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Beef
683	**14**	**47.3**
682	**12**	**35.5**
272	**15**	**31.7**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of cattle meat for the child age group based on the 3 high-rate consumers is 38.2 kg y^{-1}

The observed 97.5th percentile rate based on 3 observations is 46.7 kg y^{-1}

Table 40. Children's consumption rates of sheep meat from the Devonport terrestrial survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Lamb
272	**15**	**9.9**
683	**14**	**5.7**
682	**12**	**5.7**
267	15	2.7
268	14	2.7
269	10	0.7

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of sheep meat for the child age group based on the 3 high-rate consumers is 7.1 kg y^{-1}

The observed 97.5th percentile rate based on 6 observations is 9.4 kg y^{-1}

Table 41. Children's consumption rates of poultry from the Devonport terrestrial survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Pheasant	Pigeon	Total
675	**14**	**6.2**	**2.0**	**8.2**
272	15	0.8	-	0.8

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of poultry for the child age group based on the only high-rate consumer is 8.2 kg y^{-1}

The observed 97.5th percentile rate based on 2 observations is 8.0 kg y^{-1}

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

Child age group (6 - 15 years old)

Observation number	Age	Chicken egg
272	**15**	**26.7**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of eggs for the child age group based on the only high-rate consumer is 26.7 kg y^{-1}

The observed 97.5th percentile rate is not applicable for 1 observation

Table 43. Children's consumption rates of wild/free foods from the Devonport terrestrial survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Blackberry
683	**14**	**0.7**
682	**12**	**0.7**
311	**13**	**0.5**
267	**15**	**0.3**
268	**14**	**0.3**
38	**9**	**0.3**
269	10	0.1

Notes

Emboldened observations are the high-rate consumers

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

The observed 97.5th percentile rate based on 7 observations is 0.7 kg y^{-1}

Table 44. Children's consumption rates of rabbits/hares from the Devonport terrestrial survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Rabbit
675	**14**	**2.8**

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of rabbits/hares for the child age group based on the only high-rate consumer is 2.8 kg y^{-1}

The observed 97.5th percentile rate is not applicable for 1 observation

Table 45. Children's consumption rates of honey from the Devonport terrestrial survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Honey
272	15	1.4
683	14	1.4
682	12	1.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of honey 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 3 observations is 1.4 kg y^{-1}

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

Child age group (6 - 15 years old)

Observation number	Age	Mushrooms
272	15	2.0

Notes

The emboldened observation is the high-rate consumer

The mean consumption rate of wild fungi for the child age group based on the only high-rate consumer is 2.0 kg y^{-1}

The observed 97.5th percentile rate is not applicable for 1 observation

Table 47. Children's consumption rates of venison from the Devonport terrestrial survey area (kg y^{-1})

Child age group (6 - 15 years old)

Observation number	Age	Venison
675	14	10.3
272	15	5.0

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of venison for the child age group based on the 2 high-rate consumers is 7.7 kg y^{-1}

The observed 97.5th percentile rate based on 2 observations is 10.2 kg y^{-1}

Table 48. Percentage contribution each food type makes to its terrestrial food group for adults

Green vegetables	
Cabbage	22.5 %
Courgette	18.4 %
Brussel sprout	12.4 %
Broccoli	9.7 %
Cucumber	8.8 %
Artichoke	5.8 %
Marrow	5.0 %
Spinach	4.5 %
Cauliflower	3.9 %
Kale	2.9 %
Lettuce	2.6 %
Calabrese	2.1 %
Pak choi	0.8 %
Herbs	0.3 %
Rocket	0.3 %
Chard	0.2 %

Other vegetables	
Runner bean	34.7 %
Tomato	26.3 %
Broad bean	17.1 %
Pea	6.5 %
Squash	4.8 %
Sweetcorn	3.7 %
French bean	3.6 %
Pepper	1.5 %
Aubergine	1.0 %
Chilli pepper	0.6 %
Pumpkin	0.1 %
White kidney bean	0.1 %

Root vegetables	
Onion	26.2 %
Swede	17.6 %
Carrot	14.0 %
Beetroot	11.8 %
Leek	11.4 %
Artichoke	6.5 %
Shallot	5.0 %
Parsnip	1.8 %
Turnip	1.8 %
Spring onion	1.6 %
Celeriac	0.9 %
Radish	0.8 %
Garlic	0.5 %

Potato	
Potato	100.0 %

Domestic fruit	
Strawberry	29.8 %
Blackcurrant	16.5 %
Raspberry	13.4 %
Apple	11.2 %
Rhubarb	6.3 %
Gooseberry	4.8 %
Redcurrant	3.6 %
Tayberry	3.6 %
Loganberry	2.4 %
Plum	2.0 %
Blackberry	1.9 %
Whitecurrant	1.8 %
Pear	1.1 %
Blueberry	0.6 %
Grape	0.5 %
Melon	0.2 %
Gogi berry	0.2 %
Cherry	0.1 %

Milk	
Cows' milk	100.0 %

Cattle meat	
Beef	100.0 %

Pig meat	
Pork	100.0 %

Sheep meat	
Lamb	100.0 %

Poultry	
Pheasant	48.0 %
Chicken	24.1 %
Turkey	14.0 %
Pigeon	10.0 %
Goose	3.5 %
Woodcock	0.4 %

Eggs	
Chicken egg	100.0 %

Wild/free foods	
Blackberry	99.2 %
Sloe	0.8 %

Rabbits/hares	
Rabbit	100.0 %

Honey	
Honey	100.0 %

Wild fungi	
Mushrooms	100.0 %

Venison	
Venison	100.0 %

Notes

Food types in emboldened italics were monitored by FSA in 2010 (EA, FSA, NIEA and SEPA, 2011).
Percentages are based on the consumption of all adults in the survey consuming that particular food group.

Table 49. Occupancy rates in the direct radiation survey area for adults, children and infants (h y^{-1})

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
0 to 0.25 km zone						
297	F	75	Residing	7936	564	8500
305	F	40	Residing	8096	360	8456
240	F	53	Residing	7848	600	8448
239	M	9	Residing	8013	390	8403
234	F	40	Residing	7947	300	8247
308	M	44	Residing	7823	365	8188
312	F	59	Residing	7374	798	8172
310	M	16	Residing	7459	365	7824
309	F	39	Residing	7407	365	7772
241	M	16	Residing	7245	99	7344
249	M	69	Residing	6913	168	7081
238	M	12	Residing	6901	104	7005
250	F	64	Residing	6820	168	6988
237	F	14	Residing	6869	104	6973
306	F	16	Residing	6400	252	6652
236	M	15	Residing	6596	52	6648
311	F	13	Residing	6094	365	6459
304	M	40	Residing	5855	130	5985
235	M	45	Residing	5651	52	5703
313	F	36	Residing	3831	94	3925
314	M	18	Residing	3831	94	3925
185	M	38	Working	2024	230	2254
186	M	44	Working	2024	230	2254
187	M	44	Working	2024	230	2254
188	F	34	Working	2024	230	2254
183	M	38	Working	2114	118	2232
184	M	U	Working	2114	118	2232
476	M	U	Working	1800	240	2040
477	F	U	Working	1800	240	2040
478	F	U	Working	1800	240	2040
479	F	U	Working	1800	240	2040
501	M	2	Attending day care	1315	565	1880
502	F	2	Attending day care	1315	565	1880
503	M	3	Attending day care	1315	565	1880
504	F	3	Attending day care	1315	565	1880
505	M	4	Attending day care	1315	565	1880
506	F	4	Attending day care	1315	565	1880
507	M	5	Attending day care	1315	565	1880
508	F	5	Attending day care	1315	565	1880
480	F	U	Working	1320	240	1560
481	F	U	Working	1320	240	1560
482	F	U	Working	1320	240	1560
483	F	U	Working	1320	240	1560
484	F	U	Working	1320	240	1560
485	F	U	Working	1320	240	1560

Table 49. Occupancy rates in the direct radiation survey area for adults, children and infants (h y^{-1})

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
243	M	1	Attending day care	1344	144	1488
486	F	U	Working	1080	240	1320
487	F	U	Working	1080	240	1320
488	F	U	Working	1080	240	1320
492	F	U	Working	960	240	1200
491	F	U	Working	912	240	1152
244	M	0.9	Attending day care	1008	96	1104
245	F	2	Attending day care	800	96	896
246	M	4	Attending day care	800	96	896
493	M	2	Attending day care	635	188	823
494	F	2	Attending day care	635	188	823
495	M	3	Attending day care	635	188	823
496	F	3	Attending day care	635	188	823
497	M	4	Attending day care	635	188	823
498	F	4	Attending day care	635	188	823
499	M	5	Attending day care	635	188	823
500	F	5	Attending day care	635	188	823
489	F	U	Working	528	240	768
490	F	U	Working	528	240	768
247	M	10	Attending day care	468	96	564
242	M	0.6	Attending day care	336	48	384
307	F	U	Visiting	312	14	326
509	M	2	Attending day care	165	47	212
510	M	2	Attending day care	165	47	212
511	M	2	Attending day care	165	47	212
512	F	2	Attending day care	165	47	212
513	F	2	Attending day care	165	47	212
514	F	2	Attending day care	165	47	212
515	M	3	Attending day care	165	47	212
516	M	3	Attending day care	165	47	212
517	M	3	Attending day care	165	47	212
518	F	3	Attending day care	165	47	212
519	F	3	Attending day care	165	47	212
520	F	3	Attending day care	165	47	212
521	M	4	Attending day care	165	47	212
522	M	4	Attending day care	165	47	212
523	M	4	Attending day care	165	47	212
524	F	4	Attending day care	165	47	212
525	F	4	Attending day care	165	47	212
526	F	4	Attending day care	165	47	212
527	M	5	Attending day care	165	47	212
528	M	5	Attending day care	165	47	212
529	M	5	Attending day care	165	47	212
530	F	5	Attending day care	165	47	212
531	F	5	Attending day care	165	47	212
532	F	5	Attending day care	165	47	212

Table 49. Occupancy rates in the direct radiation survey area for adults, children and infants (h y^{-1})

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
303	F	U	Visiting	-	208	208
298	F	72	Visiting	48	6	54
299	F	69	Visiting	48	6	54
302	M	U	Visiting	-	42	42
300	M	46	Visiting	15	1	16
301	M	18	Visiting	15	1	16
>0.25 to 0.5 km zone						
176	M	19	Residing	8318	182	8500
77	F	43	Residing	8058	151	8209
76	M	48	Residing	7977	179	8156
51	F	33	Residing	6356	1748	8104
49	F	6	Residing	6776	1287	8063
50	M	51	Residing	6708	1248	7955
80	M	2	Residing	6929	971	7900
48	F	40	Residing	7296	597	7893
79	F	35	Residing	7046	845	7891
78	F	21	Residing	7105	55	7160
47	M	41	Residing	6408	360	6768
52	M	13	Residing	6393	335	6728
53	F	11	Residing	6393	335	6728
175	F	46	Residing	5812	260	6072
174	M	47	Residing	5716	260	5976
177	F	U	Working	1827	108	1935
533	M	U	Working	1433	49	1482
534	M	U	Working	1433	49	1482
535	M	U	Working	1433	49	1482
536	M	U	Working	1433	49	1482
537	F	U	Working	1433	49	1482
538	F	U	Working	1433	49	1482
539	F	U	Working	1433	49	1482
540	F	U	Working	1433	49	1482
541	F	U	Working	1433	49	1482
542	F	U	Working	1433	49	1482
543	F	U	Working	1433	49	1482
578	F	4	Attending school	912	285	1197
579	F	4	Attending school	912	285	1197
580	F	4	Attending school	912	285	1197
581	F	4	Attending school	912	285	1197
582	F	4	Attending school	912	285	1197
583	M	4	Attending school	912	285	1197
584	M	4	Attending school	912	285	1197
585	M	4	Attending school	912	285	1197
586	M	4	Attending school	912	285	1197
587	M	4	Attending school	912	285	1197
588	F	5	Attending school	912	285	1197
589	F	5	Attending school	912	285	1197

Table 49. Occupancy rates in the direct radiation survey area for adults, children and infants (h y^{-1})

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
590	F	5	Attending school	912	285	1197
591	F	5	Attending school	912	285	1197
592	F	5	Attending school	912	285	1197
593	M	5	Attending school	912	285	1197
594	M	5	Attending school	912	285	1197
595	M	5	Attending school	912	285	1197
596	M	5	Attending school	912	285	1197
597	M	5	Attending school	912	285	1197
598	F	6	Attending school	912	285	1197
599	F	6	Attending school	912	285	1197
600	F	6	Attending school	912	285	1197
601	F	6	Attending school	912	285	1197
602	F	6	Attending school	912	285	1197
603	M	6	Attending school	912	285	1197
604	M	6	Attending school	912	285	1197
605	M	6	Attending school	912	285	1197
606	M	6	Attending school	912	285	1197
607	M	6	Attending school	912	285	1197
608	F	7	Attending school	912	285	1197
609	F	7	Attending school	912	285	1197
610	F	7	Attending school	912	285	1197
611	F	7	Attending school	912	285	1197
612	F	7	Attending school	912	285	1197
613	M	7	Attending school	912	285	1197
614	M	7	Attending school	912	285	1197
615	M	7	Attending school	912	285	1197
616	M	7	Attending school	912	285	1197
617	M	7	Attending school	912	285	1197
618	F	8	Attending school	912	285	1197
619	F	8	Attending school	912	285	1197
620	F	8	Attending school	912	285	1197
621	F	8	Attending school	912	285	1197
622	F	8	Attending school	912	285	1197
623	M	8	Attending school	912	285	1197
624	M	8	Attending school	912	285	1197
625	M	8	Attending school	912	285	1197
626	M	8	Attending school	912	285	1197
627	M	8	Attending school	912	285	1197
628	F	9	Attending school	912	285	1197
629	F	9	Attending school	912	285	1197
630	F	9	Attending school	912	285	1197
631	F	9	Attending school	912	285	1197
632	F	9	Attending school	912	285	1197
633	M	9	Attending school	912	285	1197
634	M	9	Attending school	912	285	1197
635	M	9	Attending school	912	285	1197

Table 49. Occupancy rates in the direct radiation survey area for adults, children and infants (h y^{-1})

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
636	M	9	Attending school	912	285	1197
637	M	9	Attending school	912	285	1197
638	F	10	Attending school	912	285	1197
639	F	10	Attending school	912	285	1197
640	F	10	Attending school	912	285	1197
641	F	10	Attending school	912	285	1197
642	F	10	Attending school	912	285	1197
643	M	10	Attending school	912	285	1197
644	M	10	Attending school	912	285	1197
645	M	10	Attending school	912	285	1197
646	M	10	Attending school	912	285	1197
647	M	10	Attending school	912	285	1197
648	F	11	Attending school	912	285	1197
649	F	11	Attending school	912	285	1197
650	F	11	Attending school	912	285	1197
651	F	11	Attending school	912	285	1197
652	F	11	Attending school	912	285	1197
653	M	11	Attending school	912	285	1197
654	M	11	Attending school	912	285	1197
655	M	11	Attending school	912	285	1197
656	M	11	Attending school	912	285	1197
657	M	11	Attending school	912	285	1197
178	M	U	Working	940	118	1058
179	F	U	Working	940	118	1058
180	F	U	Working	940	118	1058
181	F	U	Working	940	118	1058
182	F	U	Working	940	118	1058
553	F	U	Working	887	49	936
554	F	U	Working	887	49	936
555	F	U	Working	887	49	936
544	F	U	Working	780	49	829
545	F	U	Working	780	49	829
546	F	U	Working	780	49	829
547	F	U	Working	780	49	829
548	F	U	Working	780	49	829
549	F	U	Working	780	49	829
550	F	U	Working	780	49	829
551	F	U	Working	780	49	829
552	F	U	Working	780	49	829
556	F	U	Working	731	49	780
574	F	U	Working	731	49	780
557	F	U	Working	536	49	585
558	F	U	Working	536	49	585
559	F	U	Working	536	49	585
560	F	U	Working	536	49	585
561	F	U	Working	536	49	585

Table 49. Occupancy rates in the direct radiation survey area for adults, children and infants (h y^{-1})

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
570	F	U	Working	536	49	585
571	F	U	Working	536	49	585
572	F	U	Working	536	49	585
573	F	U	Working	536	49	585
577	F	U	Working	341	49	390
562	F	U	Working	234	49	283
563	F	U	Working	234	49	283
564	F	U	Working	234	49	283
565	F	U	Working	234	49	283
566	F	U	Working	234	49	283
567	F	U	Working	234	49	283
575	F	U	Working	224	49	273
576	F	U	Working	224	49	273
568	F	U	Working	195	49	244
569	F	U	Working	195	49	244
>0.5 to 1 km zone						
203	F	75	Residing	7928	312	8240
202	M	78	Residing	8136	104	8240
168	M	9	Residing	7720	500	8220
169	F	9	Residing	7720	500	8220
165	M	28	Residing	7776	306	8082
197	F	29	Residing	7570	280	7850
198	F	3	Residing	7570	280	7850
199	F	2	Residing	7570	280	7850
167	F	33	Residing	7310	500	7810
170	M	3	Residing	7310	500	7810
171	F	0.5	Residing	7310	500	7810
248	F	72	Residing	7446	112	7558
163	F	54	Residing	7031	245	7276
173	M	17	Residing	6732	104	6836
172	F	46	Residing	6342	130	6472
166	M	26	Residing	5728	200	5928
164	M	31	Residing	5277	255	5532
195	M	31	Working	3808	224	4032
194	F	44	Working	2496	96	2592
200	M	38	Visiting	2188	100	2288
201	F	5	Residing	2188	100	2288
189	M	U	Working	1880	352	2232
190	M	U	Working	1880	352	2232
191	M	U	Working	1880	352	2232
192	M	U	Working	1880	352	2232
193	M	U	Working	1880	352	2232
467	M	U	Working	238	1782	2020
468	M	U	Working	238	1782	2020
469	M	U	Working	238	1782	2020
470	M	U	Working	238	1782	2020

Table 49. Occupancy rates in the direct radiation survey area for adults, children and infants (h y^{-1})

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
471	M	U	Working	238	1782	2020
472	M	U	Working	238	1782	2020
473	M	U	Working	238	1782	2020
474	M	U	Working	238	1782	2020
475	M	U	Working	238	1782	2020
196	F	30	Working	1904	112	2016
684	M	U	Working	528	1472	2000
685	M	U	Working	528	1472	2000
319	F	U	Working	1710	190	1900
315	F	U	Working	1862	38	1900
316	F	U	Working	1862	38	1900
317	F	U	Working	1862	38	1900
318	F	U	Working	1862	38	1900
356	M	U	Working	940	940	1880
346	F	U	Working	1615	190	1805
347	F	U	Working	1615	190	1805
348	F	U	Working	1615	190	1805
349	F	U	Working	1615	190	1805
350	F	U	Working	1615	190	1805
351	M	U	Working	1615	190	1805
352	M	U	Working	1615	190	1805
353	M	U	Working	1615	190	1805
354	M	U	Working	1615	190	1805
355	M	U	Working	1615	190	1805
363	F	3	Attending school	1045	285	1330
364	F	3	Attending school	1045	285	1330
365	F	3	Attending school	1045	285	1330
366	F	3	Attending school	1045	285	1330
367	F	3	Attending school	1045	285	1330
368	M	3	Attending school	1045	285	1330
369	M	3	Attending school	1045	285	1330
370	M	3	Attending school	1045	285	1330
371	M	3	Attending school	1045	285	1330
372	M	3	Attending school	1045	285	1330
373	F	4	Attending school	1045	285	1330
374	F	4	Attending school	1045	285	1330
375	F	4	Attending school	1045	285	1330
376	F	4	Attending school	1045	285	1330
377	F	4	Attending school	1045	285	1330
378	M	4	Attending school	1045	285	1330
379	M	4	Attending school	1045	285	1330
380	M	4	Attending school	1045	285	1330
381	M	4	Attending school	1045	285	1330
382	M	4	Attending school	1045	285	1330
383	F	5	Attending school	1045	285	1330
384	F	5	Attending school	1045	285	1330

Table 49. Occupancy rates in the direct radiation survey area for adults, children and infants (h y^{-1})

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
385	F	5	Attending school	1045	285	1330
386	F	5	Attending school	1045	285	1330
387	F	5	Attending school	1045	285	1330
388	M	5	Attending school	1045	285	1330
389	M	5	Attending school	1045	285	1330
390	M	5	Attending school	1045	285	1330
391	M	5	Attending school	1045	285	1330
392	M	5	Attending school	1045	285	1330
393	F	6	Attending school	1045	285	1330
394	F	6	Attending school	1045	285	1330
395	F	6	Attending school	1045	285	1330
396	F	6	Attending school	1045	285	1330
397	F	6	Attending school	1045	285	1330
398	M	6	Attending school	1045	285	1330
399	M	6	Attending school	1045	285	1330
400	M	6	Attending school	1045	285	1330
401	M	6	Attending school	1045	285	1330
402	M	6	Attending school	1045	285	1330
403	F	7	Attending school	1045	285	1330
404	F	7	Attending school	1045	285	1330
405	F	7	Attending school	1045	285	1330
406	F	7	Attending school	1045	285	1330
407	F	7	Attending school	1045	285	1330
408	M	7	Attending school	1045	285	1330
409	M	7	Attending school	1045	285	1330
410	M	7	Attending school	1045	285	1330
411	M	7	Attending school	1045	285	1330
412	M	7	Attending school	1045	285	1330
413	F	8	Attending school	1045	285	1330
414	F	8	Attending school	1045	285	1330
415	F	8	Attending school	1045	285	1330
416	F	8	Attending school	1045	285	1330
417	F	8	Attending school	1045	285	1330
418	M	8	Attending school	1045	285	1330
419	M	8	Attending school	1045	285	1330
420	M	8	Attending school	1045	285	1330
421	M	8	Attending school	1045	285	1330
422	M	8	Attending school	1045	285	1330
423	F	9	Attending school	1045	285	1330
424	F	9	Attending school	1045	285	1330
425	F	9	Attending school	1045	285	1330
426	F	9	Attending school	1045	285	1330
427	F	9	Attending school	1045	285	1330
428	M	9	Attending school	1045	285	1330
429	M	9	Attending school	1045	285	1330
430	M	9	Attending school	1045	285	1330

Table 49. Occupancy rates in the direct radiation survey area for adults, children and infants (h y^{-1})

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
431	M	9	Attending school	1045	285	1330
432	M	9	Attending school	1045	285	1330
433	F	10	Attending school	1045	285	1330
434	F	10	Attending school	1045	285	1330
435	F	10	Attending school	1045	285	1330
436	F	10	Attending school	1045	285	1330
437	F	10	Attending school	1045	285	1330
438	M	10	Attending school	1045	285	1330
439	M	10	Attending school	1045	285	1330
440	M	10	Attending school	1045	285	1330
441	M	10	Attending school	1045	285	1330
442	M	10	Attending school	1045	285	1330
443	F	11	Attending school	1045	285	1330
444	F	11	Attending school	1045	285	1330
445	F	11	Attending school	1045	285	1330
446	F	11	Attending school	1045	285	1330
447	F	11	Attending school	1045	285	1330
448	M	11	Attending school	1045	285	1330
449	M	11	Attending school	1045	285	1330
450	M	11	Attending school	1045	285	1330
451	M	11	Attending school	1045	285	1330
452	M	11	Attending school	1045	285	1330
336	F	U	Working	1045	190	1235
337	F	U	Working	1045	190	1235
338	F	U	Working	1045	190	1235
339	F	U	Working	1045	190	1235
340	F	U	Working	1045	190	1235
341	F	U	Working	1045	190	1235
342	F	U	Working	1045	190	1235
343	F	U	Working	1045	190	1235
344	F	U	Working	1045	190	1235
345	F	U	Working	1045	190	1235
360	F	U	Working	817	38	855
361	F	U	Working	817	38	855
362	F	U	Working	817	38	855
357	F	U	Working	776	47	823
358	F	U	Working	776	47	823
359	F	U	Working	776	47	823
325	M	U	Working	76	304	380
326	M	U	Working	76	304	380
327	M	U	Working	76	304	380
328	M	U	Working	76	304	380
329	M	U	Working	76	304	380
330	M	U	Working	76	304	380
331	M	U	Working	76	304	380
332	M	U	Working	76	304	380

Table 49. Occupancy rates in the direct radiation survey area for adults, children and infants (h y^{-1})

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
333	M	U	Working	76	304	380
334	M	U	Working	76	304	380
335	M	U	Working	76	304	380
320	F	U	Working	247	38	285
321	F	U	Working	247	38	285
322	F	U	Working	247	38	285
323	F	U	Working	247	38	285
324	F	U	Working	152	38	190

Notes

U - Unknown

Table 50. Analysis of direct radiation occupancy rates for adults, children and infants

Number of hours	Number of observations
0 - 0.25 km zone	
>8000 to 8760	7
>7000 to 8000	5
>6000 to 7000	5
>5000 to 6000	2
>4000 to 5000	0
>3000 to 4000	2
>2000 to 3000	10
>1000 to 2000	21
0 to 1000	45
0 to 8760	**97**
>0.25 - 0.5 km zone	
>8000 to 8760	5
>7000 to 8000	5
>6000 to 7000	4
>5000 to 6000	1
>4000 to 5000	0
>3000 to 4000	0
>2000 to 3000	0
>1000 to 2000	97
0 to 1000	34
0 to 8760	**146**
>0.5 - 1 km zone	
>8000 to 8760	5
>7000 to 8000	8
>6000 to 7000	2
>5000 to 6000	2
>4000 to 5000	1
>3000 to 4000	0
>2000 to 3000	18
>1000 to 2000	118
0 to 1000	22
0 to 8760	**176**

Table 51. Gamma dose rate measurements for the Devonport direct radiation survey (μGy h^{-1})

Location	Indoor substrate	Indoor gamma dose rate at 1 metre[a]	Outdoor substrate	Outdoor gamma dose rate at 1 metre[a]
Residences				
Residence 1	Wood	0.088	Concrete	0.085
Residence 2	Wood	0.113	Grass	0.086
Residence 3	Wood	0.113	Concrete	0.078
Residence 4	Wood	0.107	Concrete	0.081
Residence 5	Wood	0.100	Grass	0.085
Residence 6	Concrete	0.058	Gravel	0.076
Residence 7	Concrete	0.060	Soil	0.088
Residence 8	Concrete	0.064	Soil	0.089
Residence 9	Concrete	0.067	Grass	0.087
Residence 10	Concrete	0.064	Soil	0.089
Residence 11	Concrete	0.064	Grass	0.085
Residence 12	Concrete	0.065	Grass	0.111
Residence 13	Concrete	0.066	Grass	0.090
Residence 14	Concrete	0.064	Grass	0.114
Residence 15	Concrete	0.066	Grass	0.096
Residence 16	Concrete	0.070	Grass	0.096
Residence 17	Wood	0.103	Concrete	0.089
Residence 18	Concrete	0.065	Grass	0.094
Schools				
School 1	Concrete	0.053	Grass	0.083

Notes

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

Backgrounds				
	Location	**NGR**	**Substrate**	**Background gamma dose rate at 1 metre**
Background 1	Staddon Heights	SX 493 510	Grass	0.091
Background 2	Lopwell	SX 475 649	Grass	0.101
Background 3	Lower Moditonhain	SX 419 612	Grass	0.074
Background 4	Wacker Quay	SX 389 551	Grass	0.082

Table 52 Combinations of adult pathways for consideration in dose assessments in the Devonport area

Combination number	Fish	Crustaceans	Molluscs	Marine plants/algae	Wildfowl	Vegetables fertilised with seaweed	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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	X							X								X							X	X	X		
2	X						X	X	X		X							X																X	X		
3							X	X	X	X							X	X			X														X			
4							X	X	X	X	X										X																	
5							X	X	X	X	X							X											X							X		
6			X																																X		
7																																		X	X	X	X
8	X	X					X	X	X	X	X							X																	X	X	X
9	X																						X	X	X								X		X		
10																												X									
11	X	X																								X						X			X		
12	X																								X				X			X	X		X		
13							X		X						X			X																			
14													X		X	X	X			X	X	X																
15							X	X			X					X	X	X	X	X		X																
16														X	X	X	X																					
17				X																							X							X	X		
18										X	X	X					X	X		X	X																
19																									X								X	X			
20					X																		X										X				
21					X											X			X			X					X						X				
22					X								X		X	X		X		X	X	X		X											X		
23																														X	X					X	X

Notes

The food groups and external exposure 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 in the following pathways; vegetables fertilised with seaweed, green vegetables, other vegetables, root vegetables, potato, domestic fruit, wild/free foods, intertidal occupancy over rock, handling sediment, occupancy in water and occupancy on water.

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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	F	44	-	-	-	-	-	2.6	6.1	5.0	1.5	5.1	-	-	-	-	-	-	0.9	-	-	-	-	-	-	-	2	-	-	-	-	2	-	-	13	196	-	-
2	M	44	-	-	-	-	-	2.6	6.2	5.0	1.5	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	F	22	-	-	-	-	-	1.8	4.2	3.4	1.0	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	M	22	-	-	-	-	-	1.8	4.2	3.4	1.0	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	M	22	-	-	-	-	-	1.8	4.2	3.4	1.0	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	M	61	-	-	-	-	-	25.8	15.1	2.8	2.6	1.7	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	F	57	-	-	-	-	-	25.8	15.1	2.8	2.6	1.7	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	M	31	1.1	-	-	-	-	16.8	9.4	**16.3**	-	27.2	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	10	-	-
9	F	30	1.1	-	-	-	-	16.8	9.4	**16.3**	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	F	30	1.1	-	-	-	-	16.8	9.4	**16.3**	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	M	30	1.1	-	-	-	-	16.8	9.4	**16.3**	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	M	30	1.1	-	-	-	-	16.8	9.4	**16.3**	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	M	76	-	-	-	-	-	10.2	22.7	1.4	36.0	-	-	-	-	-	-	8.7	0.4	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	F	73	-	-	-	-	-	10.2	22.7	1.4	36.0	-	-	-	-	-	-	8.7	0.4	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	F	53	-	-	-	-	-	8.9	7.6	3.5	8.8	9.2	-	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	M	23	-	-	-	-	-	8.9	7.6	3.5	8.8	9.2	-	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	M	21	-	-	-	-	-	8.9	7.6	3.5	8.8	9.2	-	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	F	19	-	-	-	-	-	8.9	7.6	3.5	8.8	9.2	-	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	F	53	-	-	-	-	-	**35.5**	8.1	7.6	17.7	17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	M	69	-	-	-	-	-	**58.6**	**70.4**	**34.4**	**54.5**	27.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	F	68	-	-	-	-	-	**58.6**	**65.6**	**34.4**	**54.5**	21.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	M	43	-	-	-	-	-	15.0	2.3	3.6	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	F	41	-	-	-	-	-	15.0	2.3	3.6	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	M	83	-	-	-	-	-	3.0	21.0	**15.0**	-	14.2	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	F	81	-	-	-	-	-	3.0	21.0	**15.0**	-	14.2	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	M	65	-	-	-	-	-	11.0	18.8	1.2	10.4	35.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	F	50	-	-	-	-	-	11.0	18.8	1.2	10.4	35.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	M	70	-	-	-	-	-	**28.6**	**27.9**	10.6	22.0	23.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	M	62	-	-	-	-	-	**28.6**	**27.9**	10.6	22.0	23.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	M	62	-	-	-	-	-	**31.2**	**50.3**	**19.1**	29.6	27.0	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	F	65	-	-	-	-	-	**31.2**	**50.3**	**19.1**	29.6	27.0	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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
35	M	49	-	-	-	-	-	10.6	0.2	1.1	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	-	-	-
36	F	43	-	-	-	-	-	6.6	**26.7**	4.3	6.8	**52.1**	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	3	-	-
37	M	47	-	-	-	-	-	6.6	**26.7**	-	6.8	**50.7**	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	3	-	-
39	M	50	-	-	-	-	-	**38.8**	**49.5**	**12.1**	-	13.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	F	55	-	-	-	-	-	**38.8**	**49.5**	**12.1**	-	13.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	M	31	-	-	-	-	-	**38.8**	**49.5**	**12.1**	-	13.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	M	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4	-	-
43	M	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4	-	-
44	M	44	-	-	**0.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1284	-	-
45	F	44	-	-	**0.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	M	23	6.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	M	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	6408	360
48	F	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7296	597
50	M	51	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6708	1248
51	F	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6356	1748
54	M	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	6	-	-	-	-	-	-	10	-	-	-	-	-	-
55	F	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	6	-	-	-	-	-	-	10	-	-	-	-	-	-
56	M	72	-	-	-	-	-	20.5	**49.2**	**14.0**	9.1	16.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	F	57	-	-	-	-	-	20.5	**49.2**	**14.0**	9.1	16.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	F	45	-	-	-	-	-	8.2	19.7	5.6	3.6	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	M	45	-	-	-	-	-	8.2	19.7	5.6	3.6	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	M	65	-	-	-	-	-	8.4	5.4	5.5	1.6	5.7	-	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	F	33	-	-	-	-	-	8.4	7.2	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	F	33	-	-	-	-	-	8.4	5.4	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	F	16	-	-	-	-	-	8.4	5.4	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68	F	30	-	-	-	-	-	8.4	5.4	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69	M	30	-	-	-	-	-	8.4	5.4	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	M	63	-	-	-	-	-	26.3	8.5	**13.5**	4.6	17.5	-	-	-	-	-	-	**4.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74	F	56	-	-	-	-	-	26.3	8.5	**13.5**	4.6	17.5	-	-	-	-	-	-	**4.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75	F	56	-	-	-	-	-	**82.1**	19.5	**31.6**	38.2	14.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76	M	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7977	179

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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
77	F	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8058	151
78	F	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7105	55
79	F	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	7046	845
81	M	74	-	-	-	-	-	18.5	**45.1**	**22.2**	25.8	16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82	F	74	-	-	-	-	-	18.5	**45.1**	**22.2**	25.8	16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83	M	40	-	-	-	-	-	18.5	**45.1**	**22.2**	25.8	16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84	F	40	-	-	-	-	-	18.5	**45.1**	**22.2**	25.8	16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85	M	17	-	-	-	-	-	-	-	-	25.8	12.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87	M	64	-	-	-	-	-	**34.0**	22.7	**19.3**	9.8	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
88	F	65	-	-	-	-	-	**34.0**	22.7	**19.3**	9.8	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
89	F	89	-	-	-	-	-	3.4	2.3	1.9	1.0	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90	M	59	-	-	-	-	-	16.5	**38.6**	1.3	8.7	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
91	F	46	-	-	-	-	-	16.5	**38.6**	1.3	8.7	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
92	F	64	-	-	-	-	-	**43.6**	8.1	**17.1**	21.2	**110.8**	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93	M	70	-	-	-	-	-	**43.6**	8.1	**17.1**	21.2	**110.8**	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94	M	38	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	F	38	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96	M	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**31**	-	-	-	-	-	-	-	-	-
97	F	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**31**	-	-	-	-	-	-	-	-	-
99	M	34	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**245**	-	-	-	-	-	-	**245**	-	-	-	920	-	-
100	F	30	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101	M	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	24	-	-	-	-	-
102	M	62	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	24	-	-	-	-	-
103	M	70	**41.3**	**1.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**66**	-	-	-	111	-	-	-	-	97	-	-
104	F	66	**41.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-
105	F	36	**41.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**30**	-	-	-	53	-	-	-	-	20	-	-
106	M	36	**41.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**60**	-	-	-	105	-	-	-	-	27	-	-
107	M	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
108	M	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
109	F	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
111	M	62	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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
112	F	62	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
113	M	48	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
114	F	44	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117	M	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	-	-
118	F	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	-	-
120	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-
121	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-
132	M	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	150	-	-
133	F	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	150	-	-
137	M	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**365**	-	-	-	-	-	-	-	-
138	F	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	550	-	-
139	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500	-	-
140	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500	-	-
141	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	250	-	-
142	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	250	-	-
159	M	U	**15.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
160	F	U	**15.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
161	F	17	**15.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
163	F	54	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7031	245
164	M	31	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5277	255
165	M	28	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7776	306
166	M	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5728	200
167	F	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7310	500
172	F	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6342	130
173	M	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6732	104
174	M	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5716	260
175	F	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5812	260
176	M	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8318	182
177	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1827	108
178	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	940	118
179	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	940	118

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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
180	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	940	118
181	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	940	118
182	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	940	118
183	M	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2114	118
184	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2114	118
185	M	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2024	230
186	M	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2024	230
187	M	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2024	230
188	F	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2024	230
189	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1880	352
190	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1880	352
191	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1880	352
192	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1880	352
193	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1880	352
194	F	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2496	96
195	M	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3808	224
196	F	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1904	112
197	F	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7570	280
200	M	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2188	100
202	M	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8136	104
203	F	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7928	312
204	M	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-	-	-	200	-	-
205	M	20	**29.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	624	-	-
206	M	35	**29.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	624	-	-
207	F	32	**29.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
208	F	41	**29.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
209	M	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**250**	-	-	-	-	300	-	-
210	M	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	-	-	-	-	320	-	-
211	M	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-	180	-	-
212	M	64	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**200**	-	-	-	-	600	-	-
213	F	62	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600	-	-

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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
214	M	19	**36.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	7	7	30	-	-	-	208	-	-
215	M	20	**18.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	-	-	-	14	14	60	-	-	-	416	-	-
216	M	18	**18.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
218	M	47	**18.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
219	F	49	**18.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
220	M	53	10.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
221	M	63	7.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
222	F	55	7.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
223	M	16	7.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
224	M	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	-	-	-
225	M	40	-	**3.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**820**	-	-	-	820	-	-
226	F	40	-	**3.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
227	F	20	-	**3.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
228	M	17	-	**2.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
229	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**540**	-	-	-	-	-	**540**	-	-	240	-	-
230	M	56	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
231	F	55	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
232	M	58	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
233	F	56	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234	F	40	-	-	-	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7947	300
235	M	45	-	-	-	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5651	52
240	F	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7848	600
241	M	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7245	99
248	F	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7446	112
249	M	69	-	-	-	-	-	5.3	10.8	1.7	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6913	168
250	F	64	-	-	-	-	-	5.3	10.8	1.7	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6820	168
251	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**52**	-	-	-	-	-	-	-	-
252	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**52**	-	-	-	-	-	-	-	-
253	M	U	**40.7**	**1.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
254	F	U	**40.7**	**1.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
255	M	U	**40.7**	**1.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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
256	M	U	**40.7**	**1.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
257	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2390	-	-
258	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2390	-	-
259	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2390	-	-
260	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2390	-	-
261	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2390	-	-
262	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2390	-	-
263	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2390	-	-
264	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2390	-	-
265	M	45	-	-	-	-	-	8.5	-	**18.4**	-	-	-	-	-	2.7	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
266	F	44	-	-	-	-	-	8.5	-	**18.4**	-	-	-	-	-	2.7	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
270	M	48	-	-	-	-	-	-	-	-	-	-	-	**31.7**	-	**9.9**	0.8	**26.7**	-	-	1.4	**2.0**	**5.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
271	F	48	-	-	-	-	-	-	-	-	-	-	-	**31.7**	-	**9.9**	0.8	**26.7**	-	-	1.4	**2.0**	**5.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
273	M	18	-	-	-	-	-	-	-	-	-	-	-	**31.7**	-	**9.9**	0.8	**26.7**	-	-	1.4	**2.0**	**5.0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
274	M	U	-	-	-	-	-	7.6	16.6	-	-	7.9	-	-	-	-	**6.1**	**35.6**	**7.9**	0.2	**2.7**	-	**13.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
275	M	U	-	-	-	-	-	7.6	16.6	-	-	7.9	-	-	-	-	**6.1**	**35.6**	**7.9**	0.2	**2.7**	-	**13.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
276	M	67	-	-	-	-	-	-	-	-	-	-	-	-	**50.6**	**11.3**	**4.6**	**17.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
277	M	23	-	-	-	-	-	-	-	-	-	-	-	-	**50.6**	**11.3**	**4.6**	**17.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
278	F	21	-	-	-	-	-	-	-	-	-	-	-	-	**50.6**	**11.3**	**4.6**	**17.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
279	F	17	-	-	-	-	-	-	-	-	-	-	-	-	**50.6**	**11.3**	**4.6**	**17.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
281	M	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140	-	-	-	-	-	-	-	-	-	-	-
282	M	U	-	-	-	-	**0.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	10	530	-	-
283	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
284	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
285	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
286	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
287	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
288	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
289	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
290	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
291	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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
292	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
293	M	30	5.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	504	-	-
294	M	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	96	-	-	-	-	-	48	-	-	48	-	-
295	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	-	-	-
296	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	-	-	-
297	F	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7936	564
298	F	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	6
299	F	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	6
300	M	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	1
301	M	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	1
302	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42
303	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	208
304	M	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5855	130
305	F	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8096	360
306	F	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6400	252
307	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	312	14
308	M	44	4.5	1.0	-	-	-	7.4	5.8	0.3	2.3	0.7	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7823	365
309	F	39	-	1.0	-	-	-	7.4	5.8	0.3	2.3	0.7	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7407	365
310	M	16	4.5	1.0	-	-	-	7.4	5.8	0.3	2.3	0.7	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7459	365
312	F	59	-	-	-	-	-	0.7	13.6	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7374	798
313	F	36	-	-	-	-	-	0.7	13.6	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3831	94
314	M	18	-	-	-	-	-	0.7	13.6	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3831	94
315	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1862	38
316	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1862	38
317	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1862	38
318	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1862	38
319	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1710	190
320	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	247	38
321	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	247	38
322	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	247	38
323	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	247	38

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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
324	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	152	38
325	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	304
326	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	304
327	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	304
328	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	304
329	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	304
330	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	304
331	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	304
332	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	304
333	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	304
334	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	304
335	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	304
336	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
337	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
338	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
339	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
340	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
341	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
342	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
343	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
344	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
345	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
346	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
347	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
348	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
349	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
350	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
351	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
352	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
353	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
354	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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
355	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
356	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	940	940
357	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	776	47
358	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	776	47
359	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	776	47
360	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	817	38
361	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	817	38
362	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	817	38
453	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**183**	-	-	-	-	-	-	-	-	-	-	-
454	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	-	-	-	**168**	-	56	-	-	-	-	-
455	M	U	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**520**	**208**	104	-	-	-	-	-	**520**	-	-	-	64	-	-
456	F	U	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
460	M	67	-	-	-	-	-	-	-	-	**144.3**	15.1	**207.4**	-	-	-	-	**16.4**	**3.0**	-	0.2	**0.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
461	F	65	-	-	-	-	-	-	-	-	**144.3**	15.1	**207.4**	-	-	-	-	**16.4**	**3.0**	-	0.2	**0.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
462	M	41	-	-	-	-	-	-	-	-	**144.3**	15.1	**207.4**	-	-	-	-	**16.4**	**3.0**	-	0.2	**0.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
463	M	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**328**	-	-	-	-	-	**208**	-	-	-	-	-
464	M	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**548**	-	-	-	-	-	**208**	-	-	-	-	-
465	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	-	-	-	-	-	30	-	-	70	-	-
466	F	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	172	-	-	-	-	-	-	-	-	-	-	-
467	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2020	238	1782
468	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2020	238	1782
469	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2020	238	1782
470	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2020	238	1782
471	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2020	238	1782
472	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2020	238	1782
473	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2020	238	1782
474	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2020	238	1782
475	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2020	238	1782
476	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800	240
477	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800	240
478	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800	240

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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
479	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800	240
480	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320	240
481	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320	240
482	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320	240
483	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320	240
484	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320	240
485	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320	240
486	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1080	240
487	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1080	240
488	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1080	240
489	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	528	240
490	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	528	240
491	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	240
492	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	960	240
533	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
534	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
535	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
536	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
537	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
538	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
539	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
540	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
541	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
542	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
543	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
544	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
545	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
546	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
547	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
548	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
549	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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
550	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
551	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
552	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
553	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	887	49
554	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	887	49
555	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	887	49
556	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	731	49
557	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
558	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
559	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
560	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
561	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
562	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	234	49
563	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	234	49
564	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	234	49
565	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	234	49
566	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	234	49
567	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	234	49
568	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	195	49
569	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	195	49
570	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
571	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
572	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
573	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
574	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	731	49
575	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	224	49
576	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	224	49
577	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	341	49
658	M	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
659	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
660	F	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Milk	Cattle meat	Pig meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	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	Handling fishing gear	Handling sediment	Occupancy in close proximity (<10m) to liquid sewage sludge	Occupancy in close proximity (<10m) to dried sewage sludge	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
661	M	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
662	F	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
663	M	U	-	-	-	**2.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-
664	M	U	-	-	-	**2.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-
665	M	U	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-
666	M	U	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-
667	M	U	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-
668	M	U	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-
669	M	U	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-
670	M	U	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-
671	M	U	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-
672	M	U	-	-	-	**1.1**	-	-	-	-	-	-	-	-	-	-	**8.2**	-	-	**2.8**	-	-	**10.3**	-	-	-	-	**6**	-	-	-	6	-	-	-	-	-	-
673	F	U	-	-	-	**1.1**	-	-	-	-	-	-	-	-	-	-	**8.2**	-	-	**2.8**	-	-	**10.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
674	M	17	-	-	-	**1.1**	-	-	-	-	-	-	-	-	-	-	**8.2**	-	-	**2.8**	-	-	**10.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
676	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**6**	-	-	-	6	-	-	-	-	-	-
677	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**6**	-	-	-	6	-	-	-	-	-	-
678	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
679	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
680	M	44	-	-	-	**1.6**	-	-	-	-	-	-	-	**47.3**	-	**5.7**	2.4	-	0.7	-	1.4	**1.1**	4.1	-	20	-	-	-	-	-	-	-	-	-	-	30	-	-
681	F	43	-	-	-	**1.6**	-	-	-	-	-	-	-	**47.3**	-	**5.7**	2.4	-	0.7	-	1.4	**1.1**	4.1	-	20	-	-	-	-	-	-	-	-	-	-	30	-	-
684	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	966	506	-	-	528	1472
685	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	966	506	-	-	528	1472

Notes

Emboldened observations are the high-rate individuals

U - Unknown

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
Child age group (6 - 15 years old)																										
24	F	9	-	-	**4.8**	0.9	1.4	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	F	6	-	-	**4.8**	0.9	1.4	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	M	9	-	-	1.9	0.04	-	2.5	**19.4**	-	-	-	-	**0.3**	-	-	-	-	-	-	-	**3**	3	-	-	-
49	F	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6776	1287
52	M	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6393	335
53	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6393	335
60	M	11	-	-	**8.2**	**19.7**	5.6	3.6	**6.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	M	10	-	-	**8.2**	**19.7**	5.6	3.6	**6.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	M	13	-	-	**8.4**	5.4	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70	F	15	-	-	**8.4**	5.4	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71	F	11	-	-	**8.4**	5.4	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
86	M	9	-	-	-	-	-	**25.8**	**12.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98	F	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**15**	-	-	-	-	-
110	F	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
115	F	10	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
119	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	-	-
122	M	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-
123	F	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
124	M	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-
125	F	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-
126	M	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-
127	F	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-
128	M	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-
129	F	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-
130	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-
131	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-
134	M	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	150	-	-
135	M	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	150	-	-
136	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	150	-	-
143	M	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-
144	M	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-
145	M	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-
146	M	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
147	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
148	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
149	M	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
150	M	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
151	F	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-
152	F	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-
153	F	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-
154	F	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
155	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
156	F	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
157	F	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
158	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
162	F	13	**15.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
168	M	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7720	500
169	F	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7720	500
217	M	14	**18.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
236	M	15	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6596	52
237	F	14	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6869	104
238	M	12	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6901	104
239	M	9	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8013	390
247	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	468	96
267	M	15	-	-	**8.5**	-	**18.4**	-	-	-	2.7	-	-	**0.3**	-	-	-	-	-	-	-	-	-	-	-	-
268	M	14	-	-	**8.5**	-	**18.4**	-	-	-	2.7	-	-	**0.3**	-	-	-	-	-	-	-	-	-	-	-	-

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
269	F	10	-	-	2.1	-	4.6	-	-	-	0.7	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-
272	M	15	-	-	-	-	-	-	-	**31.7**	**9.9**	0.8	**26.7**	-	-	**1.4**	**2.0**	**5.0**	-	-	-	-	-	-	-	-
280	M	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**52**	-	-	-	-	-	-
311	F	13	-	-	**7.4**	5.8	0.3	2.3	0.7	-	-	-	-	**0.5**	-	-	-	-	-	-	-	-	-	-	6094	365
393	F	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
394	F	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
395	F	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
396	F	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
397	F	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
398	M	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
399	M	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
400	M	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
401	M	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
402	M	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
403	F	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
404	F	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
405	F	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
406	F	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
407	F	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
408	M	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
409	M	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
410	M	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
411	M	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
412	M	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
413	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
414	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
415	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
416	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
417	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
418	M	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
419	M	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
420	M	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
421	M	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
422	M	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
423	F	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
424	F	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
425	F	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
426	F	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
427	F	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
428	M	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
429	M	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
430	M	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
431	M	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
432	M	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
433	F	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
434	F	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
435	F	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
436	F	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
437	F	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
438	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
439	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
440	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
441	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
442	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
443	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
444	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
445	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
446	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
447	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
448	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
449	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
450	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
451	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
452	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
457	F	15	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
458	M	13	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
459	F	11	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
598	F	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
599	F	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
600	F	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
601	F	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
602	F	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
603	M	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
604	M	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
605	M	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
606	M	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
607	M	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
608	F	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
609	F	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
610	F	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
611	F	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
612	F	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
613	M	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
614	M	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
615	M	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
616	M	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
617	M	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
618	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
619	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
620	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
621	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
622	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
623	M	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
624	M	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
625	M	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
626	M	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
627	M	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
628	F	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
629	F	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
630	F	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
631	F	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
632	F	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
633	M	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
634	M	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
635	M	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
636	M	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
637	M	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
638	F	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
639	F	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
640	F	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
641	F	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
642	F	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
643	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
644	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
645	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
646	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
647	M	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
648	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
649	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
650	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
651	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
652	F	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
653	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
654	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
655	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
656	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
657	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
675	M	14	-	**1.1**	-	-	-	-	-	-	-	**8.2**	-	-	**2.8**	-	-	**10.3**	-	-	-	-	-	-	-	-
682	F	12	-	-	-	-	-	-	-	**35.5**	**5.7**	-	-	**0.7**	-	**1.4**	-	-	**20**	-	-	-	-	30	-	-
683	M	14	-	-	-	-	-	-	-	**47.3**	**5.7**	-	-	**0.7**	-	**1.4**	-	-	**20**	-	-	-	-	30	-	-
Infant age group (0 - 5 years old)																										
26	M	4	-	-	**3.2**	0.6	0.9	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	F	5	-	-	**4.1**	**11.1**	**3.0**	**1.8**	**3.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
72	M	3	-	-	**4.2**	**4.6**	**2.7**	**0.8**	**2.8**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80	M	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	6929	971
116	F	3	**2.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
170	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7310	500
171	F	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7310	500
198	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7570	280
199	F	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7570	280
201	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2188	100
242	M	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	336	48
243	M	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1344	144
244	M	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1008	96
245	F	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800	96
246	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	800	96
363	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
364	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
365	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
366	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
367	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
368	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
369	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
370	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
371	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
372	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
373	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
374	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
375	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
376	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
377	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
378	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
379	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
380	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
381	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
382	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
383	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
384	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
385	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
386	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
387	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
388	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
389	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
390	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
391	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
392	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	285
493	M	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	635	188
494	F	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	635	188
495	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	635	188
496	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	635	188
497	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	635	188
498	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	635	188
499	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	635	188
500	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	635	188
501	M	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1315	565
502	F	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1315	565
503	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1315	565
504	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1315	565
505	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1315	565
506	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1315	565

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
507	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1315	565
508	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1315	565
509	M	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
510	M	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
511	M	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
512	F	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
513	F	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
514	F	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
515	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
516	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
517	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
518	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
519	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
520	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
521	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
522	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
523	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
524	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
525	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
526	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
527	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
528	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
529	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
530	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
531	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
532	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	47
578	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
579	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
580	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
581	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
582	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
583	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
584	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
585	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
586	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
587	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
588	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
589	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285

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

Observation number	Sex	Age (years)	Fish	Wildfowl	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Cattle meat	Sheep meat	Poultry	Eggs	Wild/free foods	Rabbits/hares	Honey	Wild fungi	Venison	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	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
590	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
591	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
592	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
593	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
594	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
595	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
596	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285
597	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	285

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 occupancy rate
Evidence was obtained during the survey that people were permanently living on board houseboats at three boatyards/marinas in the aquatic survey area. The houseboats were resting on mud at low tide and were afloat at high tide.	Occupancy on board a houseboat that is resting on mud at low tide and associated occupancy on board a houseboat while it is afloat.	4098 h y^{-1} on board a houseboat that is resting on mud, which is the mean occupancy rate for the high-rate group for the 13 adults for this pathway from the 2004 Devonport habits survey report. 2348 h y^{-1} for occupancy on board a houseboat that is afloat, which is the mean of the 'water on' occupancy rates for the previous 13 adults from the 2004 Devonport habits survey report.

Annex 4. Ratios for determining consumption and occupancy rates for infants and children

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

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.

Annex 5. Consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) for women of childbearing age[a] in the Devonport area, for use in foetal dose assessments

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	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	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	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
1	F	44	-	-	-	-	2.6	6.1	5.0	1.5	5.1	-	-	-	-	-	0.9	-	-	-	-	-	-	2	-	-	-	2	13	196	-	-
3	F	22	-	-	-	-	1.8	4.2	3.4	1.0	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	F	30	1.1	-	-	-	16.8	9.4	16.3	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	F	30	1.1	-	-	-	16.8	9.4	16.3	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	F	19	-	-	-	-	8.9	7.6	3.5	8.8	9.2	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	F	41	-	-	-	-	15.0	2.3	3.6	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	F	43	-	-	-	-	6.6	26.7	4.3	6.8	52.1	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	3	-	-	-	3	-	-
45	F	44	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	F	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7296	597
51	F	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6356	1748
64	F	33	-	-	-	-	8.4	7.2	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	F	33	-	-	-	-	8.4	5.4	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	F	16	-	-	-	-	8.4	5.4	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68	F	30	-	-	-	-	8.4	5.4	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70	F	15	-	-	-	-	8.4	5.4	5.5	1.6	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77	F	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8058	151
78	F	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7105	55
79	F	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	7046	845
84	F	40	-	-	-	-	18.5	45.1	22.2	25.8	16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	F	38	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	F	30	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105	F	36	41.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	53	-	-	20	-	-
109	F	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-
114	F	44	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
118	F	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	-	-
121	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-

Annex 5. Consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) for women of childbearing age[a] in the Devonport area, for use in foetal dose assessments

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	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	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	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
123	F	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156	-	-
133	F	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	150	-	-
138	F	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	550	-	-
140	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500	-	-
142	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	250	-	-
151	F	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-
160	F	U	15.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
161	F	17	15.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
167	F	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7310	500
177	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1827	108
179	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	940	118
180	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	940	118
181	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	940	118
182	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	940	118
188	F	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2024	230
194	F	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2496	96
196	F	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1904	112
197	F	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7570	280
207	F	32	29.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
208	F	41	29.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
226	F	40	-	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
227	F	20	-	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234	F	40	-	-	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7947	300
252	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-	-	-	-	-
254	F	U	40.7	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
266	F	44	-	-	-	-	8.5	-	18.4	-	-	-	-	2.7	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Annex 5. Consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) for women of childbearing age[a] in the Devonport area, for use in foetal dose assessments

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	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	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	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
278	F	21	-	-	-	-	-	-	-	-	-	-	50.6	11.3	4.6	17.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
279	F	17	-	-	-	-	-	-	-	-	-	-	50.6	11.3	4.6	17.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
289	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
290	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
291	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
292	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324	-	-
303	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	208
305	F	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	8096	360
306	F	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	6400	252
307	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	312	14
309	F	39	-	1.0	-	-	7.4	5.8	0.3	2.3	0.7	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	7407	365
313	F	36	-	-	-	-	0.7	13.6	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3831	94
315	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1862	38
316	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1862	38
317	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1862	38
318	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1862	38
319	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1710	190
320	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	247	38
321	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	247	38
322	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	247	38
323	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	247	38
324	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	152	38
336	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
337	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
338	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190

Annex 5. Consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) for women of childbearing age[a] in the Devonport area, for use in foetal dose assessments

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	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	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	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
339	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
340	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
341	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
342	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
343	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
344	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
345	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1045	190
346	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
347	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
348	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
349	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
350	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1615	190
357	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	776	47
358	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	776	47
359	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	776	47
360	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	817	38
361	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	817	38
362	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	817	38
453	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	183	-	-	-	-	-	-	-	-
456	F	U	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
457	F	15	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
477	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800	240
478	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800	240
479	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800	240
480	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320	240
481	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320	240

Annex 5. Consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) for women of childbearing age[a] in the Devonport area, for use in foetal dose assessments

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	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	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	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
482	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320	240
483	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320	240
484	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320	240
485	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1320	240
486	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1080	240
487	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1080	240
488	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1080	240
489	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	528	240
490	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	528	240
491	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	912	240
492	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	960	240
537	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
538	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
539	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
540	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
541	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
542	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
543	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1433	49
544	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
545	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
546	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
547	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
548	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
549	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
550	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
551	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49

Annex 5. Consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) for women of childbearing age[a] in the Devonport area, for use in foetal dose assessments

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	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	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	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
552	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	49
553	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	887	49
554	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	887	49
555	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	887	49
556	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	731	49
557	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
558	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
559	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
560	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
561	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
562	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	234	49
563	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	234	49
564	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	234	49
565	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	234	49
566	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	234	49
567	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	234	49
568	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	195	49
569	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	195	49
570	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
571	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
572	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
573	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	536	49
574	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	731	49
575	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	224	49
576	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	224	49
577	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	341	49

Annex 5. Consumption rates (kg y^{-1}) and occupancy rates (h y^{-1}) for women of childbearing age[a] in the Devonport area, for use in foetal dose assessments

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Wildfowl	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	Intertidal occupancy over mud and sand	Intertidal occupancy over mud, sand and stones	Intertidal occupancy over rock	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
662	F	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-
673	F	U	-	-	-	1.1	-	-	-	-	-	-	-	-	8.2	-	-	2.8	-	-	10.3	-	-	-	-	-	-	-	-	-	-	-
679	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-
681	F	43	-	-	-	1.6	-	-	-	-	-	47.3	-	5.7	2.4	-	0.7	-	1.4	1.1	4.1	20	-	-	-	-	-	-	-	30	-	-

Notes

U - Unknown

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

Annex 6. Summary of profiles for adults in the Devonport area

Profile Name	Number of individuals	Pathway Name: Crustacea	Direct[a]	Eggs	Fish - Sea	Fruit - Domestic	Fruit and nuts - Wild	Gamma ext - Houseboat[b]	Gamma ext - Saltmarsh	Gamma ext - Sediment[c]	Honey	Marine plants/algae	Meat - Cow	Meat - Game[d]	Meat - Pig	Meat - Poultry	Meat - Sheep	Milk	Molluscs	Mushrooms	Occupancy in proximity to liquid sewage sludge	Occupancy in proximity to dried sewage sludge	Occupancy IN water	Occupancy ON water	Plume (IN; 0-0.25km)[e]	Plume (MID; >0.25-0.5km)[e]	Plume (OUT; >0.5-1.1km)[e]	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root
		kg	-	kg	kg	kg	kg	h	h	h	kg	kg	kg	kg	kg	kg	kg	l	kg	kg	h	h	h	h	h	h	h	kg	kg	kg	kg
Crustacean consumers	**9**	2.4	-	-	22.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-
Occupants for direct radiation	**187**	0.02	1.0	-	0.07	0.04	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	10	5	<1	97	1010	480	940	0.19	0.43	0.04	0.02
Egg consumers	**12**	-	-	22.6	-	5.1	2.1	-	-	-	0.83	-	7.9	3.5	16.9	2.8	6.2	51.9	-	0.69	-	-	-	-	-	-	-	1.3	2.8	36.1	-
Sea fish consumers	**20**	0.39	-	-	30.1	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-
Domestic fruit consumers	**4**	-	-	-	-	81.1	0.26	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	25.1	17.4	14.0	9.6
Wild fruit and nut consumers	**7**	-	-	17.2	-	13.7	4.9	-	-	-	0.84	-	-	3.9	-	1.7	-	88.9	-	0.32	-	-	-	-	-	-	-	9.7	7.2	63.2	3.9
Occupants for exposure - Houseboat	**2**	-	-	-	-	-	-	4100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Occupants for exposure - Saltmarsh	**3**	-	-	-	-	-	-	-	6	-	-	-	-	4.7	-	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Occupants for exposure - Sediment	**5**	-	-	-	0.69	-	-	-	-	520	-	-	-	-	-	-	-	-	-	-	-	-	-	61	-	-	-	-	-	-	-
Honey consumers	**8**	-	-	8.9	-	2.0	2.0	-	-	-	3.9	-	-	3.4	-	1.5	-	-	-	-	-	-	-	-	-	-	-	1.9	4.1	-	-
Marine plant/algae consumers	**1**	-	-	-	-	-	-	-	1	-	-	0.45	-	-	-	-	-	-	-	-	-	-	10	530	-	-	-	-	-	-	-
Cattle meat consumers	**5**	-	-	16.0	-	-	0.27	-	-	8	1.4	-	37.9	5.3	-	1.4	8.2	-	-	1.7	-	-	-	12	-	-	-	-	-	-	-
Game meat consumers	**10**	-	-	15.1	-	1.6	1.7	-	<1	4	1.2	-	19.0	9.6	-	4.4	4.1	-	-	0.83	-	-	-	6	-	-	-	1.5	3.3	-	-
Pork meat consumers	**4**	-	-	17.8	-	-	-	-	-	-	-	-	-	-	50.6	4.6	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poultry meat consumers	**9**	-	-	15.8	-	1.8	1.8	-	<1	-	0.60	-	-	7.8	22.5	6.1	5.0	-	-	-	-	-	-	-	-	-	-	1.7	3.7	-	-
Sheep meat consumers	**9**	-	-	16.8	-	-	0.15	-	-	4	0.76	-	21.1	2.9	22.5	2.8	9.6	-	-	0.92	-	-	-	7	-	-	-	-	-	-	-
Milk consumers	**3**	-	-	16.4	-	15.1	3.0	-	-	-	0.15	-	-	-	-	-	-	207.4	-	0.76	-	-	-	-	-	-	-	-	-	144.3	-
Mollusc consumers	**2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08	-	-	-	-	640	-	-	-	-	-	-	-
Mushroom consumers	**8**	-	-	16.2	-	5.7	1.3	-	-	5	0.91	-	23.7	3.3	-	0.89	5.1	77.8	-	1.3	-	-	-	8	-	-	-	-	-	54.1	-
Occupancy in proximity to liquid sewage sludge	**2**	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	970	510	-	-	-	-	2000	-	-	-	-
Occupancy in proximity to dried sewage sludge	**2**	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	970	510	-	-	-	-	2000	-	-	-	-
Occupancy IN water	**5**	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	120	60	-	-	-	-	-	-	-
Occupancy ON water	**20**	0.20	0.45	-	0.30	-	-	-	-	12	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	2020	-	-	910	-	-	-	-
Occupants for plume pathways (inner area)	**16**	0.18	1.0	-	0.56	0.36	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7080	-	-	2.2	5.0	0.43	0.29
Occupants for plume pathways (mid area)	**11**	-	1.0	-	0.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	-	7520	-	-	-	-	-
Occupants for plume pathways (outer area)	**12**	-	1.0	-	-	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6990	-	-	-	-
Green vegetable consumers	**15**	-	-	-	-	29.9	0.03	-	-	-	-	-	-	-	-	-	-	-	-	0.03	-	-	-	-	-	-	-	41.7	35.3	22.0	18.4
Other domestic vegetable consumers	**19**	-	-	-	-	20.7	0.08	-	-	<1	-	-	-	-	-	-	-	-	-	0.02	-	-	-	<1	-	-	-	27.1	44.8	19.2	15.2
Potato consumers	**5**	-	-	9.8	-	18.7	1.8	-	-	-	0.09	-	-	-	-	-	-	124.5	-	0.45	-	-	-	-	-	-	-	23.4	27.2	108.4	13.8
Root vegetable consumers	**29**	-	-	-	0.19	19.8	0.44	-	-	-	-	-	-	-	-	-	0.18	-	-	0.02	-	-	<1	<1	-	-	-	27.8	29.3	13.8	18.6

Notes

[a]Expressed as the proportion of the profile members who are exposed to direct radiation

[b]The occupancy rate for this pathway has been estimated using data from the 2004 Devonport habits survey report. See Annex 3.

[c]Gamma ext - sediment includes occupancy over mud; over mud and sand; over mud, sand and stones; over sand: over sand and stones.

[d]Game meat includes rabbits/hares, venison and wildfowl

[e]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 Devonport area

		Pathway Name																				
Profile Name	Number of individuals	Direct[a]	Eggs	Fish - Sea	Fruit - Domestic	Fruit and nuts - Wild	Gamma ext - Sediment[b]	Honey	Meat - Cow	Meat - Game[c]	Meat - Poultry	Meat - Sheep	Mushrooms	Occupancy IN water	Occupancy ON water	Plume (IN; 0-0.25km)[d]	Plume (MID; >0.25-0.5km)[d]	Plume (OUT; 0.5-1km)[d]	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root
		-	kg	kg	kg	kg	h	kg	kg	kg	kg	kg	kg	h	h	h	h	h	kg	kg	kg	kg
Occupants for direct radiation	**131**	1.0	-	-	0.04	<0.01	-	-	-	-	-	-	-	-	-	820	160	730	0.06	0.04	0.02	<0.01
Egg consumers	**1**	-	26.7	-	-	-	-	1.4	31.7	5.0	0.79	9.9	2.0	-	-	-	-	-	-	-	-	-
Sea fish consumers	**2**	-	-	16.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic fruit consumers	**4**	-	-	-	11.2	0.08	<1	-	-	-	-	-	-	<1	-	-	-	-	4.6	9.9	8.9	2.8
Wild fruit and nut consumers	**6**	0.17	-	-	3.3	0.46	7	0.45	13.8	-	-	2.8	-	<1	10	1080	-	-	4.4	0.98	0.80	6.2
Occupants for exposure - sediment	**3**	-	-	-	-	0.45	31	0.91	27.6	-	-	3.8	-	-	20	-	-	-	-	-	-	-
Honey consumers	**3**	-	8.9	-	-	0.45	13	1.4	38.2	1.7	0.26	7.1	0.67	-	20	-	-	-	-	-	-	-
Cattle meat consumers	**3**	-	8.9	-	-	0.45	13	1.4	38.2	1.7	0.26	7.1	0.67	-	20	-	-	-	-	-	-	-
Game meat consumers	**2**	-	13.3	-	-	-	-	0.68	15.8	9.6	4.5	4.9	1.0	-	-	-	-	-	-	-	-	-
Poultry meat consumers	**1**	-	-	-	-	-	-	-	-	14.2	8.2	-	-	-	-	-	-	-	-	-	-	-
Sheep meat consumers	**3**	-	8.9	-	-	0.45	13	1.4	38.2	1.7	0.26	7.1	0.67	-	20	-	-	-	-	-	-	-
Mushroom consumers	**1**	-	26.7	-	-	-	-	1.4	31.7	5.0	0.79	9.9	2.0	-	-	-	-	-	-	-	-	-
Occupancy IN water	**3**	-	-	-	-	-	-	-	-	-	-	-	-	200	150	-	-	-	-	-	-	-
Occupancy ON water	**30**	-	-	-	-	-	-	-	-	-	-	-	-	20	150	-	-	-	-	-	-	-
Occupants for plume pathways (inner area)	**5**	1.0	-	-	1.1	0.09	-	-	-	-	-	-	-	-	-	7100	-	-	1.5	1.2	0.45	0.06
Occupants for plume pathways (mid area)	**3**	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7170	-	-	-	-	-
Occupants for plume pathways (outer area)	**2**	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8220	-	-	-	-
Green vegetable consumers	**10**	0.10	-	-	3.3	0.11	-	-	-	-	-	0.53	-	-	-	650	-	-	7.6	6.3	1.4	6.7
Other domestic vegetable consumers	**2**	-	-	-	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	8.2	19.7	3.6	5.6
Potato consumers	**1**	-	-	-	12.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.8	-
Root vegetable consumers	**2**	-	-	-	-	0.32	-	-	-	-	-	2.7	-	-	-	-	-	-	8.5	-	-	18.4

Notes

[a]Expressed as the proportion of the profile members who are exposed to direct radiation

[b]Gamma ext - sediment includes occupancy over mud and sand; over mud, sand and stones; over sand; over sand and stones.

[c]Game meat includes rabbits/hares, venison and wildfowl

[d]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 Devonport area

		Pathway Name										
Profile Name	Number of individuals	Direct[a]	Fish - Sea	Fruit - Domestic	Occupancy IN water	Plume (IN; 0-0.25km)[b]	Plume (MID; >0.25-0.5km)[b]	Plume (OUT; 0.5-1km)[b]	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root
		-	kg	kg	kg	h	h	h	kg	kg	kg	kg
Occupants for direct radiation	**101**	1.0	-	-	<1	550	78	730	-	-	-	-
Sea fish consumers	**1**	-	2.3	-	-	-	-	-	-	-	-	-
Domestic fruit consumers	**2**	-	-	3.0	-	-	-	-	4.1	7.8	1.3	2.9
Occupancy IN water	**1**	1.0	-	-	9	-	7900	-	-	-	-	-
Occupants for plume pathways (inner area)	**40**	1.0	-	-	-	1250	-	-	-	-	-	-
Occupants for plume pathways (mid area)	**1**	1.0	-	-	9	-	7900	-	-	-	-	-
Occupants for plume pathways (outer area)	**4**	1.0	-	-	-	-	-	7830	-	-	-	-
Green vegetable consumers	**3**	-	-	2.3	-	-	-	-	3.8	5.4	0.88	2.2
Other domestic vegetable consumers	**2**	-	-	3.0	-	-	-	-	4.1	7.8	1.3	2.9
Potato consumers	**2**	-	-	3.0	-	-	-	-	4.1	7.8	1.3	2.9
Root vegetable consumers	**2**	-	-	3.0	-	-	-	-	4.1	7.8	1.3	2.9

Notes

[a]Expressed as the proportion of the profile members who are exposed to direct radiation

[b]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 Devonport area, for use in foetal dose assessments

		Pathway Name																								
Profile Name	**Number of individuals**	**Crustacea**	**Direct[a]**	**Eggs**	**Fish - Sea**	**Fruit - Domestic**	**Fruit and nuts - Wild**	**Gamma ext - Houseboat[b]**	**Gamma ext - Sediment[c]**	**Honey**	**Meat - Cow**	**Meat - Game[d]**	**Meat - Pig**	**Meat - Poultry**	**Meat - Sheep**	**Molluscs**	**Mushrooms**	**Occupancy IN water**	**Occupancy ON water**	**Plume (IN; 0-0.25km)[e]**	**Plume (MID; >0.25-0.5km)[e]**	**Plume (OUT; >0.5-1.1km)[e]**	**Vegetables - Green**	**Vegetables - Other Domestic**	**Vegetables - Potatoes**	**Vegetables - Root**
		kg	**-**	**kg**	**kg**	**kg**	**kg**	**h**	**h**	**kg**	**kg**	**kg**	**kg**	**kg**	**kg**	**kg**	**kg**	**h**	**h**	**h**	**h**	**h**	**kg**	**kg**	**kg**	**kg**
Crustacean consumers	**3**	3.2	-	-	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Occupants for direct radiation	**110**	<0.01	1.0	-	-	0.02	0.01	-	-	-	-	-	-	-	-	-	-	<1	-	830	410	520	0.07	0.18	0.02	<0.01
Egg consumers	**2**	-	-	17.8	-	-	-	-	-	-	-	-	50.6	4.6	11.3	-	-	-	-	-	-	-	-	-	-	-
Sea fish consumers	**6**	0.26	-	-	28.6	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
Domestic fruit consumers	**1**	-	-	-	-	52.1	0.30	-	3	-	-	-	-	-	-	-	-	-	3	-	-	-	6.6	26.7	6.8	4.3
Wild fruit and nut consumers	**3**	-	-	-	-	4.8	1.1	-	7	0.45	15.8	1.9	-	0.79	1.9	-	0.38	4	75	-	-	-	3.8	4.5	3.4	2.8
Occupants for exposure - Houseboat	**2**	-	-	-	-	-	-	4100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Occupants for exposure - Sediment	**1**	-	-	-	-	-	-	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Honey consumers	**2**	-	-	-	-	-	0.34	-	10	2.6	23.7	2.8	-	1.2	2.8	-	0.57	-	15	-	-	-	-	-	-	-
Cattle meat consumers	**1**	-	-	-	-	-	0.68	-	20	1.4	47.3	5.7	-	2.4	5.7	-	1.1	-	30	-	-	-	-	-	-	-
Game meat consumers	**2**	-	-	-	-	-	0.34	-	10	0.68	23.7	9.9	-	5.3	2.8	-	0.57	-	15	-	-	-	-	-	-	-
Pork meat consumers	**2**	-	-	17.8	-	-	-	-	-	-	-	-	50.6	4.6	11.3	-	-	-	-	-	-	-	-	-	-	-
Poultry meat consumers	**3**	-	-	11.9	-	-	-	-	-	-	-	4.7	33.7	5.8	7.5	-	-	-	-	-	-	-	-	-	-	-
Sheep meat consumers	**3**	-	-	11.9	-	-	0.23	-	7	0.45	15.8	1.9	33.7	3.9	9.4	-	0.38	-	10	-	-	-	-	-	-	-
Mollusc consumers	**1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08	-	-	-	-	-	-	-	-	-	-
Mushroom consumers	**1**	-	-	-	-	-	0.68	-	20	1.4	47.3	5.7	-	2.4	5.7	-	1.1	-	30	-	-	-	-	-	-	-
Occupancy IN water	**1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	150	-	-	-	-	-	-	-
Occupancy ON water	**10**	-	-	-	-	0.51	0.09	-	-	-	-	-	-	-	-	-	-	1	330	-	-	-	0.26	0.61	0.15	0.50
Occupants for plume pathways (inner area)	**5**	0.20	1.0	-	-	0.37	0.27	-	-	-	-	-	-	-	-	-	-	-	-	7010	-	-	1.6	3.9	0.45	0.09
Occupants for plume pathways (mid area)	**5**	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	7850	-	-	-	-	-
Occupants for plume pathways (outer area)	**2**	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7830	-	-	-	-
Green vegetable consumers	**13**	0.08	0.08	-	0.17	8.5	0.27	-	<1	-	-	-	-	-	0.20	-	-	-	<1	600	-	-	10.8	10.4	4.0	8.6
Other domestic vegetable consumers	**2**	-	-	-	-	34.4	0.15	-	2	-	-	-	-	-	-	-	-	-	1	-	-	-	12.5	35.9	16.3	13.3
Potato consumers	**2**	-	-	-	-	12.9	0.85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.7	26.3	17.3	12.9
Root vegetable consumers	**4**	-	-	-	0.55	4.2	0.26	-	-	-	-	-	-	-	0.66	-	-	-	-	-	-	-	15.1	16.0	6.4	18.3

Notes

[a]Expressed as the proportion of the profile members who are exposed to direct radiation

[b]The occupancy rate for this pathway has been estimated using data from the 2004 Devonport habits survey report. See Annex 3.

[c]Gamma ext - sediment includes occupancy over mud; mud and sand; sand: sand and stones; and stones

[d]Game meat includes rabbits/hares, venison and wildfowl

[e]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

This page has been intentionally left blank

This page has been intentionally left blank

About us

Cefas is a multi-disciplinary scientific research and consultancy centre providing a comprehensive range of services in fisheries management, environmental monitoring and assessment, and aquaculture to a large number of clients worldwide.

We have more than 500 staff based in 2 laboratories, our own ocean-going research vessel, and over 100 years of fisheries experience.

We have a long and successful track record in delivering high-quality services to clients in a confidential and impartial manner.
(www.cefas.defra.gov.uk)

Cefas Technology Limited (CTL) is a wholly owned subsidiary of Cefas specialising in the application of Cefas technology to specific customer needs in a cost-effective and focussed manner.

CTL systems and services are developed by teams that are experienced in fisheries, environmental management and aquaculture, and in working closely with clients to ensure that their needs are fully met.
(www.cefastechnology.co.uk)

Customer focus

With our unique facilities and our breadth of expertise in environmental and fisheries management, we can rapidly put together a multi-disciplinary team of experienced specialists, fully supported by our comprehensive in-house resources.

Our existing customers are drawn from a broad spectrum with wide ranging interests. Clients include:

- international and UK government departments
- the European Commission
- the World Bank
- Food and Agriculture Organisation of the United Nations (FAO)
- oil, water, chemical, pharmaceutical, agro-chemical, aggregate and marine industries
- non-governmental and environmental organisations
- regulators and enforcement agencies
- local authorities and other public bodies

We also work successfully in partnership with other organisations, operate in international consortia and have several joint ventures commercialising our intellectual property.

Head office
Centre for Environment,
Fisheries & Aquaculture Science
Pakefield Road, Lowestoft,
Suffolk NR33 0HT UK

Tel +44 (0) 1502 56 2244
Fax +44 (0) 1502 51 3865
Web www.cefas.defra.gov.uk

printed on paper made from a minimum 75% de-inked post-consumer waste