

Cefas contract report C2848

Radiological Habits Survey: Sizewell, 2010

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Final Report

Radiological Habits Survey: Sizewell, 2010

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SUMMARY

This report presents the results of a survey conducted in 2010 to determine the habits and consumption patterns of people living, working and pursuing recreational activities in the vicinity of the Sizewell nuclear site. There are two separate nuclear power stations at Sizewell, the A station and the B station, and for the purpose of this survey they were considered together as one site. The A station is shut down and is being decommissioned. The site discharges gaseous radioactive wastes via stacks to the atmosphere, liquid radioactive wastes into the North Sea and contains sources of direct radiation. Areas likely to be most affected by the discharges and sources of radiation were defined as the aquatic survey area for liquid discharges, the terrestrial survey area for the deposition 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
- 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 649 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 was defined as the intertidal areas along the Suffolk coast from Southwold, in the north, to North Weir Point at the southern tip of Orford Ness shingle spit, in the south, and the adjacent area of sea up to 10 km offshore. The tidal stretches of the rivers Blyth, Alde, Ore and Butley were also included. 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 high-rate groups for fish were cod, Dover sole, bass and thornback ray, with smaller

quantities of dab, flounder, grey mullet, herring, huss, lemon sole, mackerel, plaice, sprat and whiting; for crustaceans were brown crab and common lobster; for molluscs were whelks and Pacific oysters; for wildfowl were mallard, greylag goose and Canada goose; and for marine plants/algae were samphire, sea purslane and sea beet. The mean consumption rate for the adult high-rate group for fish was 28 kg y^{-1} , for crustaceans was 14 kg y^{-1} , for molluscs was 4.2 kg y^{-1} , for wildfowl was 7.5 kg y^{-1} and for marine plants/algae was 0.9 kg y^{-1} . The mean consumption rate for the adult high-rate group exceeded the generic 97.5th percentile rate for crustaceans but not for fish or molluscs. 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 nature conservation duties, fixing moorings, boat maintenance, walking, playing, dog walking, angling, supervising youth groups and living on a boat. Gamma dose rate measurements were taken at most locations in the aquatic survey area where activities were occurring. The activities undertaken by the adults in the high-rate group for handling fishing gear were handling nets, pots and long-lines. The only activity in the adult high-rate group for handling sediment was fixing moorings. People were undertaking the following water-based activities: windsurfing; wake boarding; swimming; kayaking; canoeing; sailing; paddling; living on a houseboat; commercial fishing; boat crew duties; boat maintenance; boat angling; lifeboat duties; oyster farming; fixing moorings. The use of seaweed as a fertiliser or animal feed was not identified.

The terrestrial survey area was defined as the land, watercourses and lakes within 5 km of the centre of the Sizewell site. Ten farming businesses were identified that produced beef, lamb, pork, soft fruits and arable crops. One smallholding was identified that produced a variety of vegetables and kept chickens for eggs. The farmers, smallholders and their families consumed foods that were produced on their land. Two allotment sites with approximately 100 plots in total were identified and several residents in the survey area grew fruit and vegetables in their gardens. Eight people were identified that kept chickens for eggs in their gardens or on their allotments. One beekeeper was identified who produced honey within the survey area. 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. Three 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 green vegetables, root vegetables and eggs. 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 and had access to ditch water. Control measures taken by the Sizewell site against wildlife in order to limit the possibility that contamination is transferred off-site included periodically culling rabbits and pigeons.

The direct radiation survey area was defined as the land and sea within 1 km of the Sizewell nuclear site boundary. For the purposes of the direct radiation survey the site boundary was taken as the perimeter of the licensed area, except on the eastern side of the site where the licensed area

extended out onto the shore into an unfenced area frequently used by members of the public. Because of this, the boundary on the eastern side of the site was taken as the perimeter fence. Occupancy rates were obtained for residents, employees, visitors, commercial fishermen, dog walkers, anglers and for people who were playing on the beach, swimming, supervising youth groups, walking, sunbathing, sitting on the beach and staying at holiday homes. Occupancy rates were also obtained for two people who were working within the Sizewell nuclear licensed site area but who were not Sizewell site employees or contractors. The occupancy rates were analysed in zones according to the distance from the Sizewell 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, two of whom also worked in the survey area. Gamma dose rate measurements were taken indoors and outdoors at most properties where interviews were conducted in the direct radiation survey area. Background readings were taken at distances beyond 5 km of the Sizewell site centre.

Comparisons were made with the results from a previous habits survey undertaken around the Sizewell site in 2005. Reasons for significant changes in the consumption, occupancy and handling rates were identified for certain pathways and these are provided in Section 8.

In the aquatic survey area in 2010, compared with 2005, there were increases in the mean consumption rates for the adult high-rate groups for fish from 23 kg y⁻¹ to 28 kg y⁻¹ and for crustaceans from 11 kg y⁻¹ to 14 kg y⁻¹. In 2010 there were decreases in the mean consumption rates for the adult high-rate groups for molluscs from 5.1 kg y⁻¹ to 4.2 kg y⁻¹ and for wildfowl from 21 kg y⁻¹ to 7.5 kg y⁻¹. In 2005 the consumption of marine plants/algae was not identified, but in 2010 the mean consumption rate for the adult high-rate group for marine plants/algae was 0.9 kg y⁻¹. The mean intertidal occupancy rates for the adult high-rate groups decreased in 2010 compared to 2005 over the following substrates: mud, from 720 h y⁻¹ to 210 h y⁻¹; sand, from 420 h y⁻¹ to 80 h y⁻¹; sand and stones, from 820 h y⁻¹ to 280 h y⁻¹. The mean intertidal occupancy rates for salt marsh were broadly similar in 2005 and 2010, which were 420 h y⁻¹ and 410 h y⁻¹ respectively. Occupancy on a boat which was resting on mud was not identified in 2005, but in 2010 the mean occupancy rate for the high-rate group was 5900 h y⁻¹. The mean handling rates for the adult high-rate groups for fishing gear decreased from 1300 h y⁻¹ in 2005 to 1100 h y⁻¹ in 2010, and for sediment decreased from 720 h y⁻¹ in 2005 to 170 h y⁻¹ in 2010.

In the terrestrial survey area in 2010, compared with 2005, there were relatively large increases in the mean consumption rates for the adult high-rate groups for the following food groups: green vegetables, from 29 kg y⁻¹ to 50 kg y⁻¹; pig meat, from 22 kg y⁻¹ to 36 kg y⁻¹; eggs, from 16 kg y⁻¹ to 30 kg y⁻¹; honey, from 1.8 kg y⁻¹ to 5.4 kg y⁻¹. There were relatively large decreases in the mean consumption rates for the adult high-rate groups for the following food groups: poultry, from 19 kg y⁻¹ to 7.5 kg y⁻¹; wild/free foods, from 32 kg y⁻¹ to 3.9 kg y⁻¹; wild fungi, from 1.8 kg y⁻¹ to 0.8 kg y⁻¹. There were small increases in the mean consumption rates for the adult high-rate groups for root vegetables, domestic fruit, milk, cattle meat, sheep meat, rabbits/hares and venison, and there were

small decreases for other vegetables and potato. The consumption of cereals or freshwater was not identified in either survey.

In 2010, two people, who were not employees or contractors of the Sizewell site, were identified working in the nuclear licensed site area and the highest total occupancy rate was 1900 h y^{-1} . In 2005, no occupancy data were obtained for this area. In the direct radiation survey area in 2010 compared with 2005, there was a slight increase in the highest total occupancy rate in the 0 - 0.25 km zone, from 8500 h y^{-1} to 8600 h y^{-1} . In the >0.25 - 0.5 km zone in 2010 compared with 2005 there was a slight decrease in the highest total occupancy rate, from 8100 h y^{-1} to 8000 h y^{-1} . There was an increase in the highest total occupancy rate in the >0.5 – 1.0 km zone in 2010 compared with 2005, from 7800 h y^{-1} to 8600 h y^{-1} . Seven sets of gamma dose rate measurements taken at the same residences in 2010 and 2005 were compared. At the time of the 2010 survey, land in the direct radiation survey area to the north, northwest and south of the existing Sizewell site, which included woodland, scrub and agricultural land, had been nominated for development for a new nuclear power station.

Suggestions are provided for changes to the current environmental monitoring programmes on the basis of the information collected during the survey. These include replacing the sample of mussels currently monitored with a sample of whelks, and adding a sample of pork.

1 INTRODUCTION

The public may be exposed to radiation as a result of the operations of the Sizewell 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 Health and Safety Executive 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 relevant dose limits and constraints, 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 6 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). The Nuclear Installations Inspectorate (NII) of the Health and Safety Executive (subsumed within the Office for Nuclear Regulation (ONR) from 1 April 2011) 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.

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, 2009a), 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,

2010), 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 Sizewell nuclear site is located on the Suffolk coast, approximately 3 km east of the town of Leiston (see Figure 1). There are two separate nuclear power stations, Sizewell A and Sizewell B, and for the purpose of this survey the two power stations are considered together as a single site. Sizewell A has two Magnox reactors that ceased generating electricity on 31st December 2006. The station is currently undergoing the processes involved with defuelling and decommissioning. Sizewell B has the only Pressurised Water Reactor in the United Kingdom. It started generating electricity in 1995 and is expected to continue generation until 2035.

The A station is owned by the Nuclear Decommissioning Authority and Magnox South Ltd is responsible for the management and operations during decommissioning. The B station is owned by British Energy (part of EDF Energy) and operated by British Energy Generation Ltd. Magnox South Ltd is licensed to operate the A station and British Energy Generation Ltd is licensed to operate the B station under NIA 65, which allows the installation and operation of certain activities. Under the Environmental Permitting Regulations the companies are permitted to discharge gaseous radioactive wastes via stacks to the atmosphere and liquid radioactive wastes via an outfall into the North Sea. Details of the amounts of gaseous and liquid radioactive waste discharged are published in the RIFE reports, for example, EA, FSA, NIEA and SEPA, 2010. At the time of the habits survey, defuelling and decommissioning operations were being undertaken at Sizewell A and the B station was temporarily shut down for a period of a few months for maintenance.

Sizewell has been proposed as a site for a new nuclear power station. Approximately 117 hectares of land adjacent to the existing nuclear site have been nominated for new nuclear building activities (UK Parliament, 2009b). This land is situated mainly to the north and northwest of the existing site, with a small area to the south. It is currently woodland, scrub and agricultural land.

2.2 Survey objectives

The Centre for Environment, Fisheries & Aquaculture Science (Cefas) undertook the Sizewell habits survey in 2010 on behalf of the Environment Agency, the Food Standards Agency, and the Health and Safety Executive. 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 Sizewell nuclear site.

Specifically, investigations were conducted into the following:

- The consumption of food from the aquatic survey area
- Activities and occupancy over intertidal substrates
- The handling of fishing gear and sediment
- Activities and occupancy in and on water
- The use of seaweed as a fertiliser or animal feed
- The consumption of food from the terrestrial survey area
- The use and destination of produce originating from the survey areas
- The consumption and use of groundwater and surface water in the terrestrial survey area
- The transfer of contamination off-site by wildlife
- Activities and occupancy within the direct radiation survey area
- New or unusual exposure pathways

No additional site-specific investigations were requested by the Environment Agency, the Food Standards Agency or the Health and Safety Executive.

2.3 Survey areas

The geographic extent 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 intertidal areas along the coast of Suffolk from Southwold, in the north, to North Weir Point at the southern tip of Orford Ness shingle spit, in the south, and the adjacent sea area up to 10 km offshore. This area covers approximately twice the mean tidal excursion as derived from Admiralty data close to Sizewell, and was taken to represent the predominant area of mixing of discharged radionuclides in seawater. The tidal stretches of the rivers Blyth, Alde, Ore and Butley were also included since water from the offshore area could enter these waterways on flood tides.

The terrestrial survey area, shown in Figure 2, covered all land within 5 km of the site centre (National Grid Reference: TM 473 634), to encompass the main areas of potential deposition from gaseous discharges. Watercourses and lakes within the survey area, which potentially contained contamination from the washout of gaseous discharges, are included in the terrestrial section of this report.

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 site boundary. For the purposes of the direct radiation survey the site boundary was taken as the perimeter of the licensed area, except on the eastern side of the site where the licensed area extended out onto the shore into an unfenced area frequently used by members of the public. Because of this, the boundary of the survey area on the eastern side of the site was taken as the perimeter fence. 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 Sizewell site, which was in 2005 (Clyne *et al.*, 2006).

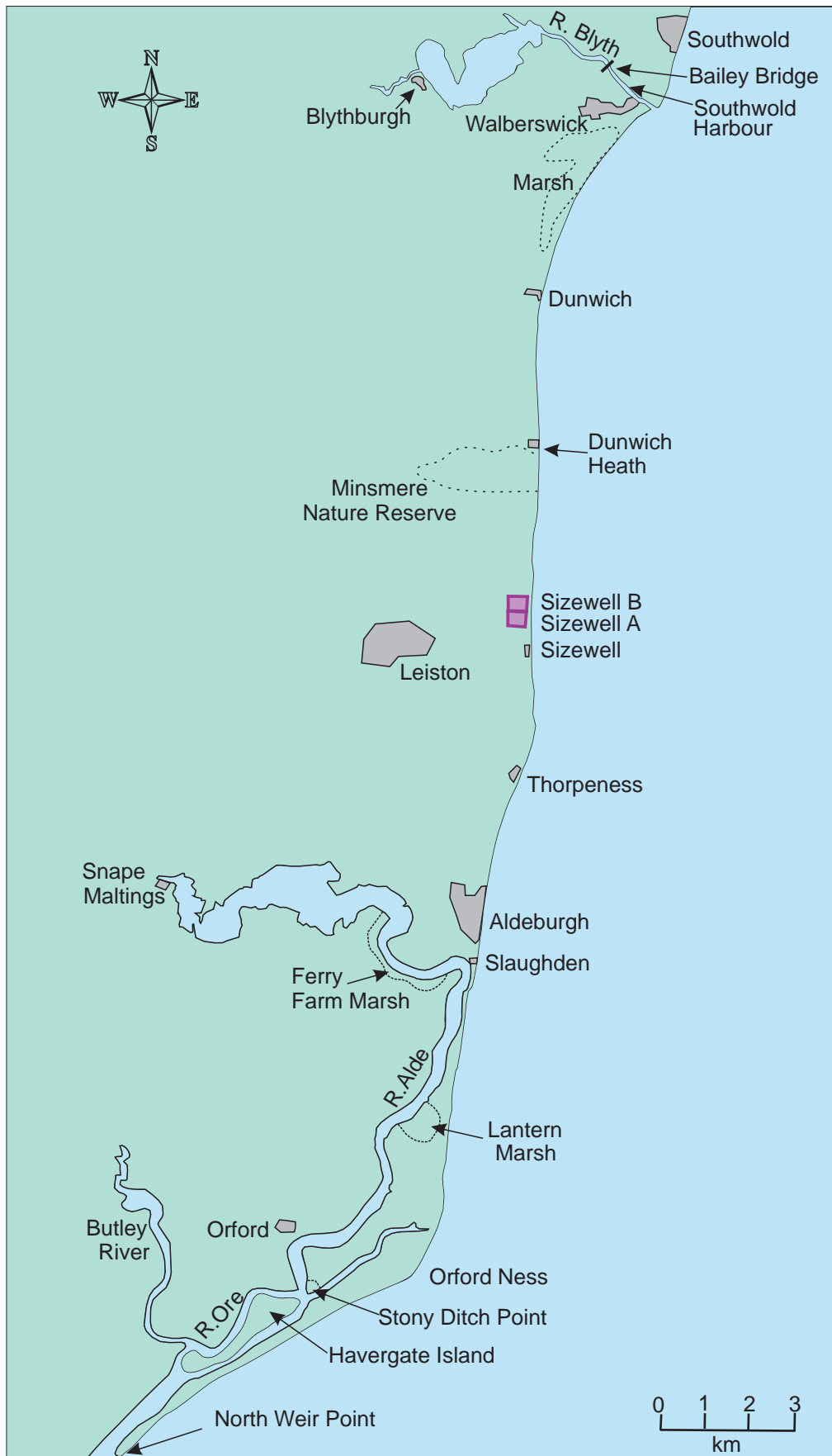


Figure 1. The Sizewell aquatic survey area



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

- Sizewell site centre
- 1 Valley Road Allotments
- 2 Haylings Road Allotments

2.4 Conduct of the survey

As part of the pre-survey preparation, the Environment Agency, the Food Standards Agency and the Health and Safety Executive 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 Sizewell site. People with local knowledge of the survey area were contacted for information relevant to the various exposure pathways. These included representatives from parish councils who provided information on allotment sites and the Marine Management Organisation who provided information on commercial fishing.

A proposed programme for fieldwork was distributed to the Environment Agency, the Food Standards Agency, and the Health and Safety Executive before the fieldwork commenced, for their comment.

The fieldwork was carried out from the 21st June to the 1st July 2010 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 Sizewell A and B sites. 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 defuelling and minor decommissioning operations were being undertaken at Sizewell A. The fuel was kept in cooling ponds prior to shipment off the site. It was expected that defuelling would take approximately another two years to complete.
- Sizewell B was shut down for maintenance and was expected to remain off-line for a few months.
- Planning permission was being sought for a new dry fuel storage facility for the B station and it was anticipated that the facility would be completed around 2014.
- Control measures taken against wildlife in order to limit the possibility that contamination is transferred off-site included periodically culling pigeons and rabbits. Pigeons and dead seagulls found in the area were occasionally monitored.
- Over 80% of fish caught on the cooling water intake screens were returned to the sea alive. Dead fish, seaweed and other debris caught on the screens were sent to landfill.
- Information about potential exposure pathways and activities in the area included walkers and dog walkers on the dunes and shore to the east of the site, walkers on forest trails to the northwest of the site, angling at Aldeburgh and Dunwich, wildfowling on tidal rivers, and oyster farming in the River Alde.

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 properties in the direct radiation survey area where interviews were conducted. Background gamma dose rates were taken at a distance beyond 5 km from the site centre.

For practical and resource reasons, the survey did not involve the whole population in the vicinity of the Sizewell 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 8000 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 Sizewell 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 and 2 for adults and children respectively, 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 quantitative or estimated habits data for use in dose assessments. In this series of habits survey reports, such data is usually presented in Annex 3. It was not necessary to estimate data for the Sizewell survey, but Annex 3 is included in this report to maintain consistency of presentation through the series of reports.

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) has changed its recommendations for the age groupings to be used in radiological assessments. These recommendations have been adopted in this report and consequently the age ranges used differ from those used in previous habits survey reports produced by Cefas. The new age ranges 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 previous reports, for comparison.

Age ranges adopted in this report		Age ranges used in previous reports	
Name of age group	Age range in group	Name of age group	Age range in group
• 1-year-old	0 to 5-year-old	• 3-month-old	Under 1-year
• 10-year-old	6-year-old to 15-year-old	• 1-year-old	1-year-old
• Adult	16-year-old and over	• 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

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

For direct radiation pathways, the data were grouped into distance zones from the nuclear site boundary as a coarse indication of the potential dose rate distribution due to this source of exposure.

The bands used in this report were: 0 – 0.25 km; >0.25 – 0.5 km; >0.5 – 1.0 km. These distance bands are also useful when assessing exposure to gaseous discharges.

3.4 Approaches for the identification of high rates

The habits data have been analysed to identify high rates of consumption, occupancy and handling, which are suitable for use in radiological assessments. 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 for consumption, intertidal occupancy and handling pathways, have been calculated. However, in cases where few child 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 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 from adult rates. Adult to child 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 Health and Safety Executive, and by a senior radiological consultant.
- Final reports were only issued when the Environment Agency, the Food Standards Agency and the Health and Safety Executive 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) covered the intertidal areas along the coast of Suffolk from Southwold, in the north, to North Weir Point at the southern tip of Orford Ness shingle spit, in the south, and the adjacent sea area up to 10 km offshore. The tidal stretches of the rivers Blyth, Alde, Ore and Butley were also included.

The beaches along the coast were predominantly sand and shingle while the tidal reaches of the rivers were typically muddy estuaries with banks of grass, freshwater marsh or salt marsh.

Southwold and the River Blyth

Southwold is a busy seaside town situated approximately 12 km north of the Sizewell site. There was a pier that was used by anglers and good access to a long sand and shingle beach, which was very popular with locals and tourists who were sunbathing and playing. The beach extended southwards to the mouth of the River Blyth, which was approximately 1 km south of the town, and angling took place on the southern end of the beach towards the river mouth.

Southwold harbour (see Figure 3) is located in the lower reaches of the River Blyth and the harbour area extends along the banks of the river from its mouth to a bailey bridge that crosses the river about 1.5 km upstream. Wooden walkways over the mud bank provided access to jetties and floating pontoons where the boats were moored. The harbour was the main port within the survey area and provided moorings for over 100 small craft including commercial and hobby fishing boats, angling boats, sailing yachts and pleasure cruisers. There were several boatyards with slipways, a public slipway, a sailing club, a compound for sailing dinghies and an inshore lifeboat station. Boat maintenance was being undertaken over mud. Sea-angling charter trips and pleasure boat trips on the river and sea were available, and a rowing boat ferry took passengers across the river to Walberswick on the southern bank. Local fish were sold from huts on the quay and one houseboat was identified. Water sports such as windsurfing took place offshore and jet skiing was also observed.

The tidal reaches of the River Blyth extend upstream from the bailey bridge for approximately 8 km and include areas of flooded farmland, which have become mud flats. The river banks were grass with small areas of salt marsh. This stretch of the river was not heavily used but several anglers were interviewed who were fishing for bass from salt marsh close to the bailey bridge, one individual was farming Pacific oysters non-commercially in the river near Blythburgh and one individual was canoeing down the river. The inshore lifeboat crew occasionally practised in the river and water

skiing was permitted on a short stretch of river just upstream of the bailey bridge, although this activity was not observed at the time of the survey.



Figure 3. Southwold harbour

Walberswick

Walberswick beach (see Figure 4) was a fine sand beach with patches of shingle, situated immediately to the south of the mouth of the River Blyth. There was a large car park close by and the area was popular with families for days out on the beach and swimming. Crabbing with baited hand lines was a popular family activity that took place from the staved banks and salt marsh areas along a creek that entered the River Blyth close to its mouth on the Walberswick side. The crabbing was a recreational activity targeting shore crabs and swimming crabs and the crabs were typically released after capture. These crab species are not usually consumed in the UK and no consumption was identified.

The shore between Walberswick and Dunwich, approximately 4 km further south, was a sand and shingle beach that became increasingly stony towards Dunwich. The only road access was at Walberswick or Dunwich and the number of beach users declined with increasing distance from these access points. A shingle bank separated the beach from the marshes just inland. The marshes were predominantly freshwater although the lagoons and marsh close to the shingle bank were slightly

saline because of seawater seepage through the shingle, sea spray, and the occasional breaching of the banks. No activities were identified taking place in the saline areas.



Figure 4. Walberswick beach

Dunwich and Dunwich Heath

At Dunwich village there was easy access to the beach from a large car park close to the shore. The beach was predominantly shingle with patches of sand towards the low water mark and was popular with walkers, dog walkers, anglers and people playing on the beach, sunbathing, swimming and paddling. A part time commercial fisherman and a hobby fisherman kept their boats on the beach above the high water mark.

Small cliffs prevented easy access to the shore between Dunwich and Dunwich Heath, approximately 3 km further south. At Dunwich Heath there was car parking and footpaths to the sand and shingle beach where people were recorded walking, sunbathing, sitting, bird watching, paddling and swimming in the sea. The wetland area of the Minsmere Nature Reserve run by the Royal Society for the Protection of Birds (RSPB) was situated close by. This was predominantly a freshwater wetland although periodic encroachment of seawater in the lagoons nearest to the sea was reported. The area attracted many bird watchers.

The sand and shingle shore continued from Minsmere towards Sizewell, approximately 3 km further south. There was no road access to this stretch of coast but the Suffolk Coast Path provided access to the shore by foot.

Sizewell and Thorpeness

The hamlet of Sizewell is situated just to the south of the Sizewell nuclear power station and there is a car park close to the shore. The sand and shingle beach (see Figure 5) was popular with walkers, dog walkers, anglers, sunbathers and people playing. Several people were interviewed who went swimming in the sea at Sizewell. One commercial fishing boat, one hobby fishing boat and a few small private angling boats operated from the beach. The commercial fisherman sold part of his catch from his house situated close by.

The sand and shingle shore continued for another 3 km southwards from Sizewell to the village of Thorpeness, where there was easy access to the beach, which was popular with walkers and anglers. One family was recorded picnicking on the beach and it was noted that youth groups visited both Sizewell and Thorpeness beaches.



Figure 5. Sizewell beach

Aldeburgh

A road runs along the coast from Thorpeness to the town of Aldeburgh, approximately 3 km further south and just to the north of Aldeburgh there is a large car park. The beach in this area was predominantly shingle with small patches of sand. The area by the car park was very popular with visitors although many kept to the paths on the top of the shingle bank above the high water mark. The activities recorded taking place in the intertidal area included sunbathing and kite flying. People were noted to be paddling and swimming in the sea.

At Aldeburgh town the beach was again predominantly shingle with small patches of sand (see Figure 6). There was parking close by and easy access to the beach from the town. Five commercial fishing boats operated from the beach and the catch was on sale from huts close by. There was a lifeboat station and both inshore and offshore lifeboats were launched from the beach. The area was popular with visitors, who were recorded sunbathing and angling on the beach and swimming and paddling in the sea.



Figure 6. Aldeburgh beach

Slaughden and the River Alde

Just to the south of Aldeburgh, Slaughden sits on a narrow isthmus between the River Alde and the North Sea that marks the northern limit of the Orford Ness spit. On the eastern side of the isthmus the beach at Slaughden was predominantly shingle with small patches of sand. It was a popular angling venue and people were also recorded sitting on the beach and kayaking and swimming in the sea.

On the western side of the isthmus is the River Alde and the tidal reaches of the river extend approximately 8 km upstream from Slaughden to Snape Maltings and approximately 5 km downstream to a point just north of Orford where it becomes the River Ore. There were extensive mud flats along the River Alde and patches of salt marsh. Wildfowling was reported to take place over these areas.

The main centre of activity on the River Alde was at Slaughden (see Figure 7), which was a popular boating area where many sailing and pleasure boats were moored. There were two sailing clubs and a boat yard. Sailing, windsurfing, canoeing and swimming took place in the river and pleasure cruises along the river were available on one small boat. One commercial fishing boat was moored at Slaughden and there were commercial oyster beds close by. Angling for bass was undertaken from areas of salt marsh and one family was identified collecting samphire, sea beet and sea purslane from the salt marsh for their own consumption. One individual was identified living on a houseboat that rested on mud for part of the time and several people were identified fixing moorings over mud. It was reported that there were wild mussel beds in the river but no consumption of mussels was identified during the survey.



Figure 7. The River Alde at Slaughden

Orford, Orford Ness, River Ore and Butley River

The Orford Ness spit extends approximately 15 km down the coast from Slaughden to the southern limit of the survey area at North Weir Point. The narrow spit is bounded by the North Sea to the east and the River Alde and River Ore to the west. The beach on the eastern shore was predominantly shingle, while the land bordering the rivers on the western side of the spit was predominantly freshwater marsh and salt marsh. Much of the area of the spit was a National Nature Reserve managed by the National Trust, which attracted 8500 visitors per year. The spit was accessible by boat or by walking along the shore from Slaughden. There was also a track from Slaughden but it was barred by a locked gate and was not available for vehicular use by the general public. The seaward shore of the spit was a very popular angling venue, and voluntary groups undertook litter picking along the beach.

The River Ore is a continuation of the River Alde that extends approximately 9 km from just north of the town of Orford to the sea at North Weir Point. Wildfowling was reported to take place on salt marsh at various locations along the river. Orford is a busy area with a quay (see Figure 8) and two sailing clubs, and many sailing yachts, angling boats and pleasure boats were moored in the river. Four commercial fishing boats were based there and the catch was sold from huts on the quay. One charter angling boat operated from Orford and it was also used for pleasure trips on the river. Orford was the main access point to Orford Ness and a passenger ferry and other craft took visitors and anglers across the river to the spit. Water sports such as wake boarding (being towed behind a boat on a board) were noted to be taking place in the river. Havergate Island, to the south of Orford was part of the National Nature Reserve and was only accessible by boat. Water skiing was permitted in the River Ore to the south of Havergate Island but this activity was not observed at the time of the survey.

Butley River is a tributary of the River Ore. There was a small passenger ferry across Butley River and a commercial oyster farm. Two people were recorded swimming in the river and one person was recorded collecting small quantities of samphire from the salt marsh for his own family's consumption.



Figure 8. Orford Quay

4.2 Commercial fisheries

Approximately 27 commercial fishing boats, all less than 10 m long, operated from ports and beaches within the aquatic survey area. Many of them only fished part time. The main fishing harbour was at Southwold, but fishing boats also operated from the beaches at Dunwich, Aldeburgh and Sizewell, and from moorings in the River Alde at Slaughden and the River Ore at Orford. Most commercial fishing took place in the open sea but a small amount of fishing for bass and grey mullet took place in the River Alde and River Ore. A wide variety of fishing methods were used including trawling, long-lining, gill-netting, and trammel-netting for mixed demersal fish species; drift-netting for mackerel, herring and sprat; lure fishing for cod and bass; trawling for shrimps and potting for crab and lobster. The main target species in the demersal fisheries were Dover sole, cod, bass and thornback ray but a variety of other species were also caught. Whelks were caught incidentally in several types of fishing gear. Many vessels used more than one type of fishing gear.

One commercial oyster fishermen farmed oysters on the River Alde and another farmed oysters on Butley River.

4.3 Aquatic food wholesalers and retailers

Fish and shellfish were sent to many destinations both within and outside the survey area. These included local hotels and restaurants, Lowestoft fish market and the continent. In addition to this fish and shellfish were sold directly to the public from a fisherman's house and from huts at Southwold, Aldeburgh and Orford.

4.4 Hobby fishing and angling

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. Several hobby fishermen operated in the survey area, mainly from Southwold harbour. They used trawl-nets, shrimp-nets, drift-nets, trammel-nets, long-lines and lobster pots. They caught the same range of fish and shellfish species as the commercial fishermen. The catches were consumed by the fishermen's families and friends.

One individual farmed oysters non-commercially on the River Blyth and these were consumed by himself and his family.

Two charter angling boats operated from Southwold harbour and one operated from Orford. The boats based at Southwold fished offshore and the boat based at Orford fished offshore and also in the River Alde and River Ore. Several private angling boats were based at Southwold and Orford and a few others were launched from beaches throughout the survey area. Shore angling was popular at many locations including Southwold, Dunwich, Sizewell, Thorpeness, Aldeburgh, Slaughden, Orford Ness, the River Alde and the River Blyth. The main edible species caught by shore anglers were cod, whiting, bass, dab, and Dover sole. Boat anglers caught the same species as well as mackerel and thornback ray.

4.5 Wildfowling

Two wildfowling clubs were identified that shot in the survey area. One club had approximately 100 members and the other club had just two members. Wildfowling took place on salt marshes at Ferry Farm Marsh, Lantern Marsh and Stony Ditch Point and many other areas of marsh and mudflats along the tidal reaches of the River Alde and River Ore. Wildfowl were also shot by rough shooters over farmland and around freshwater ponds in the terrestrial survey area, particularly in the area around Theberton and Eastbridge. The main species being shot were mallard, teal, greylag goose and Canada goose. The shot wildfowl were consumed by the wildfowlers and rough shooters and their families and friends.

4.6 Other pathways

Two people were collecting small quantities of marine plants including samphire, sea beet and sea purslane from salt marsh on the River Alde near Slaughden and one person was collecting small quantities of samphire from salt marsh on Butley River. Six people were consuming the collected plants. No consumption or use of seaweed from the survey area was noted.

4.7 Food consumption data

Consumption data for aquatic foods are presented in Tables 3 to 7 for adults and in Tables 8 to 10 for children. 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.

Adults' consumption rates

The people consuming the greatest quantities of food from the aquatic survey area were commercial and hobby fishermen, anglers, wildfowlers, people who collected marine plants, 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 97.5 th percentile (kg y ⁻¹)	Generic mean (kg y ⁻¹)	Generic 97.5 th percentile (kg y ⁻¹)
Fish	130	33	52.0	17.7	28.1	36.1	15.0	40.0
Crustaceans	58	5	21.4	8.1	13.9	14.7	3.5	10.0
Molluscs	13	8	5.0	1.7	4.2	5.0	3.5	10.0
Wildfowl	22	7	8.5	7.0	7.5	8.5	Not determined	Not determined
Marine plants/algae	4	4	1.0	0.9	0.9	1.0	Not determined	Not determined

The predominant species of fish consumed by adults were cod, Dover sole, bass, and thornback ray, with smaller quantities of allis shad, dab, flounder, grey mullet, herring, huss, lemon sole, lesser spotted dogfish, mackerel, plaice, pouting, sprat and whiting. These fish were caught throughout the aquatic survey area. Of the fish consumed by the 33 people in the high-rate group, the percentage breakdown of species, rounded to the nearest 5%, was 25% cod, 20% Dover sole, 15% bass, 15% thornback ray and 25% of a mix of dab, flounder, grey mullet, herring, huss, lemon sole, mackerel, plaice, sprat and whiting.

The species of crustaceans consumed by adults were brown crab, common lobster and brown shrimp. The brown shrimp were caught off Southwold and the brown crab and common lobster were caught at a variety of locations throughout the aquatic survey area. Of the crustaceans consumed by the five people in the high-rate group, the percentage breakdown of species, rounded to the nearest 5%, was 65% brown crab and 35% common lobster.

The species of molluscs consumed by adults were whelks and Pacific oysters. The whelks were caught off Southwold and the Pacific oysters were farmed in the River Blythe near Blythburgh and in Butley River. Of the molluscs consumed by the eight people in the high-rate group, the percentage breakdown of species, rounded to the nearest 5%, was 90% whelks and 10% Pacific oysters.

The species of wildfowl consumed by adults were Canada goose, greylag goose, mallard and teal, which were shot on salt marshes and mudflats of the tidal River Alde and River Ore and also over farmland and around freshwater ponds in the terrestrial survey area. The consumption of wildfowl that had been shot over farmland and in 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 65% mallard, 20% greylag goose and 15% Canada goose.

The three species of marine plants/algae consumed by adults were samphire, sea purslane and sea beet. The samphire was collected from the River Alde near Slaughden and from Butley River. The sea purslane and sea beet were collected from the River Alde near Slaughden. Of the marine plants/algae consumed by the four people in the high-rate group, the percentage breakdown of species, rounded to the nearest 5%, was 55% samphire, 35% sea purslane and 10% sea beet.

Children's consumption rates

Table B presents a summary of children's consumption rates of fish, crustaceans and marine plants/algae 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 10-year-old age group, no consumption of molluscs or wildfowl was identified. For the 1-year-old age group, no consumption of

crustaceans, molluscs, wildfowl or marine plants/algae was identified. No generic rates have been determined for the 10-year-old and the 1-year-old age groups.

Table B. Summary of children's consumption rates of foods from the aquatic survey area

Food group	Number of observations	Number of high-rate consumers	Observed maximum for the high-rate group (kg y ⁻¹)	Observed minimum for the high-rate group (kg y ⁻¹)	Observed mean for the high-rate group (kg y ⁻¹)	Observed 97.5 th percentile (kg y ⁻¹)
10-year-old age group (6 – 15 years old)						
Fish	9	7	20.8	11.3	15.8	20.2
Crustaceans	7	2	1.9	0.7	1.3	1.8
Marine plants/algae	2	2	0.5	0.5	0.5	0.5
1-year-old age group (0 – 5 years old)						
Fish	2	2	0.2	0.2	0.2	0.2

The predominant species of fish consumed by the 10-year-old age group were cod, Dover sole, thornback ray and bass, with smaller quantities of grey mullet, herring, mackerel, sprat and whiting. The only species of fish consumed by the children in the 1-year-old age group was Dover sole.

The species of crustaceans consumed by the 10-year-old age group were brown shrimp, brown crab and common lobster.

The species of marine plants/algae consumed by the 10-year-old age group were samphire, sea beet and sea purslane.

4.8 Intertidal occupancy

Intertidal occupancy rates for adults and children are presented in Table 11 and Table 12, respectively. 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

Adults were identified undertaking activities over the following seven types of substrate:

- mud
- mud and stones
- salt marsh
- sand
- sand and stones
- stones
- boat resting on mud

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.

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	21	7	411	206	297
Mud and stones	3	3	70	70	70
Salt marsh	22	1	411	411	233
Sand	11	6	90	80	90
Sand and stones	98	11	525	275	315
Stones	74	9	936	687	900
Boat on mud	1	1	5901	5901	Not applicable

The following activities were undertaken by people in the adult high-rate groups for occupancy over intertidal substrates. For mud, the activities undertaken were nature conservation duties at Orford Ness and fixing moorings, which occurred at Slaughden on the River Alde. For mud and stones, the activity was boat maintenance at Orford. For salt marsh, the activity was nature conservation duties at Orford Ness. For sand, the activities were walking and playing at Walberswick. For sand and stones, the activities comprised dog walking at Sizewell and Dunwich; angling at Sizewell, Dunwich and Orford Ness; walking and supervising youth groups at Sizewell and Thorpeness; and walking at Dunwich. For stones, the activities comprised nature conservation duties at Orford Ness; angling at Orford Ness, Thorpeness, Sizewell and Slaughden; and walking at Thorpeness. The person

identified spending time on a boat that was resting on mud was a boat dweller at Slaughden on the River Alde.

Children’s intertidal occupancy rates

Children in the 10-year-old age group were identified undertaking activities over the following four types of intertidal substrate:

- salt marsh
- sand
- sand and stones
- stones

Children in the 1-year-old age group were identified undertaking activities over the following four types of intertidal substrate:

- salt marsh
- sand
- sand and stones
- stones

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)
10-year-old age group (6 – 15 years old)					
Salt marsh	10	8	32	26	32
Sand	8	5	90	74	87
Sand and stones	23	12	98	59	98
Stones	8	1	125	125	108
1-year-old age group (0 – 5 years old)					
Salt marsh	1	1	18	18	Not applicable
Sand	1	1	90	90	Not applicable
Sand and stones	8	4	36	24	34
Stones	5	3	64	44	61

The following activities were undertaken by children in the 10-year-old age group high-rate groups for occupancy over intertidal substrates. For salt marsh the activities were crabbing at Walberswick and playing at Slaughden on the River Alde. For sand the activities were walking and playing at Walberswick. For sand and stones, the activities were playing at Southwold, Sizewell, Dunwich and Thorpeness; walking at Walberswick, Sizewell, Dunwich, Aldeburgh and Thorpeness; and sunbathing at Walberswick, Dunwich and Aldeburgh. For stones the only activity was angling at Slaughden and Thorpeness.

The following activities were undertaken by children in the 1-year-old age group high-rate groups for occupancy over intertidal substrates. For salt marsh, the only activity was crabbing at Walberswick. For sand, the only activity was playing at Walberswick. For sand and stones, the activities were walking and playing at Dunwich. For stones, the activities were kite flying and playing at Aldeburgh.

4.9 Gamma dose rate measurements

Gamma dose rate measurements were taken over six intertidal substrates and on board a fibreglass boat while it was resting on mud. All measurements were taken at a height of 1 metre above the substrate. The results are presented in Table 13 and are summarised below.

- Three measurements taken over mud ranged from 0.046 $\mu\text{Gy h}^{-1}$ to 0.069 $\mu\text{Gy h}^{-1}$
- One measurement taken over mud and stones was 0.047 $\mu\text{Gy h}^{-1}$
- Three measurements taken over salt marsh ranged from 0.060 $\mu\text{Gy h}^{-1}$ to 0.071 $\mu\text{Gy h}^{-1}$
- One measurement taken over sand was 0.049 $\mu\text{Gy h}^{-1}$
- Five measurements taken over sand and stones ranged from 0.043 $\mu\text{Gy h}^{-1}$ to 0.049 $\mu\text{Gy h}^{-1}$
- Two measurements taken over stones were both 0.044 $\mu\text{Gy h}^{-1}$
- One measurement taken on a fibreglass boat resting on mud was 0.052 $\mu\text{Gy h}^{-1}$

Natural levels of around 0.05 $\mu\text{Gy h}^{-1}$ over sand and around 0.07 $\mu\text{Gy h}^{-1}$ over mud and over salt marsh are expected. A value of 0.06 $\mu\text{Gy h}^{-1}$ is expected for all other natural substrate types (EA, FSA, NIEA and SEPA, 2010).

4.10 Handling of fishing gear and sediment

Handling fishing gear that has become entrained with fine sediment particles, or handling sediment while undertaking activities such as bait digging or mollusc collecting, can potentially give rise to skin exposure from beta radiation. Doses to the skin need consideration, as there is a separate dose limit for skin for members of the public. There is also a contribution to effective dose due to skin exposure (ICRP, 1991).

Fishing gear can also be a source of whole body 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 and Table 15 presents the child handling rates of fishing gear.

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	40	14	1920	1125	1920
Handling sediment	8	6	182	172	182

The activities undertaken by adults in the high-rate group for handling fishing gear were handling nets, pots and long-lines, which took place throughout the survey area. The activity undertaken by the people in the high-rate group for handling sediment was fixing moorings at Slaughden on the River Alde.

Children's handling rates of fishing gear and sediment

Table F presents a summary of the handling rates of fishing gear for children. The table includes the mean handling rate for the high-rate group. No children were identified handling sediment.

Table F. Summary of children's handling rates of fishing gear					
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)
10-year-old age group (6 – 15 years old)					
Handling fishing gear	7	5	32	26	32
1-year-old age group (0 – 5 years old)					
Handling fishing gear	1	1	18	18	Not applicable

The children identified handling fishing gear in the 10-year-old and the 1-year-old age group were handling crab lines at Walberswick.

4.11 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 and children are presented in Table 16 and Table 17, respectively. Data for members of lifeboat crews were gained through interviews with representatives from the lifeboat stations.

Activities in the water

The activities identified taking place in the water around Sizewell during the survey were windsurfing, wake boarding, swimming and kayaking. It was reported that sub-aqua diving occasionally took place on the sunken village at Dunwich but this activity was not observed at the time of the survey. Forty-nine observations were recorded for adults and 23 observations were recorded for children in the 10-year-old age group. No activities were recorded taking place in water for children in the

1-year-old age group. The highest occupancy rate for adults was 140 h y^{-1} for an individual who was windsurfing between Southwold and Aldeburgh. The highest occupancy rate for children in the 10-year-old age group was 100 h y^{-1} for two children who were swimming at Sizewell.

Activities on the water

Activities taking place on the water around Sizewell included lifeboat duties, trawling, netting, long-lining, potting, oyster farming, boat angling, sailing, canoeing, passenger ferry crew, cruise and charter boat crew, operating a rescue boat, paddling, fixing moorings and living on a houseboat. One hundred and thirty-seven observations were recorded for adults, 12 observations were recorded for children in the 10-year-old age group and 11 observations were recorded for children in the 1-year-old age group. The highest occupancy rate for adults was 3900 h y^{-1} for two people who were living on a houseboat in Southwold harbour. The highest occupancy rate for children in the 10-year-old age group was 14 h y^{-1} for two children who were paddling at Southwold. The highest occupancy rate for children in the 1-year-old age group was 24 h y^{-1} for two children who were sailing along the River Alde and River Ore.

5 TERRESTRIAL RADIATION PATHWAYS

5.1 Terrestrial survey area

The terrestrial survey area (shown in Figure 2) covered all land, watercourses and lakes within 5 km of the Sizewell site centre (National Grid Reference: TM 473 634).

The land around the Sizewell site was predominantly agricultural with scattered patches of woodland, heath and marsh. The main population centre is the town of Leiston, situated approximately 3 km to the west of the site. The villages of Theberton and Eastbridge are located to the northwest of the survey area and the villages of Aldringham and Coldfair Green are located to the southwest. The hamlet of Sizewell is situated close to the southern boundary of the site and the village of Thorpeness is further south along the coast. The wetlands and freshwater ponds that constitute the Minsmere Nature Reserve are located in the north of the survey area and a lake called Thorpeness Meare is located in the south of the survey area.

Eight working farms were identified in the Sizewell terrestrial survey area. Additionally, one farmer and a large farming company were identified as farming land within the 5 km survey area, but their main businesses were based outside this 5 km radius. Of these 10 farming businesses:

- Three produced beef cattle
- One produced beef cattle, lambs and pigs
- One produced piglets
- One produced arable crops and lambs
- Four produced arable crops

Beef cattle were sold direct to other farms outside the area for fattening and breeding or sent to auctions and abattoirs within East Anglia. Lambs were sent to an abattoir outside the survey area. Piglets were sold to other farms outside the survey area for fattening and small quantities of pork were sold direct to the public from one farm. The arable crops produced in the area comprised potatoes, onions, carrots, parsnips, turnips, French beans, sugar beet, wheat, barley, rye, oilseed rape, raspberries, strawberries and a wide variety of other soft fruit. Sugar beet was sold to a large national sugar producer; cereal grain was sold nationally for human consumption and animal feed; oilseed rape was sold through national wholesalers; vegetables were sold to national supermarket chains and regional wholesalers; and soft fruit was sold to national supermarket chains and direct to the public from one farm.

Farmers and their families were noted to be consuming beef, pork, lamb, vegetables and soft fruits produced on their own farms. One farmer kept chickens and dairy cows non-commercially and the

chickens, eggs and milk were used for his own family's consumption. Two other farmers kept chickens for eggs for their own families' consumption.

One smallholding was identified within the survey area. The smallholder grew a wide variety of vegetables and kept chickens for eggs. The vegetables and eggs were consumed by the smallholder and his family and sold direct to the public from the smallholding and from a market stall just outside the survey area. Small amounts of vegetables were grown at a plant nursery situated in the survey area and sold direct to the public from the nursery.

Two allotment sites with a total of approximately 100 plots and many private gardens were identified within the survey area. Both the allotment sites were located in Leiston. Several allotment holders held more than one plot. The allotment holders and gardeners grew a wide variety of fruit and vegetables and eight people kept chickens for eggs in their gardens or on their allotment plots. Children grew vegetables at a school in the area and these were used in the school canteen.

One beekeeper was interviewed who had four hives located within the survey area to the west of Leiston. The production of honey per hive ranged from 18 kg y⁻¹ to 32 kg y⁻¹. The honey was sold to a shop just outside the survey area and consumed by the beekeeper and his family. It was reported that two other beekeepers had hives within the survey area but they could not be contacted.

Blackberries, bullace plums, chestnuts, elderberries, mushrooms and sloes were growing wild in the survey area and these were collected and consumed.

Rough shooting took place on many of the farms within the survey area and one organised game shoot was identified. The shooters and their families consumed the shot partridge, pheasant, pigeon, rabbit and venison. Also, deer were culled in woodlands to the north-west of the power stations. The culled deer and excess game from the organised shoot were sold to a specialist game retailer outside the area. The shooters in the terrestrial survey area also shot wildfowl, as discussed in the aquatic section of this report.

The two main bodies of freshwater in the terrestrial survey area that were potentially affected by the deposition of gaseous discharges were Minsmere and Thorpeness Meare. Minsmere was an RSPB Nature Reserve and beef cattle grazed on the marshland around the ponds in the reserve. One person was identified cutting reeds from a boat. Thorpeness Meare was used as a boating lake and rowing boats were rented out to the public through the summer months. Coarse fishing was permitted on a 'catch and return' basis only. Two people were identified cutting reeds from a boat.

The consumption of groundwater by humans and livestock was identified. Seven households situated in the south of the survey area used well water or borehole water as their sole domestic supply and one household situated in the centre of the survey area used well water and mains supply water.

Livestock were supplied with well water for drinking at two farms and livestock at other farms had access to ditch water. Groundwater was used for irrigating arable crops at three farms.

5.2 Terrestrial food wholesalers and retailers

No wholesalers were identified within the survey area. Retailers located inside or close to the survey area were interviewed to establish whether they were selling produce from within the survey area. They included a farm shop, a plant nursery, a butcher, several village shops, a delicatessen and a market. The butcher was selling a small amount of beef from the survey area and the nursery was selling a range of vegetables from the survey area. Vegetables and chicken eggs from the survey area were being sold at a market stall just outside the area.

5.3 The transfer of contamination off-site by wildlife

Representatives from the Sizewell site reported that control measures taken against wildlife in order to limit the possibility that contamination is transferred off-site included periodically culling pigeons and rabbits. Pigeons and dead seagulls found in the area were occasionally monitored.

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 41 for children.

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 42 and the foods sampled as part of the 2009 Food Standards Agency monitoring programme (EA, FSA, NIEA and SEPA, 2010) 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 G presents a summary of the adults' consumption rates for the foods consumed from the terrestrial survey area. The table includes the mean consumption rates for the high-rate groups and the observed 97.5th percentile rates 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.

Table G. 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 97.5 th percentile (kg y ⁻¹ or l y ⁻¹)	Generic mean (kg y ⁻¹ or l y ⁻¹)	Generic 97.5 th percentile (kg y ⁻¹ or l y ⁻¹)
Green vegetables	102	28	91.2	30.9	49.9	85.7	15.0	45.0
Other vegetables	107	34	86.0	28.9	48.5	65.3	20.0	50.0
Root vegetables	93	30	97.8	34.0	57.1	75.7	10.0	40.0
Potato	93	47	116.9	41.0	69.4	115.4	50.0	120.0
Domestic fruit	108	13	71.1	23.8	44.3	57.4	20.0	75.0
Milk	5	5	219.0	219.0	219.0	219.0	95.0	240.0
Cattle meat	20	18	37.8	23.7	31.8	37.8	15.0	45.0
Pig meat	16	7	42.5	19.0	35.7	42.5	15.0	40.0
Sheep meat	18	18	4.2	2.3	2.7	4.2	8.0	25.0
Poultry	37	20	12.8	4.8	7.5	12.8	10.0	30.0
Eggs	47	21	41.6	19.1	29.6	41.4	8.5	25.0
Wild/free foods	47	10	6.3	2.1	3.9	6.1	7.0	25.0
Rabbits/hares	25	8	10.8	3.6	8.2	10.8	6.0	15.0
Honey	3	2	5.4	5.4	5.4	5.4	2.5	9.5
Wild fungi	15	14	1.1	0.5	0.8	1.1	3.0	10.0
Venison	19	6	36.3	30.0	34.2	36.3	ND	ND

Notes

ND - Not determined

Three mean consumption rates for the high-rate groups were found to be greater than the generic 97.5th percentile consumption rates. These were for green vegetables, root vegetables and eggs. 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, eggs, rabbits/hares and honey. Five observed 97.5th percentile consumption rates exceeded the generic 97.5th percentile consumption rates. These were for green vegetables, other vegetables, root vegetables, pig meat and eggs.

Children's consumption rates

Ten children in the 10-year-old age group and four children in the 1-year-old age group were identified consuming foods from the terrestrial survey area. Table H presents a summary of children's consumption rates. The table includes the mean consumption rates for the high-rate groups and the observed 97.5th percentile rates. No generic data have been determined for the 10-year-old and the 1-year-old age groups. In the 10-year-old age group, no consumption of foods from the following food

groups was identified: milk; cattle meat; pig meat; poultry; rabbits/hares; honey; wild fungi; venison; cereals; freshwater fish. In the 1-year-old age group, no consumption of foods from the following food groups was identified: milk; cattle meat; pig meat; sheep meat; poultry; rabbits/hares; honey; wild fungi; venison; cereals; freshwater fish.

Table H. Summary of children's 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 97.5 th percentile (kg y ⁻¹)
10-year-old age group (6 - 15 years old)						
Green vegetables	7	4	25.0	8.8	12.9	22.6
Other vegetables	7	3	38.6	13.6	22.1	34.9
Root vegetables	7	2	33.4	24.0	28.7	32.0
Potato	4	4	17.5	10.2	13.6	17.2
Domestic fruit	10	1	38.0	38.0	38.0	30.7
Sheep meat	2	2	3.4	3.4	3.4	3.4
Eggs	4	2	11.4	8.6	10.0	11.2
Wild/free foods	3	3	0.5	0.2	0.4	0.5
1-year-old age group (0 - 5 years old)						
Green vegetables	2	2	3.8	2.1	2.9	3.7
Other vegetables	2	2	3.7	3.3	3.5	3.7
Root vegetables	2	1	5.3	5.3	5.3	5.2
Potato	2	2	13.0	10.2	11.6	12.9
Domestic fruit	4	1	5.3	5.3	5.3	5.0
Eggs	1	1	8.6	8.6	8.6	NA
Wild/free foods	1	1	0.2	0.2	0.2	NA

Notes

NA - Not applicable

5.5 Water based activities

Occupancy rates for activities taking place on freshwater in the terrestrial survey area are presented in Table 43. Three adults were identified with occupancy on freshwater. The highest occupancy rate was 480 h y⁻¹ for two individuals who were reed cutting aboard a boat on Thorpeness Meare. No children were identified spending time on freshwater in the terrestrial survey area.

6 DIRECT RADIATION PATHWAYS

6.1 Direct radiation survey area

The direct radiation survey area (shown in Figure 2) covered all land and sea within 1 km of the Sizewell site boundary. For the purposes of the direct radiation survey, the site boundary was taken as the perimeter of the licensed area, except on the eastern side of the site where the licensed area extended out onto the shore into an unfenced area frequently used by members of the public. Because of this, the boundary on the eastern side of the site was taken as the perimeter fence. The occupancy data collected from the direct radiation area is also applicable to the direct exposure arising from gaseous releases from the site.

The land within the direct radiation survey area was predominantly agricultural. The Suffolk Wildlife Trust managed the land to the north and to the west of the Sizewell site, which included agricultural fields, woodland, heath land and freshwater marshes. Beef cattle and sheep were being grazed on the fields including those adjacent to the site to the west. There were public nature trails across the areas of woodland, heath land and marshes, which included the Sizewell Belts nature reserve. A small number of residential properties were located to the west of the power stations. Residences and a compound for an offshore wind farm consortium were located to the southwest and part of the area to the southwest and south was arable farmland.

Most of the residential properties within the survey area were located to the south of the power stations in the hamlet of Sizewell, along with a café and a pub which also had a small camping/touring caravan site. A caravan park, a conference centre and residential properties were located further to the south.

The eastern side of the power stations was situated directly adjacent to sand dunes, beyond which was a sand and shingle beach. The Suffolk Coastal Path and numerous other smaller footpaths ran through the sand dunes.

The proposed area for the new nuclear site at Sizewell includes land in the direct radiation survey area, mainly to the north and northwest of the existing site, with a small area to the south. It is currently woodland, scrub and agricultural land.

6.2 Residential activities

The direct radiation survey area was sparsely populated; 30 residential properties were identified, four of which were unoccupied. Interviews were conducted at 19 residences, none of which included families with children. One of these residences was a holiday home, two were mobile homes and four

were businesses where people were living and working. Six properties were within the 0 – 0.25 km zone, four properties were within the >0.25 – 0.5 km zone and nine properties were within the >0.5 – 1.0 km zone.

6.3 Leisure activities

Sizewell beach was popular with people who were angling, walking, dog walking, sunbathing and playing. Many people were swimming off the beach and two people were hobby fishing offshore within 1 km of the site. The Suffolk Coastal Path and numerous other smaller footpaths that ran through the sand dunes close to the site boundary were popular with walkers and dog walkers. Walkers and dog walkers also used the nature trails in the Sizewell Belts nature reserve and woodlands to the west of the site.

The caravan park had 67 pitches for static caravans, many of which accommodated privately owned caravans, and 60 pitches for touring caravans and tents. The park was open for 11 months of the year. The conference centre received approximately 6500 visitors per year, who stayed in dormitories or tents for a maximum of two weeks per visit.

6.4 Commercial activities

Two people, who were not Sizewell site employees or contractors, worked within the Sizewell nuclear licensed site boundary. The following people were identified who were working within the direct radiation survey area: farmers; commercial fishermen; employees at the pub, the café, the conference centre, the caravan park and the businesses associated with the offshore wind farm. One farmer who lived outside the survey area farmed the fields to the southwest and south of the site and the Suffolk Wildlife Trust farmed the fields to the west and north of the site. Two commercial fishermen were operating at sea in the Sizewell area and part of their sea time was spent within 1 km of the site. Four organisations in the offshore wind farm consortium were based at a compound in the survey area and occupancy data were obtained for 30 employees from these organisations. There were also numerous sub-contractors who were working in the survey area for variable periods. It was reported that the consortium would occupy the compound until June 2011 when it was anticipated that the construction of the wind farm and electricity sub-station would be completed. The remaining electricity substation would then be manned by a skeleton crew.

The activities of Sizewell site employees and contractors while at work were not considered in the direct radiation survey, as radiation workers are subject to different radiation protection criteria.

6.5 Occupancy rates

Table 44 presents indoor, outdoor and total occupancy data for adults and children. An analysis of the data by distance zones and occupancy rates is shown in Table 45. A summary of occupancy rates in the direct radiation survey area is presented in Table I.

Table I. 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)
Within the nuclear licensed site area	2	950	950	1900
0 - 0.25 km	59	8369	2080	8552
>0.25 - 0.5 km	49	6727	2208	8005
>0.5 - 1.0 km	45	7298	2325	8552

Within the nuclear licensed site area

Occupancy data were collected for two people who were working within the nuclear licensed site area but were not Sizewell site employees or contractors.

0 - 0.25 km from the site boundary

Occupancy data were collected for 59 individuals in the 0 - 0.25 km zone. The observations were for 12 residents, two of whom were also working in the area, six employees, three visitors, 11 dog walkers, three anglers, seven people who were playing on the beach, three of whom were also swimming, two people who were sunbathing on the beach, 12 walkers, one of whom was also swimming, two people who were supervising youth groups on the beach and one person who was preparing fishing gear and fishing. The highest indoor and total occupancy rate were for a resident. The highest outdoor occupancy rate was for a resident who also spent time preparing fishing gear and fishing.

>0.25 - 0.5 km from the site boundary

Occupancy data was collected for 49 individuals in the >0.25 - 0.5 km zone. The observations were for three residents, one of whom was also preparing fishing gear and fishing, two people who were staying in a holiday home, 37 employees, five people who were sitting on the beach, three of whom were also swimming, one dog walker and one person who was preparing fishing gear and fishing.

Two residents had the same highest indoor and total occupancy rates and 10 employees had the same highest outdoor occupancy rate.

>0.5 - 1.0 km from the site boundary

Occupancy data were collected for 45 people in the >0.5 - 1.0 km zone. The observations were for 18 residents, seven of whom were also working in the area, 14 employees and 13 visitors, two of whom were also sunbathing. One person who was living and working in the area had the highest indoor occupancy rate. Two different residents had the highest outdoor occupancy rate and the highest total occupancy rate.

6.6 Gamma dose rate measurements

Gamma dose rate measurements were taken indoors and outdoors at most properties where interviews were conducted in the Sizewell direct radiation survey area. Outdoor measurements were taken approximately 5 to 10 metres from the nearest building. 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 natural background dose rates. The results are presented in Table 46 and are summarised below.

Indoor measurements

- Seven measurements taken over wood ranged from 0.052 $\mu\text{Gy h}^{-1}$ to 0.095 $\mu\text{Gy h}^{-1}$
- Ten measurements taken over concrete ranged from 0.053 $\mu\text{Gy h}^{-1}$ to 0.088 $\mu\text{Gy h}^{-1}$

Outdoor measurements

- Seventeen outdoor measurements taken over grass ranged from 0.049 $\mu\text{Gy h}^{-1}$ to 0.071 $\mu\text{Gy h}^{-1}$
- One outdoor measurement taken over sand and stones was 0.061 $\mu\text{Gy h}^{-1}$
- One outdoor measurement taken over sandy soil was 0.065 $\mu\text{Gy h}^{-1}$

Background measurements

- Two measurements taken over grass ranged from 0.048 $\mu\text{Gy h}^{-1}$ to 0.052 $\mu\text{Gy h}^{-1}$

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 47. Each of the 39 combinations shown in Table 47 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 47 do not correlate directly with observation numbers in Annex 1. Other individuals from Annex 1 have combinations that are not listed in Table 47 because they have fewer pathways and a dose assessment for them would be adequately covered by one of the 39 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 Sizewell habits survey for females of childbearing age are presented in Annex 5. The Office of National Statistics classifies women to be of childbearing age if they are between 15 – 44 years old (www.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 Sizewell 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 Sizewell are made using these profiles and reported in the Radioactivity in Food and the Environment reports (e.g. EA, FSA, NIEA and SEPA, 2010). Additionally, profiles have been created for the 10-year-old and 1-year-old 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.

8 COMPARISONS WITH THE PREVIOUS SURVEY

The results from this 2010 survey can be compared with results from the last combined habits survey undertaken in 2005. The aquatic, terrestrial and direct radiation survey areas in the 2010 survey were the same as those in the 2005 survey. All comparisons for consumption, intertidal occupancy, handling and occupancy rates in the direct radiation area are for adults only.

8.1 Aquatic survey area

The main species of fish consumed by the adult high-rate group in 2005 were cod, Dover sole, dab, thornback ray, bass and herring, and in 2010 the main species were cod, Dover sole, bass and thornback ray. In 2010 and 2005, the species of crustaceans consumed by the adult high-rate group were brown crab and common lobster. In 2005 the species of molluscs consumed by the adult high-rate group were Pacific oyster and mussel and in 2010 the species were Pacific oyster and whelk. The wildfowl consumed by the adult high-rate group in 2005 were unspecified species of duck and goose and in 2010 were mallard, greylag goose, and Canada goose. In 2005 no consumption of marine plants/algae was identified but in 2010 the adult high-rate group were consuming samphire, sea purslane and sea beet.

A comparison between the 2005 and 2010 data for the consumption of aquatic foods is presented in Table J. In 2010, compared with 2005, there was an increase in the mean consumption rate for the adult high-rate group for fish, from 23 kg y⁻¹ in 2005 to 28 kg y⁻¹ in 2010. There was a slight increase in the mean consumption rate for the adult high-rate group for crustaceans, from 11 kg y⁻¹ in 2005 to 14 kg y⁻¹ in 2010. There was a slight decrease in the mean consumption rates for the adult high-rate group for molluscs, from 5.1 kg y⁻¹ to 4.2 kg y⁻¹, and a significant decrease in the mean consumption rates for the adult high-rate group for wildfowl, from 21 kg y⁻¹ to 7.5 kg y⁻¹. No consumption of marine plants/algae was identified in 2005, but in 2010 the mean consumption rate for the adult high-rate group was 0.9 kg y⁻¹. No specific reasons were identified for the changes in consumption rates.

Table J. Comparison between 2005 and 2010 consumption rates of aquatic food groups for adults

Food group	2005			2010		
	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	24	47.4	23.0	33	52.0	28.1
Crustaceans	4	21.7	11.2	5	21.4	13.9
Molluscs	3	6.6	5.1	8	5.0	4.2
Wildfowl	6	29.7	20.5	7	8.5	7.5
Marine plants/algae	-	-	-	4	1.0	0.9

For intertidal occupancy in 2005, activities were recorded over the following four substrates: mud; salt marsh; sand; sand and stones. In 2010, activities were recorded over the same substrates with the addition of occupancy over mud and stones, over stones, and over a boat resting on mud.

The activities undertaken over intertidal substrates by the individuals in the high-rate groups in 2005 included oyster farming, angling, dog walking and working on the shore. In 2010, the activities were nature conservation duties, fixing moorings, boat maintenance, walking, dog walking, playing, angling, supervising youth groups and living on a boat resting on mud. The only activity for individuals in the high-rate group for handling fishing gear in 2005 was gear handling (unspecified) and in 2010 the activities were handling nets, pots and long-lines. The only activity for individuals in the high-rate group for handling sediment in 2005 was oyster farming and in 2010 was fixing moorings.

A comparison between the 2005 and 2010 data for occupancy over intertidal substrates, handling fishing gear and handling sediment is shown in Table K.

Table K. Comparison between 2005 and 2010 intertidal occupancy rates and handling rates of fishing gear and sediment for adults^a

Intertidal substrate or handling pathway	2005			2010		
	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	1	720	720	7	411	206
Mud and stones	-	-	-	3	70	70
Salt marsh	2	420	420	1	411	411
Sand	7	663	422	6	90	80
Sand and stones	6	1264	816	11	525	275
Stones	-	-	-	9	936	687
Boat on mud	-	-	-	1	5901	5901
Handling fishing gear	15	2100	1297	14	1920	1125
Handling sediment	1	720	720	6	182	172

^aIn the 2005 survey report the data for intertidal occupancy and handling were presented for adults and children combined. However, all the individuals in the high-rate groups were adults so the data presented here is the same as in the 2005 survey report.

The mean intertidal occupancy rate for the high-rate group for salt marsh in 2010 was broadly similar to that in 2005. The most significant changes in the intertidal occupancy rates were that no activities were recorded over mud and stones, over stones, or on board boats resting on mud in 2005, although there were in 2010; and that occupancy rates for activities over mud, over sand, and over sand and stones decreased significantly in 2010 compared to 2005. The decrease in the occupancy rate over mud was attributed to an increased use of boats in oyster farming resulting in less time spent on mud. The increase in the occupancy rate over mud and stones was due to a newly identified activity of boat maintenance at a location where no activities had previously been identified. The changes in the occupancy rates over sand, over sand and stones, and over stones were attributed mainly to the sediments at given locations changing over time since the ratio of sand and stones along this dynamic coastline was subject to change with prevailing weather and tidal conditions. Considering those three substrates together there was a slight decrease in occupancy between 2005 and 2010. Occupancy on board a boat resting on mud was not recorded in 2005 since all the boats that people were living on that were identified at that time were permanently afloat, whereas one of the boats identified at a new location in 2010 rested on mud for part of the tidal cycle. The handling rate for fishing gear

decreased slightly in 2010 compared with 2005. The decrease in the handling rate of sediment in 2010 was attributed to a recorded change in the harvesting method for oysters from hand collection (classified as sediment handling) to dredging (classified as gear handling), coupled with a reduction in the overall time spent collecting oysters.

8.2 Terrestrial survey area

Activities in the terrestrial survey area in 2010 were broadly similar to those in 2005 except that the commercial dairy farm identified in 2005 had switched to rearing beef cattle in 2010. There was no commercial dairy farming in the survey area in 2010, although one farmer kept a few cows for milk for his own family's consumption. Otherwise, the principal types of farm produce continued to be a mix of beef, pigs, sheep and arable crops. In both surveys, two allotment sites were identified and the allotment holders and several gardeners were producing a variety of fruit and vegetables and some kept chickens for chicken eggs. In 2005 gardeners and allotments holders were identified that kept ducks and geese for eggs but this was not identified in 2010.

The mean consumption rates for the adult high-rate group for terrestrial food groups from the 2005 and 2010 surveys are shown in Table L.

Table L. Comparison between 2005 and 2010 mean consumption rates for the adult high-rate groups for terrestrial food groups (kg y^{-1} or l y^{-1})

Food group	2005	2010
Green vegetables	28.6	49.9
Other vegetables	55.2	48.5
Root vegetables	47.7	57.1
Potato	73.9	69.4
Domestic fruit	41.8	44.3
Milk	208.4	219.0
Cattle meat	28.0	31.8
Pig meat	22.0	35.7
Sheep meat	2.4	2.7
Poultry	19.2	7.5
Eggs	15.5	29.6
Wild/free foods	32.1	3.9
Rabbits/hares	6.4	8.2
Honey	1.8	5.4
Wild fungi	1.8	0.8
Venison	30.6	34.2

Consumption rates increased in 2010 in the following 11 food groups: green vegetables; root vegetables; domestic fruit; milk; cattle meat; pig meat; sheep meat; eggs; rabbits/hares; honey; venison. Consumption rates decreased in 2010 in the following five food groups: other vegetables;

potato; poultry; wild/free foods; wild fungi. There were relatively large increases in the consumption rates for green vegetables, pig meat, eggs and honey; and relatively large decreases in the consumption rates for poultry, wild/free foods and wild fungi. No consumption of cereals or freshwater fish was identified in either 2005 or 2010.

The steep decline in the mean rate for the high-rate group of wild/free food consumers was due to one family that used large amounts of blackberries for home-made wine in 2005 that had stopped making wine in 2010. No specific reasons were identified for the other changes in consumption rates.

The human consumption of groundwater was identified in both the 2005 and the 2010 surveys. The use of groundwater and surface water for the drinking supply for livestock was identified in 2010 but not in 2005.

8.3 Direct radiation survey area

Activities identified in the direct radiation survey area in 2005 and 2010 were similar and included people residing, working, visiting, farming, commercial fishing, angling, walking, dog walking, and swimming. In 2005 bird watching was also identified and in 2010 playing, sunbathing, supervising youth groups, staying at holiday homes and sitting on the beach were also identified.

A comparison between the 2005 and 2010 direct radiation occupancy rates, by zone, is presented in Table M.

Table M. Comparison between 2005 and 2010 direct radiation occupancy rates ($h\ y^{-1}$)

	2005	2010
Within the nuclear licensed site area		
Highest indoor	-	950
Highest outdoor	-	950
Highest total	-	1900
0 - 0.25 km zone		
Highest indoor	7988	8369
Highest outdoor	2000	2080
Highest total	8488	8552
>0.25 - 0.5 km zone		
Highest indoor	7944	6727
Highest outdoor	1250	2208
Highest total	8104	8005
>0.5 - 1 km zone		
Highest indoor	7176	7298
Highest outdoor	1911	2325
Highest total	7756	8552

In 2010, two people were identified working within the nuclear licensed site area who were not Sizewell site employees or contractors. No occupancy data were obtained for this area in 2005. In 2005 and 2010 the highest total, indoor and outdoor rates in all three of the zones outside the nuclear licensed site area were for residents. Two of these residents also worked in the survey area.

In the Sizewell direct radiation survey area, seven sets of gamma dose measurements taken in 2010 can be compared with those taken at the same properties in 2005. These data are shown in Table N.

Table N. Comparison between 2005 and 2010 gamma dose rates ($\mu\text{Gy h}^{-1}$)

Location	Indoor		Outdoor	
	2005	2010	2005	2010
Residence 1	0.087	0.084	0.063	0.054
Residence 2	0.085	0.087	0.067	0.060
Residence 3	0.072	0.078	0.061	0.067
Residence 6	0.083	0.086	0.065	0.053
Residence 7	0.067	0.064	0.063	0.062
Residence 9	0.086	0.086	0.058	0.061
Residence 14 (with associated business)	0.079	0.072	0.050	0.052

Notes

These measurements have not been adjusted for background dose rates
The locations correspond to those in Table 46

9 MAIN FINDINGS

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

- Discharges of liquid radioactive waste to the North Sea
- Discharges of gaseous radioactive waste to the atmosphere
- Emissions of direct radiation

Data were collected for 649 individuals including, for example, commercial and hobby 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 group (as defined in Section 3.4) for the separate aquatic consumption pathways for foods potentially affected by liquid discharges were:

- 28 kg y⁻¹ for fish
- 14 kg y⁻¹ for crustaceans
- 4.2 kg y⁻¹ for molluscs
- 7.5 kg y⁻¹ for wildfowl
- 0.9 kg y⁻¹ for marine plants/algae

The predominant foods consumed by the high-rate groups for fish were cod, Dover sole, bass and thornback ray; for crustaceans were brown crab and common lobsters; for molluscs were whelks and Pacific oysters; for wildfowl were mallard, greylag goose and Canada goose; and for marine plants/algae were samphire, sea purslane and sea beet.

The use of seaweed as a fertiliser or animal feed was not identified.

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

- 210 h y⁻¹ for mud
- 70 h y⁻¹ for mud and stones
- 410 h y⁻¹ for salt marsh
- 80 h y⁻¹ for sand
- 280 h y⁻¹ for sand and stones
- 690 h y⁻¹ for stones
- 5900 h y⁻¹ for a boat on mud

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

- 1100 h y⁻¹ for handling fishing gear
- 170 h y⁻¹ for handling sediment

The adult maximum occupancy rate in water was 140 h y⁻¹ and on water was 3900 h y⁻¹.

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:

- 50 kg y⁻¹ for green vegetables
- 49 kg y⁻¹ for other vegetables
- 57 kg y⁻¹ for root vegetables
- 69 kg y⁻¹ for potato
- 44 kg y⁻¹ for domestic fruit
- 220 l y⁻¹ for milk
- 32 kg y⁻¹ for cattle meat
- 36 kg y⁻¹ for pig meat
- 2.7 kg y⁻¹ for sheep meat
- 7.5 kg y⁻¹ for poultry
- 30 kg y⁻¹ for eggs
- 3.9 kg y⁻¹ for wild/free foods
- 8.2 kg y⁻¹ for rabbits/hares
- 5.4 kg y⁻¹ for honey
- 0.8 kg y⁻¹ for wild fungi
- 34 kg y⁻¹ for venison

No consumption of freshwater fish or cereals was identified from the survey area. The consumption of foodstuffs by children (10-year-old and 1-year-old age groups) was also recorded.

The consumption of groundwater by humans was identified at seven 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 well water for drinking at two farms and livestock at other farms had access to ditch water.

Control measures taken by the Sizewell site against wildlife in order to limit the possibility that contamination is transferred off-site included periodically culling rabbits and pigeons.

9.3 Direct radiation survey area

Two people, who were not Sizewell site employees or contractors, were identified working within the Sizewell nuclear licensed site area. Within the other zones of the direct radiation survey area, the highest indoor, outdoor and total occupancy rates were for residents, two of whom also worked in the survey area. The highest indoor, outdoor and total occupancy rates recorded for all zones were:

Within the nuclear licensed site area

- 950 h y⁻¹ for the indoor occupancy rate
- 950 h y⁻¹ for the outdoor occupancy rate
- 1900 h y⁻¹ for the total occupancy rate

0 - 0.25 km zone

- 8400 h y⁻¹ for the indoor occupancy rate
- 2100 h y⁻¹ for the outdoor occupancy rate
- 8600 h y⁻¹ for the total occupancy rate

>0.25 - 0.5 km zone

- 6700 h y⁻¹ for the indoor occupancy rate
- 2200 h y⁻¹ for the outdoor occupancy rate
- 8000 h y⁻¹ for the total occupancy rate

>0.5 - 1 km zone

- 7300 h y⁻¹ for the indoor occupancy rate
- 2300 h y⁻¹ for the outdoor occupancy rate
- 8600 h y⁻¹ for the total occupancy rate

10 SUGGESTIONS

The information collected during the 2010 Sizewell habits survey can be used to make recommendations for changes to the current monitoring programmes.

10.1 Summary of current environmental monitoring programmes

The 2009 monitoring programmes for Sizewell operated by the Environment Agency and the Food Standards Agency, and published in the RIFE report (EA, FSA, NIEA and SEPA, 2010), 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 2010 Sizewell habits survey.

Aquatic monitoring

- Cod from Sizewell
- Sole from Sizewell
- Skates/rays from Sizewell
- Crabs from Sizewell
- Lobsters from Sizewell
- Pacific oysters from Butley Creek and the Blyth Estuary
- Mussels from the River Alde
- Sediment from the rifle range, Aldeburgh and Southwold
- Seawater from Sizewell
- Gamma dose rate measurements:
 - Mud at Southwold Harbour
 - Sand and shale at Sizewell beach
 - Sand and shingle at the rifle range, Aldeburgh, Dunwich and Sizewell beach

Terrestrial monitoring

- Milk
- Apples
- Blackberries
- Cabbage
- Honey
- Onions
- Potatoes
- Runner beans

- Wheat
- Freshwater

10.2 Suggestions for changes to the monitoring programmes

The following lists are suggestions for changes to the current environmental monitoring programmes. It should be noted that the suggestions are based on the findings of this survey. They are not the outcome of any form of radiological assessment. It is suggested that samples currently monitored, which are not listed below, remain unchanged in the monitoring programmes.

Environment Agency monitoring

The current environmental monitoring programme adequately covers the Sizewell area and no changes to this are suggested.

Food Standards Agency monitoring

- Within the 'mollusc' food group, the sample of mussels currently collected could be replaced with a sample of whelks, since no consumption of mussels was identified whereas whelks made the highest percentage contribution to this food group.
- A sample of pork could be added since both pork and beef were consumed at high rates and no meat samples are currently taken. The mean consumption rate for the high-rate group for pork was higher than the mean consumption rate for the high rate group for beef.

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Table 1. Survey coverage

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
SUMMARY OF ALL PATHWAYS					
All potential interviewees in the Sizewell 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)	8000 ^a	133 ^b	2%	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)	48	35 ^b	73%	Interviews were conducted at 19 occupied residences out of a total of 26 identified occupied residences. (4 of the residences were also businesses)
	Number of people employed but not resident in the direct radiation survey area (See (C) DIRECT RADIATION PATHWAYS)	60 (excluding temporary staff)	60 ^b	100%	Excluding people living in the direct radiation survey area and employees and contractors of Magnox South Ltd and British Energy.
	Number of people visiting the direct radiation survey area (See (C) DIRECT RADIATION PATHWAYS)	U	25 ^b	U	Where an individual was potentially affected by liquid discharges as well as visiting the direct radiation survey area (e.g. intertidal dog walkers) they have been allocated to aquatic pathways below.
	Number of people effected by liquid discharges (excluding those assigned to other categories above) (See (A) AQUATIC PATHWAYS)	U	396 ^b	U	
	Total for aquatic, terrestrial and direct radiation survey areas	U	649 ^b	U	

Table 1. Survey coverage

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
(A) AQUATIC PATHWAYS					
Commercial fishermen	Number of commercial fishermen based in the aquatic survey area	37	18	48%	Interviews were conducted with the skippers of 13 commercial fishing boats out of an estimated total of 27 commercial fishing boats based in the aquatic survey area.
Boat anglers, hobby fishermen and angling charter boat skippers	Number of boat anglers, hobby fishermen and angling charter boat skippers fishing in the aquatic survey area	U	16	U	
People undertaking activities in or on water (e.g. swimming, sailing and lifeboat duties)	Number of people undertaking activities in or on water in the aquatic survey area	U	223	U	Includes commercial fishermen, boat anglers etc.
People using the shore including anglers, dog walkers and people playing etc.	Number of people undertaking intertidal activities in the aquatic survey area	U	278	U	
Fish and shellfish consumers	Number of people consuming fish or shellfish from the aquatic survey area	U	155	U	
Wildfowl consumers	Number of people consuming wildfowl from the aquatic survey area	U	22	U	
Marine plant consumers	Number of people consuming marine plants from the aquatic survey area	U	6	U	
Houseboat dwellers	Number of people living on boats in the aquatic survey area	U	3	U	

Table 1. Survey coverage

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
(B) TERRESTRIAL PATHWAYS					
Farmers and smallholders	Number of farmers and smallholders and their family members consuming food from the terrestrial survey area	28	28	100%	Interviews were conducted at all 11 agricultural enterprises identified operating within the survey area.
Allotment holders	Number of allotment holders and their family members consuming food from the terrestrial survey area	230	87	38%	Interviews were conducted with 25 allotment holders from an estimated total of 65 allotment holders.
Gardeners	Number of gardeners and their family members consuming food from the terrestrial survey area	U	43	U	
Beekeepers	Number of people consuming honey produced by bee keepers in the terrestrial survey area	U	3	U	1 beekeeper was interviewed.
People with occupancy on water in the terrestrial survey area	Number of people spending time on water in the terrestrial survey area	U	3	U	
(C) DIRECT RADIATION PATHWAYS					
Residents	Number of residents in the survey area	48	35	73%	Interviews were conducted at 19 occupied residences out of a total of 26 identified occupied residences. (4 of the residences were also businesses)
Employees	Number of people employed in the survey area	60 (excluding temporary staff)	60	100%	Excluding people living in the direct radiation survey area and employees and contractors of Magnox South Ltd and British Energy.
Visitors	Number of visitors to the survey area	U	60	U	Mainly individuals undertaking recreational activities within the direct radiation survey area, including those also affected by aquatic discharges, such as intertidal dog walkers etc.

Table 1. Survey coverage

Group	Criteria	Estimate of complete coverage	Number for whom positive data was obtained	Coverage for positive observations	Notes
BREAKDOWN OF AGE GROUPS					
Adults	16-year-old and over	U	560	U	
10-year-old	6-year-old to 15-year-old	U	64	U	
1-year-old	0 to 5-year-old	U	25	U	

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 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, kohlrabi, 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, <i>Nephrops</i> , 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 Sizewell aquatic survey area (kg y⁻¹)

Observation number	Allis shad	Bass	Cod	Dab	Dover sole	Flounder	Grey mullet	Herring	Huss	Lemon sole	Lesser spotted dogfish	Mackerel	Plaice	Pouting	Sprat	Thornback ray	Whiting	Total
562	-	8.0	8.0	4.0	8.0	-	-	4.0	-	-	-	-	-	-	4.0	8.0	8.0	52.0
570	-	10.0	11.3	-	10.0	-	-	-	-	-	-	-	-	-	-	11.3	-	42.6
571	-	10.0	11.3	-	10.0	-	-	-	-	-	-	-	-	-	-	11.3	-	42.6
12	-	7.7	14.4	0.5	6.7	-	-	-	-	-	-	6.6	0.4	-	-	-	-	36.3
49	-	-	11.8	-	11.8	-	-	-	-	-	-	-	-	-	-	11.8	-	35.4
50	-	-	11.8	-	11.8	-	-	-	-	-	-	-	-	-	-	11.8	-	35.4
544	-	4.5	6.8	1.8	6.8	-	-	-	-	1.8	-	-	1.8	-	-	4.5	-	28.1
545	-	4.5	6.8	1.8	6.8	-	-	-	-	1.8	-	-	1.8	-	-	4.5	-	28.1
546	-	4.5	6.8	1.8	6.8	-	-	-	-	1.8	-	-	1.8	-	-	4.5	-	28.1
547	-	4.5	6.8	1.8	6.8	-	-	-	-	1.8	-	-	1.8	-	-	4.5	-	28.1
548	-	4.5	6.8	1.8	6.8	-	-	-	-	1.8	-	-	1.8	-	-	4.5	-	28.1
549	-	4.5	6.8	1.8	6.8	-	-	-	-	1.8	-	-	1.8	-	-	4.5	-	28.1
550	-	3.6	4.5	-	4.5	-	1.8	1.8	-	-	-	1.8	-	-	1.8	4.5	3.6	28.1
551	-	3.6	4.5	-	4.5	-	1.8	1.8	-	-	-	1.8	-	-	1.8	4.5	3.6	28.1
552	-	3.6	4.5	-	4.5	-	1.8	1.8	-	-	-	1.8	-	-	1.8	4.5	3.6	28.1
553	-	3.6	4.5	-	4.5	-	1.8	1.8	-	-	-	1.8	-	-	1.8	4.5	3.6	28.1
554	-	3.6	4.5	-	4.5	-	1.8	1.8	-	-	-	1.8	-	-	1.8	4.5	3.6	28.1
556	-	3.6	4.5	-	4.5	-	1.8	1.8	-	-	-	1.8	-	-	1.8	4.5	3.6	28.1
557	-	3.6	4.5	-	4.5	-	1.8	1.8	-	-	-	1.8	-	-	1.8	4.5	3.6	28.1
622	-	6.4	6.4	-	6.4	-	-	-	-	-	-	-	-	-	-	4.5	4.5	28.1
627	-	6.4	6.4	-	6.4	-	-	-	-	-	-	-	-	-	-	4.5	4.5	28.1
616	-	5.6	13.1	-	-	-	-	2.9	-	-	-	-	-	-	-	5.2	-	26.8
617	-	5.6	13.1	-	-	-	-	2.9	-	-	-	-	-	-	-	5.2	-	26.8
563	-	4.0	4.0	2.0	4.0	-	-	2.0	-	-	-	-	-	-	2.0	4.0	4.0	26.0
5	-	2.8	2.8	0.9	2.8	-	-	-	-	2.8	-	2.8	2.8	-	-	2.8	2.8	23.6
475	-	4.5	6.8	2.3	2.3	-	-	-	-	-	-	-	-	-	-	-	6.8	22.7
476	-	4.5	6.8	2.3	2.3	-	-	-	-	-	-	-	-	-	-	-	6.8	22.7
246	-	22.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22.6
56	-	-	8.4	-	-	5.7	-	-	4.4	-	-	-	-	-	-	-	-	18.5
60	-	-	3.3	0.7	0.8	0.6	-	7.2	-	-	-	-	-	-	5.8	-	-	18.5
61	-	-	3.3	0.7	0.8	0.6	-	7.2	-	-	-	-	-	-	5.8	-	-	18.5
228	-	-	-	-	17.7	-	-	-	-	-	-	-	-	-	-	-	-	17.7
229	-	-	-	-	17.7	-	-	-	-	-	-	-	-	-	-	-	-	17.7
284	-	-	7.6	-	-	-	-	-	-	2.8	2.8	-	-	-	-	2.8	-	16.1
239	-	1.9	6.6	-	1.9	-	-	-	-	-	-	-	-	-	-	5.3	-	15.6
241	-	1.9	6.6	-	1.9	-	-	-	-	-	-	-	-	-	-	5.3	-	15.6
558	-	1.8	2.3	-	2.3	-	0.9	0.9	-	-	-	0.9	-	-	0.9	2.3	1.8	14.1

Table 3. Adults' consumption rates of fish from the Sizewell aquatic survey area (kg y⁻¹)

Observation number	Allis shad	Bass	Cod	Dab	Dover sole	Flounder	Grey mullet	Herring	Huss	Lemon sole	Lesser spotted dogfish	Mackerel	Plaice	Pouting	Sprat	Thornback ray	Whiting	Total
282	-	-	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0
283	-	-	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0
198	-	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	1.2	-	4.6
454	-	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.5
153	-	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.9
72	-	-	1.6	0.5	-	1.4	-	-	-	-	-	-	-	-	-	-	-	3.5
73	-	-	1.6	0.5	-	1.4	-	-	-	-	-	-	-	-	-	-	-	3.5
311	-	-	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5
312	-	-	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5
313	-	-	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5
456	-	1.1	1.1	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	3.4
564	-	1.1	1.1	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	3.4
565	-	1.1	1.1	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	3.4
165	-	-	1.8	-	-	-	-	-	-	-	-	-	-	0.2	-	-	1.0	3.0
364	-	1.5	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.0
365	-	1.5	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.0
366	-	1.5	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.0
457	-	-	-	-	0.7	-	-	-	-	-	-	2.3	-	-	-	-	-	2.9
458	-	-	-	-	0.7	-	-	-	-	-	-	2.3	-	-	-	-	-	2.9
352	-	-	1.4	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	2.8
353	-	-	1.4	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	2.8
194	-	-	1.4	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-	2.3
195	-	-	1.4	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-	2.3
469	-	0.7	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	2.3
470	-	0.7	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	2.3
67	-	-	1.5	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	1.9
68	-	-	1.5	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	1.9
154	-	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8
236	-	0.4	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	1.5
451	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3
452	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3
453	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3
304	-	0.4	-	-	-	-	-	-	-	-	-	0.4	-	-	-	0.4	-	1.2
305	-	0.4	-	-	-	-	-	-	-	-	-	0.4	-	-	-	0.4	-	1.2
46	-	-	-	-	0.3	-	-	-	-	-	-	-	0.3	-	-	-	0.3	0.9
47	-	-	-	-	0.3	-	-	-	-	-	-	-	0.3	-	-	-	0.3	0.9
48	-	-	-	-	0.3	-	-	-	-	-	-	-	0.3	-	-	-	0.3	0.9

Table 3. Adults' consumption rates of fish from the Sizewell aquatic survey area (kg y⁻¹)

Observation number	Allis shad	Bass	Cod	Dab	Dover sole	Flounder	Grey mullet	Herring	Huss	Lemon sole	Lesser spotted dogfish	Mackerel	Plaice	Pouting	Sprat	Thornback ray	Whiting	Total
635	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
636	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
637	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
137	-	-	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	0.6
138	-	-	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	0.6
78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
51	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
52	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
53	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
219	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4
220	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4
199	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	0.3
200	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	0.3
155	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
156	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of fish based on the 33 high-rate adult consumers is 28.1 kg y⁻¹

The observed 97.5th percentile rate based on 130 observations is 36.1 kg y⁻¹

Table 4. Adults' consumption rates of crustaceans from the Sizewell aquatic survey area (kg y⁻¹)

Observation number	Brown shrimp	Brown crab	Common lobster	Total
229	-	13.0	8.4	21.4
228	-	8.7	8.4	17.1
570	-	9.7	1.9	11.6
571	-	9.7	1.9	11.6
395	-	2.9	5.2	8.1
542	0.9	-	1.3	2.2
543	0.9	-	1.3	2.2
594	-	2.2	-	2.2
352	-	0.7	1.3	2.0
353	-	0.7	1.3	2.0
564	-	0.7	1.3	2.0
565	-	0.7	1.3	2.0
281	-	2.0	-	2.0
282	-	2.0	-	2.0
283	-	2.0	-	2.0
521	-	1.9	-	1.9
374	-	0.6	1.1	1.7
375	-	0.6	1.1	1.7
616	-	0.5	0.9	1.5
617	-	0.5	0.9	1.5
463	-	1.4	-	1.4
464	-	1.4	-	1.4
562	-	0.7	0.6	1.4
563	-	0.7	0.6	1.4
544	-	-	0.9	0.9
545	-	-	0.9	0.9
546	-	-	0.9	0.9
547	-	-	0.9	0.9
548	-	-	0.9	0.9
549	-	-	0.9	0.9
638	-	-	0.9	0.9
639	-	-	0.9	0.9
643	-	-	0.9	0.9
42	-	0.5	-	0.5
43	-	0.5	-	0.5
458	-	0.2	0.2	0.5
556	0.5	-	-	0.5
557	0.5	-	-	0.5
558	0.5	-	-	0.5
559	0.5	-	-	0.5
560	0.5	-	-	0.5
444	-	-	0.4	0.4
446	-	-	0.4	0.4
63	-	0.4	-	0.4
64	-	0.4	-	0.4
179	-	0.4	-	0.4
180	-	0.4	-	0.4
447	-	0.1	0.2	0.3
448	-	0.1	0.2	0.3
51	-	0.2	-	0.2
52	-	0.2	-	0.2
53	-	0.2	-	0.2
550	0.2	-	-	0.2
551	0.2	-	-	0.2
552	0.2	-	-	0.2
553	0.2	-	-	0.2
554	0.2	-	-	0.2
457	-	-	0.2	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of crustaceans based on the 5 high-rate adult consumers is 13.9 kg y⁻¹

The observed 97.5th percentile rate based on 58 observations is 14.7 kg y⁻¹

Table 5. Adults' consumption rates of molluscs from the Sizewell aquatic survey area (kg y⁻¹)

Observation number	Pacific oyster	Whelk	Total
544	-	5.0	5.0
545	-	5.0	5.0
546	-	5.0	5.0
547	-	5.0	5.0
548	-	5.0	5.0
549	-	5.0	5.0
644	1.7	-	1.7
645	1.7	-	1.7
366	1.4	-	1.4
562	-	1.0	1.0
563	-	1.0	1.0
638	0.4	-	0.4
643	0.4	-	0.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of molluscs based on the 8 high-rate adult consumers is 4.2 kg y⁻¹

The observed 97.5th percentile rate based on 13 observations is 5.0 kg y⁻¹

Table 6. Adults' consumption rates of wildfowl from the Sizewell aquatic survey area (kg y⁻¹)

Observation number	Canada goose	Greylag goose	Mallard	Teal	Total
72	1.4	4.4	2.7	-	8.5
73	1.4	4.4	2.7	-	8.5
395	0.8	0.4	5.8	-	7.0
396	0.8	0.4	5.8	-	7.0
397	0.8	0.4	5.8	-	7.0
398	0.8	0.4	5.8	-	7.0
399	0.8	0.4	5.8	-	7.0
279	-	-	2.8	-	2.8
280	-	-	2.8	-	2.8
459	-	-	2.7	-	2.7
460	-	-	2.7	-	2.7
54	1.4	-	0.5	0.5	2.3
56	1.4	-	0.5	0.5	2.3
300	-	-	1.8	-	1.8
301	-	-	1.8	-	1.8
302	-	-	1.8	-	1.8
303	-	-	1.8	-	1.8
51	-	-	0.3	-	0.3
52	-	-	0.3	-	0.3
53	-	-	0.3	-	0.3
369	-	-	0.2	-	0.2
370	-	-	0.2	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wildfowl based on the 7 high-rate adult consumers is 7.5 kg y⁻¹

The observed 97.5th percentile rate based on 22 observations is 8.5 kg y⁻¹

Table 7. Adults' consumption rates of marine plants/algae from the Sizewell aquatic survey area (kg y⁻¹)

Observation number	Samphire	Sea beet	Sea purslane	Total
8	0.2	0.2	0.7	1.0
9	0.2	0.2	0.7	1.0
367	0.9	-	-	0.9
368	0.9	-	-	0.9

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of marine plants/algae based on the 4 high-rate adult consumers is 0.9 kg y⁻¹

The observed 97.5th percentile rate based on 4 observations is 1.0 kg y⁻¹

Table 8. Children's consumption rates of fish from the Sizewell aquatic survey area (kg y⁻¹)

10-year-old age group (6 - 15 years old)

Observation number	Age	Bass	Cod	Dover sole	Grey mullet	Herring	Mackerel	Sprat	Thornback ray	Whiting	Total
555	14	2.7	3.4	3.4	1.4	1.4	1.4	1.1	3.4	2.7	20.8
227	13	-	5.9	5.9	-	-	-	-	5.9	-	17.7
646	11	-	5.9	5.9	-	-	-	-	5.9	-	17.7
240	14	1.9	6.6	1.9	-	-	-	-	5.3	-	15.6
561	12	1.8	2.3	2.3	0.9	0.9	0.9	0.9	2.3	1.8	14.1
618	9	2.8	6.5	-	-	1.5	-	-	2.6	-	13.4
522	13	4.5	4.5	2.3	-	-	-	-	-	-	11.3
619	6	1.4	3.3	-	-	0.7	-	-	1.3	-	6.7
221	7	-	0.2	-	-	-	-	-	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of fish for the 10-year-old age group based upon the 7 high-rate consumers is 15.8 kg y⁻¹

The observed 97.5th percentile rate based on 9 observations is 20.2 kg y⁻¹

1-year-old age group (0 - 5 years old)

Observation number	Age	Bass	Cod	Dover sole	Grey mullet	Herring	Mackerel	Sprat	Thornback ray	Whiting	Total
201	4	-	-	0.2	-	-	-	-	-	-	0.2
202	2	-	-	0.2	-	-	-	-	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of fish for the 1-year-old age group based upon the 2 high-rate consumers is 0.2 kg y⁻¹

The observed 97.5th percentile rate based on 2 observations is 0.2 kg y⁻¹

Table 9. Children's consumption rates of crustaceans from the Sizewell aquatic survey area (kg y⁻¹)**10-year-old age group (6 - 15 years old)**

Observation number	Age	Brown shrimp	Brown crab	Common lobster	Total
522	13	-	1.9	-	1.9
618	9	-	0.3	0.5	0.7
561	12	0.5	-	-	0.5
619	6	-	0.1	0.2	0.4
449	13	-	0.1	0.2	0.3
450	11	-	0.1	0.2	0.3
555	14	0.2	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of crustaceans for the 10-year-old age group based upon the 2 high-rate consumers is 1.3 kg y⁻¹

The observed 97.5th percentile rate based on 7 observations is 1.8 kg y⁻¹

Table 10. Children's consumption rates of marine plants/algae from the Sizewell aquatic survey area (kg y⁻¹)**10-year-old age group (6 - 15 years old)**

Observation number	Age	Samphire	Sea beet	Sea purslane	Total
10	9	0.1	0.1	0.3	0.5
11	7	0.1	0.1	0.3	0.5

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of marine plants/algae for the 10-year-old age group based upon the 2 high-rate consumers is 0.5 kg y⁻¹

The observed 97.5th percentile rate based on 2 observations is 0.5 kg y⁻¹

Table 11. Adults' intertidal occupancy rates in the Sizewell aquatic survey area (h y⁻¹)

Observation number	Location	Activity	Mud	Mud and stones	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
314	Orford Ness	Nature conservation duties	411	-	411	-	-	823	-
13	River Alde (at Slaughden)	Fixing moorings	182	-	-	-	-	-	-
14	River Alde (at Slaughden)	Fixing moorings	182	-	-	-	-	-	-
15	River Alde (at Slaughden)	Fixing moorings	182	-	-	-	-	-	-
16	River Alde (at Slaughden)	Fixing moorings	182	-	-	-	-	-	-
612	River Alde (at Slaughden)	Fixing moorings	152	-	-	-	-	-	-
613	River Alde (at Slaughden)	Fixing moorings	152	-	-	-	-	-	-
534	Southwold harbour	Boat maintenance	40	-	-	-	-	-	-
535	Southwold harbour	Boat maintenance	40	-	-	-	-	-	-
536	Southwold harbour	Boat maintenance	40	-	-	-	-	-	-
537	Southwold harbour	Boat maintenance	40	-	-	-	-	-	-
644	River Blyth (near Blythburgh)	Oyster farming	8	-	-	-	-	-	-
	Dunwich	Dog walking	-	-	-	-	150	-	-
525	Southwold harbour and River Blyth	Boat maintenance and lifeboat duties	8	-	-	-	-	-	-
526	Southwold harbour	Boat maintenance	5	-	-	-	-	-	-
527	Southwold harbour	Boat maintenance	5	-	-	-	-	-	-
528	Southwold harbour	Boat maintenance	5	-	-	-	-	-	-
529	Southwold harbour	Boat maintenance	5	-	-	-	-	-	-
530	Southwold harbour	Boat maintenance	5	-	-	-	-	-	-
531	River Blyth	Lifeboat duties	3	-	-	-	-	-	-
532	River Blyth	Lifeboat duties	3	-	-	-	-	-	-
533	River Blyth	Lifeboat duties	3	-	-	-	-	-	-
311	Orford	Boat maintenance	-	70	-	-	-	-	-
312	Orford	Boat maintenance	-	70	-	-	-	-	-
313	Orford	Boat maintenance	-	70	-	-	-	-	-
631	River Alde (at Slaughden)	Angling	-	-	72	-	-	-	-
632	River Alde (at Slaughden)	Angling	-	-	72	-	-	-	-
495	Walberswick	Crabbing	-	-	32	-	-	-	-
		Playing	-	-	-	18	-	-	-
496	Walberswick	Crabbing	-	-	32	-	-	-	-
		Playing	-	-	-	12	-	-	-
497	Walberswick	Crabbing	-	-	32	-	-	-	-
		Playing	-	-	-	12	-	-	-
261	River Alde (at Slaughden)	Sitting on the salt marsh	-	-	24	-	-	-	-
262	River Alde (at Slaughden)	Sitting on the salt marsh	-	-	24	-	-	-	-
263	River Alde (at Slaughden)	Sitting on the salt marsh	-	-	24	-	-	-	-
264	River Alde (at Slaughden)	Sitting on the salt marsh	-	-	24	-	-	-	-
451	River Blyth (near bailey bridge)	Angling	-	-	24	-	-	-	-
452	River Blyth (near bailey bridge)	Angling	-	-	24	-	-	-	-
453	River Blyth (near bailey bridge)	Angling	-	-	24	-	-	-	-
501	Walberswick	Crabbing	-	-	18	-	-	-	-
502	Walberswick	Crabbing	-	-	18	-	-	-	-

Table 11. Adults' intertidal occupancy rates in the Sizewell aquatic survey area (h y⁻¹)

Observation number	Location	Activity	Mud	Mud and stones	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
260	River Alde (at Slaughden)	Angling	-	-	12	-	-	-	-
	Slaughden	Angling	-	-	-	-	-	48	-
459	River Alde	Wildfowling	-	-	10	-	-	-	-
	Sizewell	Maintenance of boat and fishing gear	-	-	-	-	60	-	-
506	Walberswick	Crabbing	-	-	9	-	-	-	-
507	Walberswick	Crabbing	-	-	9	-	-	-	-
8	River Alde (at Slaughden)	Collecting marine plants	-	-	6	-	-	-	-
9	River Alde (at Slaughden)	Collecting marine plants	-	-	6	-	-	-	-
367	Butley River	Collecting marine plants	-	-	5	-	-	-	-
487	Walberswick	Playing	-	-	-	90	-	-	-
488	Walberswick	Playing	-	-	-	90	-	-	-
481	Walberswick	Walking and playing	-	-	-	81	-	-	-
482	Walberswick	Walking and playing	-	-	-	81	-	-	-
491	Walberswick	Playing	-	-	-	70	-	-	-
492	Walberswick	Playing	-	-	-	70	-	-	-
485	Walberswick	Walking and sitting on the beach	-	-	-	9	-	-	-
	Aldeburgh	Walking and sitting on the beach	-	-	-	-	-	12	-
486	Walberswick	Walking and sitting on the beach	-	-	-	9	-	-	-
	Aldeburgh	Walking and sitting on the beach	-	-	-	-	-	12	-
402	Sizewell	Dog walking	-	-	-	-	525	-	-
375	Sizewell	Dog walking	-	-	-	-	483	-	-
377	Sizewell	Dog walking	-	-	-	-	375	-	-
87	Sizewell	Angling	-	-	-	-	234	-	-
474	Dunwich	Dog walking	-	-	-	-	233	-	-
40	Sizewell	Dog walking	-	-	-	-	210	-	-
41	Sizewell	Dog walking	-	-	-	-	210	-	-
475	Dunwich	Angling	-	-	-	-	200	-	-
	Orford Ness	Angling	-	-	-	-	-	600	-
77	Sizewell	Angling	-	-	-	-	200	-	-
	Aldeburgh and Thorpeness	Angling	-	-	-	-	-	200	-
171	Sizewell and Thorpeness	Walking and supervising youth group	-	-	-	-	178	-	-
	Dunwich	Walking	-	-	-	-	-	-	-
455	Sizewell	Dog walking	-	-	-	-	175	-	-
457	Sizewell	Walking	-	-	-	-	168	-	-
458	Sizewell	Walking	-	-	-	-	168	-	-
595	Sizewell	Playing	-	-	-	-	162	-	-
596	Sizewell	Playing	-	-	-	-	162	-	-
586	Sizewell	Dog walking	-	-	-	-	131	-	-
587	Sizewell	Dog walking	-	-	-	-	131	-	-
478	Southwold	Playing	-	-	-	-	105	-	-
106	Sizewell,Thorpeness and Aldeburgh	Walking	-	-	-	-	100	-	-
107	Sizewell,Thorpeness and Aldeburgh	Walking	-	-	-	-	100	-	-
203	Dunwich	Angling	-	-	-	-	100	-	-

Table 11. Adults' intertidal occupancy rates in the Sizewell aquatic survey area (h y⁻¹)

Observation number	Location	Activity	Mud	Mud and stones	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
204	Dunwich	Lying on the beach	-	-	-	-	100	-	-
172	Sizewell and Thorpeness	Walking and supervising youth group	-	-	-	-	89	-	-
	Dunwich	Walking	-	-	-	-		-	-
165	Southwold, Dunwich and Aldeburgh	Angling	-	-	-	-	84	-	-
166	Dunwich	Playing	-	-	-	-	84	-	-
155	Dunwich	Angling	-	-	-	-	77	-	-
156	Dunwich	Sitting on a chair	-	-	-	-	77	-	-
168	Walberswick, Dunwich and Aldeburgh	Walking and sunbathing	-	-	-	-	71	-	-
169	Walberswick, Dunwich and Aldeburgh	Walking and sunbathing	-	-	-	-	70	-	-
175	Dunwich, Dunwich Heath and Sizewell	Walking, sunbathing and birdwatching	-	-	-	-	62	-	-
176	Dunwich, Dunwich Heath and Sizewell	Walking, sunbathing and birdwatching	-	-	-	-	62	-	-
461	Sizewell	Maintenance of boat and fishing gear	-	-	-	-	60	-	-
601	Sizewell	Dog walking	-	-	-	-	60	-	-
154	Dunwich and Aldeburgh	Angling	-	-	-	-	54	-	-
122	Sizewell	Walking	-	-	-	-	50	-	-
123	Sizewell	Walking	-	-	-	-	50	-	-
469	Dunwich	Angling	-	-	-	-	48	-	-
470	Dunwich	Angling	-	-	-	-	48	-	-
477	Southwold	Playing	-	-	-	-	40	-	-
133	Sizewell, Thorpeness and Aldeburgh	Angling and walking	-	-	-	-	39	-	-
42	Sizewell	Sunbathing	-	-	-	-	36	-	-
43	Sizewell	Sunbathing	-	-	-	-	36	-	-
465	Dunwich	Walking and playing	-	-	-	-	36	-	-
466	Dunwich	Walking and playing	-	-	-	-	36	-	-
153	Dunwich Heath	Sunbathing	-	-	-	-	28	-	-
588	Sizewell	Sunbathing	-	-	-	-	28	-	-
589	Sizewell	Sunbathing	-	-	-	-	28	-	-
199	Dunwich	Walking and playing	-	-	-	-	25	-	-
200	Dunwich	Walking and playing	-	-	-	-	25	-	-
471	Dunwich	Angling	-	-	-	-	24	-	-
177	Dunwich	Dog walking	-	-	-	-	23	-	-
127	Sizewell, Thorpeness and Aldeburgh	Walking	-	-	-	-	22	-	-
128	Sizewell, Thorpeness and Aldeburgh	Walking	-	-	-	-	22	-	-
136	Dunwich Heath	Sitting on the beach	-	-	-	-	21	-	-
178	Dunwich	Dog walking	-	-	-	-	21	-	-
213	Dunwich Heath	Walking	-	-	-	-	19	-	-
214	Dunwich Heath	Walking	-	-	-	-	19	-	-
138	Dunwich Heath	Walking and sunbathing	-	-	-	-	19	-	-
135	Dunwich Heath	Sunbathing	-	-	-	-	17	-	-
152	Dunwich Heath and Sizewell	Walking and sunbathing	-	-	-	-	13	-	-
245	Slaughden	Sitting on the beach	-	-	-	-	13	-	-
134	Sizewell and Aldeburgh	Walking	-	-	-	-	13	-	-
538	Southwold	Angling	-	-	-	-	12	-	-

Table 11. Adults' intertidal occupancy rates in the Sizewell aquatic survey area (h y⁻¹)

Observation number	Location	Activity	Mud	Mud and stones	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
539	Southwold	Angling	-	-	-	-	12	-	-
381	Sizewell	Walking	-	-	-	-	11	-	-
382	Sizewell	Walking	-	-	-	-	11	-	-
157	Dunwich	Playing	-	-	-	-	10	-	-
276	Slaughden	Sitting on the beach	-	-	-	-	10	-	-
277	Slaughden	Sitting on the beach	-	-	-	-	10	-	-
599	Sizewell	Sunbathing	-	-	-	-	10	-	-
600	Sizewell	Sunbathing	-	-	-	-	10	-	-
158	Dunwich	Playing	-	-	-	-	10	-	-
139	Dunwich Heath	Sunbathing	-	-	-	-	9	-	-
140	Dunwich Heath	Sunbathing	-	-	-	-	9	-	-
463	Sizewell	Angling	-	-	-	-	9	-	-
590	Sizewell	Dog walking	-	-	-	-	9	-	-
472	Dunwich	Dog walking	-	-	-	-	8	-	-
473	Dunwich	Dog walking	-	-	-	-	8	-	-
207	Dunwich Heath	Sitting on the beach	-	-	-	-	6	-	-
208	Dunwich Heath	Sitting on the beach	-	-	-	-	6	-	-
137	Dunwich Heath	Walking and sunbathing	-	-	-	-	6	-	-
279	Dunwich Heath	Walking	-	-	-	-	5	-	-
280	Dunwich Heath	Walking	-	-	-	-	5	-	-
591	Sizewell	Playing	-	-	-	-	5	-	-
215	Walberswick and Dunwich	Walking	-	-	-	-	5	-	-
216	Walberswick and Dunwich	Walking	-	-	-	-	5	-	-
592	Sizewell	Playing	-	-	-	-	4	-	-
209	Dunwich and Thorpeness	Sitting on the beach	-	-	-	-	3	-	-
210	Dunwich and Thorpeness	Sitting on the beach	-	-	-	-	3	-	-
145	Dunwich Heath	Sunbathing	-	-	-	-	3	-	-
146	Dunwich Heath	Sunbathing	-	-	-	-	3	-	-
160	Dunwich	Sunbathing	-	-	-	-	3	-	-
147	Dunwich Heath	Sunbathing	-	-	-	-	2	-	-
149	Dunwich Heath	Sunbathing	-	-	-	-	1	-	-
205	Dunwich	Dog walking	-	-	-	-	1	-	-
206	Dunwich	Dog walking	-	-	-	-	1	-	-
12	Thorpeness and Orford Ness	Angling	-	-	-	-	-	936	-
633	Thorpeness	Walking	-	-	-	-	-	900	-
634	Thorpeness	Walking	-	-	-	-	-	900	-
271	Sizewell to Orford Ness	Angling	-	-	-	-	-	684	-
237	Slaughden and Orford Ness	Angling	-	-	-	-	-	504	-
239	Thorpeness and Slaughden	Angling	-	-	-	-	-	437	-
246	Slaughden	Angling	-	-	-	-	-	400	-
275	Slaughden and Orford Ness	Angling	-	-	-	-	-	192	-
334	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
335	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-

Table 11. Adults' intertidal occupancy rates in the Sizewell aquatic survey area (h y⁻¹)

Observation number	Location	Activity	Mud	Mud and stones	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
336	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
337	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
338	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
339	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
340	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
341	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
342	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
343	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
344	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
345	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
346	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
347	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
348	Orford Ness	Angling and collecting litter	-	-	-	-	-	192	-
39	Orford Ness	Angling	-	-	-	-	-	180	-
46	Aldeburgh	Angling	-	-	-	-	-	112	-
47	Aldeburgh	Angling	-	-	-	-	-	112	-
48	Aldeburgh	Sunbathing	-	-	-	-	-	112	-
99	Thorpeness and Aldeburgh	Angling	-	-	-	-	-	100	-
235	Aldeburgh and Orford Ness	Angling	-	-	-	-	-	78	-
395	Thorpeness	Walking	-	-	-	-	-	78	-
254	North Aldeburgh	Sitting on beach	-	-	-	-	-	68	-
255	North Aldeburgh	Sitting on beach	-	-	-	-	-	68	-
3	Aldeburgh	Sunbathing	-	-	-	-	-	64	-
620	Slaughden	Angling	-	-	-	-	-	60	-
256	North Aldeburgh	Kite flying	-	-	-	-	-	34	-
257	North Aldeburgh	Kite flying	-	-	-	-	-	34	-
65	Aldeburgh	Angling	-	-	-	-	-	30	-
249	North Aldeburgh	Sunbathing	-	-	-	-	-	30	-
250	North Aldeburgh	Sunbathing	-	-	-	-	-	30	-
242	Slaughden	Angling	-	-	-	-	-	24	-
578	Aldeburgh	Playing	-	-	-	-	-	16	-
582	Aldeburgh	Playing	-	-	-	-	-	16	-
247	North Aldeburgh	Sunbathing	-	-	-	-	-	14	-
248	North Aldeburgh	Sunbathing	-	-	-	-	-	14	-
116	Aldeburgh	Coastguard duties	-	-	-	-	-	12	-
315	Orford Ness	Walking	-	-	-	-	-	10	-
316	Orford Ness	Walking	-	-	-	-	-	10	-
317	Orford Ness	Walking	-	-	-	-	-	10	-
318	Orford Ness	Collecting litter	-	-	-	-	-	6	-
319	Orford Ness	Collecting litter	-	-	-	-	-	6	-
320	Orford Ness	Collecting litter	-	-	-	-	-	6	-
321	Orford Ness	Collecting litter	-	-	-	-	-	6	-
322	Orford Ness	Collecting litter	-	-	-	-	-	6	-

Table 11. Adults' intertidal occupancy rates in the Sizewell aquatic survey area (h y⁻¹)

Observation number	Location	Activity	Mud	Mud and stones	Salt marsh	Sand	Sand and stones	Stones	Boat on mud
323	Orford Ness	Collecting litter	-	-	-	-	-	6	-
324	Orford Ness	Collecting litter	-	-	-	-	-	6	-
325	Orford Ness	Collecting litter	-	-	-	-	-	6	-
326	Orford Ness	Collecting litter	-	-	-	-	-	6	-
327	Orford Ness	Collecting litter	-	-	-	-	-	6	-
328	Orford Ness	Collecting litter	-	-	-	-	-	6	-
329	Orford Ness	Collecting litter	-	-	-	-	-	6	-
330	Orford Ness	Collecting litter	-	-	-	-	-	6	-
331	Orford Ness	Collecting litter	-	-	-	-	-	6	-
332	Orford Ness	Collecting litter	-	-	-	-	-	6	-
333	Orford Ness	Collecting litter	-	-	-	-	-	6	-
268	Thorpeness	Picnicking	-	-	-	-	-	4	-
269	Thorpeness	Picnicking	-	-	-	-	-	4	-
1	Aldeburgh	Sunbathing	-	-	-	-	-	2	-
2	Aldeburgh	Sunbathing	-	-	-	-	-	2	-
18	River Alde (at Slaughden)	Living on a boat	-	-	-	-	-	-	5901

Notes

Emboldened observations are the high-rate individuals

The mean intertidal occupancy rate over mud based on 7 high-rate adult observations is 206 h y⁻¹

The observed 97.5th percentile rate based on 21 observations for mud is 297 h y⁻¹

The mean intertidal occupancy rate over mud and stones based on 3 high-rate adult observations is 70 h y⁻¹

The observed 97.5th percentile rate based on 3 observations for mud and stones is 70 h y⁻¹

The intertidal occupancy rate over salt marsh based on 1 high-rate adult observation is 411 h y⁻¹

The observed 97.5th percentile rate based on 22 observations for salt marsh is 233 h y⁻¹

The mean intertidal occupancy rate over sand based on 6 high-rate adult observations is 80 h y⁻¹

The observed 97.5th percentile rate based on 11 observations for sand is 90 h y⁻¹

The mean intertidal occupancy rate over sand and stones based on 11 high-rate adult observations is 275 h y⁻¹

The observed 97.5th percentile rate based on 98 observations for sand and stones is 315 h y⁻¹

The mean intertidal occupancy rate over stones based on 9 high-rate adult observations is 687 h y⁻¹

The observed 97.5th percentile rate based on 74 observations for stones is 900 h y⁻¹

The intertidal occupancy rate over boat on mud based on the only adult observation is 5901 h y⁻¹

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

Table 12. Children's intertidal occupancy rates in the Sizewell aquatic survey area (h y⁻¹)

10-year-old age group (6 - 15 years old)

Observation number	Age	Location	Activity	Salt marsh	Sand	Sand and stones	Stones
498	13	Walberswick	Crabbing	32	-	-	-
			Playing	-	12	-	-
499	15	Walberswick	Crabbing	32	-	-	-
			Playing	-	12	-	-
500	14	Walberswick	Crabbing	32	-	-	-
			Playing	-	12	-	-
265	9	River Alde (at Slaughden)	Playing	24	-	-	-
266	7	River Alde (at Slaughden)	Playing	24	-	-	-
267	13	River Alde (at Slaughden)	Playing	24	-	-	-
503	7	Walberswick	Crabbing	18	-	-	-
504	6	Walberswick	Crabbing	18	-	-	-
508	12	Walberswick	Crabbing	9	-	-	-
509	9	Walberswick	Crabbing	9	-	-	-
489	7	Walberswick	Playing	-	90	-	-
493	14	Walberswick	Playing	-	70	-	-
494	9	Walberswick	Playing	-	70	-	-
483	11	Walberswick	Walking and playing	-	69	-	-
484	7	Walberswick	Walking and playing	-	69	-	-
479	9	Southwold	Playing	-	-	98	-
480	7	Southwold	Playing	-	-	98	-
167	7	Dunwich	Playing	-	-	84	-
170	11	Walberswick, Dunwich and Aldeburgh	Walking and sunbathing	-	-	72	-
597	15	Sizewell	Playing	-	-	62	-
598	13	Sizewell	Playing	-	-	62	-
124	15	Sizewell	Walking	-	-	50	-
173	6	Dunwich and Thorpeness	Walking and playing	-	-	39	-
174	9	Dunwich and Thorpeness	Walking and playing	-	-	39	-
44	9	Sizewell	Playing	-	-	36	-
45	12	Sizewell	Playing	-	-	36	-
467	8	Dunwich	Walking and playing	-	-	36	-
278	10	Slaughden	Playing	-	-	10	-
141	10	Dunwich Heath	Playing	-	-	5	-
142	11	Dunwich Heath	Playing	-	-	5	-

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

10-year-old age group (6 - 15 years old)

Observation number	Age	Location	Activity	Salt marsh	Sand	Sand and stones	Stones
143	8	Dunwich Heath	Playing	-	-	5	-
144	7	Dunwich Heath	Playing	-	-	5	-
211	7	Dunwich and Thorpeness	Playing	-	-	3	-
161	12	Dunwich	Playing	-	-	3	-
162	10	Dunwich	Playing	-	-	3	-
163	9	Dunwich	Playing	-	-	3	-
148	14	Dunwich Heath	Sunbathing	-	-	2	-
151	8	Dunwich Heath	Playing	-	-	1	-
240	14	Slaughden and Thorpeness	Angling	-	-	-	125
251	12	North Aldeburgh	Playing	-	-	-	30
252	15	North Aldeburgh	Playing	-	-	-	30
253	9	North Aldeburgh	Playing	-	-	-	30
579	8	Aldeburgh	Playing	-	-	-	15
580	8	Aldeburgh	Playing	-	-	-	15
581	11	Aldeburgh	Playing	-	-	-	15
583	7	Aldeburgh	Playing	-	-	-	15

Notes

The mean intertidal occupancy rate over salt marsh for the 10-year-old age group based on 8 observations is 26 h y^{-1}

The observed 97.5th percentile rate based on 10 observations for salt marsh is 32 h y^{-1}

The mean intertidal occupancy rate over sand for the 10-year-old age group based on 5 high-rate observations is 74 h y^{-1}

The observed 97.5th percentile rate based on 8 observations for sand is 87 h y^{-1}

The mean intertidal occupancy rate over sand and stones for the 10-year-old age group based on 12 high-rate observations is 59 h y^{-1}

The observed 97.5th percentile rate based on 23 observations for sand and stones is 98 h y^{-1}

The mean intertidal occupancy rate over stones for the 10-year-old age group based on the only high-rate observations is 125 h y^{-1}

The observed 97.5th percentile rate based on 8 observations for stones is 108 h y^{-1}

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

1-year-old age group (0 - 5 years old)

Observation number	Age	Location	Activity	Salt marsh	Sand	Sand and stones	Stones
505	4	Walberswick	Crabbing	18	-	-	-
490	2	Walberswick	Playing	-	90	-	-
468	5	Dunwich	Walking and playing	-	-	36	-
201	4	Dunwich	Walking and playing	-	-	25	-
202	2	Dunwich	Walking and playing	-	-	25	-
159	4	Dunwich	Playing	-	-	12	-
593	0.7	Sizewell	Playing	-	-	5	-
212	5	Dunwich and Thorpeness	Playing	-	-	3	-
164	4	Dunwich	Playing	-	-	3	-
150	5	Dunwich Heath	Playing	-	-	1	-
4	2	Aldeburgh	Playing	-	-	-	64
258	3	North Aldeburgh	Kite flying	-	-	-	34
259	5	North Aldeburgh	Kite flying	-	-	-	34
584	3	Aldeburgh	Playing	-	-	-	15
270	2	Thorpeness	Playing	-	-	-	4

Notes

The intertidal occupancy rate over salt marsh for the 1-year-old age group based on the only observation is 18 h y^{-1}

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

The intertidal occupancy rate over sand for the 1-year-old age group based on the only observation is 90 h y^{-1}

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

The mean intertidal occupancy rate over sand and stones for the 1-year-old age group based on 4 high-rate observations is 24 h y^{-1}

The observed 97.5th percentile rate based on 8 observations for sand and stones is 34 h y^{-1}

The mean intertidal occupancy rate over stones for the 1-year-old age group based on 3 high-rate observations is 44 h y^{-1}

The observed 97.5th percentile rate based on 5 observations for stones is 61 h y^{-1}

Table 13. Gamma dose rate measurements over intertidal substrates in the Sizewell aquatic survey area ($\mu\text{Gy h}^{-1}$)

Location	NGR	Substrate	Gamma dose rate at 1 metre^a
Southwold beach	TM 506 748	Sand and stones	0.043
River Blyth (near bailey bridge)	TM 493 758	Salt marsh	0.071
Southwold harbour	TM 499 752	Mud	0.069
Walberswick beach	TM 503 747	Sand	0.049
Walberswick creek	TM 500 746	Salt marsh	0.063
Dunwich beach	TM 479 706	Sand and stones	0.049
Sizewell beach	TM 476 633	Sand and stones	0.044
Sizewell beach	TM 476 637	Sand and stones	0.044
North Aldeburgh beach	TM 467 576	Stones	0.044
Aldeburgh beach	TM 464 559	Stones	0.044
River Alde (at Slaughden)	TM 463 555	Mud	0.060
River Alde (at Slaughden)	TM 461 547	Salt marsh	0.060
On board a boat resting on mud on the River Alde at Slaughden	TM 463 555	Fibreglass boat on mud	0.052
Close to a boat resting on mud on the River Alde at Slaughden	TM 463 555	Mud	0.046
Slaughden beach	TM 464 554	Sand and stones	0.046
River Ore (near Orford Quay)	TM 425 495	Mud and stones	0.047

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 Sizewell aquatic survey area (h y^{-1})

Observation number	Location	Activity	Fishing gear	Sediment
573	Southwold to North Weir Point	Handling nets, pots and long-lines	1920	-
574	Southwold to North Weir Point	Handling nets, pots and long-lines	1920	-
564	Southwold to North Weir Point	Handling nets, pots and long-lines	1250	-
459	Off Sizewell	Handling nets, pots and long-lines	1228	-
	Marshes on River Alde	Wildfowling	-	10
461	Off Sizewell	Handling nets, pots and long-lines	1228	-
49	Off Aldeburgh	Handling pots and long-lines	1092	-
570	Southwold to North Weir Point	Handling nets, pots and long-lines	960	-
572	Southwold to North Weir Point	Handling nets, pots and long-lines	960	-
575	Southwold to North Weir Point	Handling nets, pots and long-lines	960	-
616	Off Aldeburgh	Handling nets and long-lines	900	-
352	Sizewell to Orford Ness	Handling nets, pots and long-lines	864	-
354	Sizewell to Orford Ness	Handling nets, pots and long-lines	864	-
544	Southwold to North Weir Point	Handling nets and long-lines	800	-
547	Southwold to North Weir Point	Handling nets and long-lines	800	-
228	Off Sizewell	Handling nets and pots	480	-
229	Off Sizewell	Handling nets and pots	480	-
562	Southwold to North Weir Point	Handling nets and long-lines	400	-
5	Dunwich to North Weir Point	Handling nets and long-lines	360	-
6	Dunwich to North Weir Point	Handling nets and long-lines	360	-
542	Southwold to Aldeburgh	Handling nets and long-lines	350	-
638	Off Orford Ness	Handling nets, pots and long-lines	299	-
639	Off Orford Ness	Handling nets, pots and long-lines	299	-
640	Off Orford Ness	Handling nets, pots and long-lines	299	-
641	Off Orford Ness	Handling nets, pots and long-lines	299	-
196	Southwold to Thorpeness	Handling nets	238	-
642	Butley River	Handling oyster dredge	212	-
7	Dunwich to North Weir Point	Handling nets and long-lines	120	-
550	Off Southwold	Handling nets	100	-
556	Off Southwold	Handling nets	100	-
197	Southwold to Thorpeness	Handling nets	56	-
566	Off Southwold	Handling nets	40	-
495	Walberswick	Handling crab lines	32	-
496	Walberswick	Handling crab lines	32	-
497	Walberswick	Handling crab lines	32	-

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

Observation number	Location	Activity	Fishing gear	Sediment
217	Dunwich to Thorpeness	Handling nets and long-lines	18	-
218	Dunwich to Thorpeness	Handling nets and long-lines	18	-
501	Walberswick	Handling crab lines	18	-
502	Walberswick	Handling crab lines	18	-
506	Walberswick	Handling crab lines	9	-
507	Walberswick	Handling crab lines	9	-
13	River Alde (at Slaughden)	Fixing moorings	-	182
14	River Alde (at Slaughden)	Fixing moorings	-	182
15	River Alde (at Slaughden)	Fixing moorings	-	182
16	River Alde (at Slaughden)	Fixing moorings	-	182
612	River Alde (at Slaughden)	Fixing moorings	-	152
613	River Alde (at Slaughden)	Fixing moorings	-	152
644	River Blyth	Collecting oysters by hand	-	8

Notes

Emboldened observations are the high-rate individuals

The mean fishing gear handling rate based on 14 high-rate adult observations is 1125 h y^{-1}

The observed 97.5th percentile rate based on 40 observations for fishing gear is 1920 h y^{-1}

The mean sediment handling rate based on 6 high-rate adult observations is 172 h y^{-1}

The observed 97.5th percentile rate based on 8 observations for sediment is 182 h y^{-1}

Table 15. Children's handling rates of fishing gear in the Sizewell aquatic survey area (h y^{-1})

10-year-old age group (6 - 15 years old)

Observation number	Age	Location	Activity	Fishing gear
498	13	Walberswick	Handling crab lines	32
499	15	Walberswick	Handling crab lines	32
500	14	Walberswick	Handling crab lines	32
503	7	Walberswick	Handling crab lines	18
504	6	Walberswick	Handling crab lines	18
508	12	Walberswick	Handling crab lines	9
509	9	Walberswick	Handling crab lines	9

Notes

Emboldened observations are the high-rate individuals

The mean fishing gear handling rate for the 10-year-old age group based on 5 high-rate observations is 26 h y^{-1}

The observed 97.5th percentile rate based on 7 observations for fishing gear is 32 h y^{-1}

1-year-old age group (0 - 5 years old)

Observation number	Age	Location	Activity	Fishing gear
505	4	Walberswick	Handling crab lines	18

Notes

Emboldened observations are the high-rate individuals

The fishing gear handling rate for the 1-year-old age group based on the only observation is 18 h y^{-1}

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

Table 16. Adults' occupancy rates in and on water in the Sizewell aquatic survey area (h y⁻¹)

Observation number	Location	Activity	In water	On water
513	Southwold to Aldeburgh	Windsurfing	144	-
	Southwold to Aldeburgh and the River Blyth and River Alde	Canoeing	-	150
280	River Alde	Wake boarding	80	-
		Sailing	-	80
272	Slaughden	Swimming	38	-
491	Walberswick	Swimming	35	-
492	Walberswick	Swimming	35	-
232	Sizewell	Swimming	32	-
233	Sizewell	Swimming	32	-
585	River Alde	Windsurfing	30	-
364	Butley River and River Ore	Swimming	27	-
	River Alde and River Ore	Sailing	-	108
135	Dunwich Heath	Swimming	25	-
273	Slaughden	Swimming and kayaking	25	-
274	Slaughden	Swimming and kayaking	25	-
152	Dunwich Heath and Sizewell	Swimming	21	-
137	Dunwich Heath	Swimming	15	-
244	River Alde	Windsurfing	14	-
481	Walberswick	Swimming	12	-
482	Walberswick	Swimming	12	-
458	Sizewell	Swimming	10	-
487	Walberswick	Swimming	10	-
488	Walberswick	Swimming	10	-
455	Sizewell	Swimming	8	-
192	Sizewell	Swimming	6	-
193	Sizewell	Swimming	6	-
496	Walberswick	Swimming	6	-
497	Walberswick	Swimming	6	-
261	River Alde (at Slaughden)	Swimming	5	-
262	River Alde (at Slaughden)	Swimming	5	-
263	River Alde (at Slaughden)	Swimming	5	-
264	River Alde (at Slaughden)	Swimming	5	-
457	Sizewell	Swimming	5	-
477	Southwold	Swimming	5	-
249	North Aldeburgh	Swimming	3	-

Table 16. Adults' occupancy rates in and on water in the Sizewell aquatic survey area (h y⁻¹)

Observation number	Location	Activity	In water	On water
157	Dunwich	Swimming	2	-
		Paddling	-	1
158	Dunwich	Swimming	2	-
		Paddling	-	1
138	Dunwich Heath	Swimming	2	-
177	Dunwich	Swimming	2	-
366	Butley River	Swimming	2	-
169	Walberswick, Dunwich and Aldeburgh	Swimming	2	-
376	Sizewell	Swimming	2	-
168	Walberswick, Dunwich and Aldeburgh	Swimming	1	-
175	Dunwich	Swimming	1	-
		Paddling	-	1
176	Dunwich	Swimming	1	-
		Paddling	-	1
213	Dunwich Heath	Swimming	1	-
		Paddling	-	1
214	Dunwich Heath	Swimming	1	-
		Paddling	-	1
147	Dunwich Heath	Swimming	1	-
149	Dunwich Heath	Swimming	1	-
171	Dunwich	Swimming	1	-
172	Dunwich	Swimming	1	-
592	Sizewell	Swimming	1	-
576	Southwold harbour	Living on a boat	-	3864
577	Southwold harbour	Living on a boat	-	3864
573	Southwold to North Weir Point	Netting, potting and long-lining	-	2400
574	Southwold to North Weir Point	Netting, potting and long-lining	-	2400
444	River Alde, River Ore and off Orford Ness	Charter boat skipper	-	1900
564	Southwold to North Weir Point	Netting, potting and long-lining	-	1750
562	Southwold to North Weir Point	Trawling, netting and long-lining	-	1600
544	Southwold to North Weir Point	Netting and long-lining	-	1575
547	Southwold to North Weir Point	Netting and long-lining	-	1575
352	Sizewell to Orford Ness	Netting, potting and long-lining	-	1548
354	Sizewell to Orford Ness	Netting, potting and long-lining	-	1548
616	Off Aldeburgh	Netting and long-lining	-	1500

Table 16. Adults' occupancy rates in and on water in the Sizewell aquatic survey area (h y⁻¹)

Observation number	Location	Activity	In water	On water
49	Off Aldeburgh	Potting and long-lining	-	1456
459	Off Sizewell	Netting, potting and long-lining	-	1360
461	Off Sizewell	Netting, potting and long-lining	-	1360
570	Southwold to North Weir Point	Netting, potting and long-lining	-	1200
572	Southwold to North Weir Point	Netting, potting and long-lining	-	1200
575	Southwold to North Weir Point	Netting, potting and long-lining	-	1200
196	Southwold to Thorpness	Trawling	-	1120
5	Dunwich to North Weir Point	Netting and long-lining	-	1080
6	Dunwich to North Weir Point	Netting and long-lining	-	1080
445	River Alde, River Ore and off Orford Ness	Charter boat crew	-	950
17	River Alde	Cruise boat crew	-	852
542	Southwold to Aldeburgh	Trawling, netting and long-lining	-	812
605	River Alde	Sailing	-	600
606	River Alde	Sailing	-	600
638	Off Orford Ness	Netting, potting and long-lining	-	595
639	Off Orford Ness	Netting, potting and long-lining	-	595
640	Off Orford Ness	Netting, potting and long-lining	-	595
641	Off Orford Ness	Netting, potting and long-lining	-	595
18	River Alde (at Slaughden)	Living on a boat	-	562
13	River Alde (at Slaughden)	Boat maintenance	-	482
14	River Alde (at Slaughden)	Boat maintenance	-	482
15	River Alde (at Slaughden)	Boat maintenance	-	482
16	River Alde (at Slaughden)	Boat maintenance	-	482
228	Off Sizewell	Netting and potting	-	480
229	Off Sizewell	Netting and potting	-	480
197	Southwold to Thorpness	Trawling	-	448
607	River Alde	Passenger ferry crew	-	440
608	River Alde	Passenger ferry crew	-	440
609	River Alde	Passenger ferry crew	-	440
610	River Alde	Passenger ferry crew	-	440
611	River Alde	Passenger ferry crew	-	440
510	Off Southwold and River Blyth	Sailing	-	390
511	Off Southwold and River Blyth	Sailing	-	390
349	River Ore	Passenger ferry crew	-	380
523	Off Southwold	Boat angling	-	375

Table 16. Adults' occupancy rates in and on water in the Sizewell aquatic survey area (h y⁻¹)

Observation number	Location	Activity	In water	On water
7	Dunwich to North Weir Point	Netting and long-lining	-	360
515	Southwold harbour	Passenger ferry crew	-	350
516	Southwold harbour	Passenger ferry crew	-	350
525	Off Southwold and River Blyth	Cruise boat skipper and lifeboat duties	-	290
19	Off Aldeburgh	Lifeboat duties	-	232
20	Off Aldeburgh	Lifeboat duties	-	232
21	Off Aldeburgh	Lifeboat duties	-	232
22	Off Aldeburgh	Lifeboat duties	-	232
23	Off Aldeburgh	Lifeboat duties	-	232
24	Off Aldeburgh	Lifeboat duties	-	232
25	Off Aldeburgh	Lifeboat duties	-	232
26	Off Aldeburgh	Lifeboat duties	-	232
27	Off Aldeburgh	Lifeboat duties	-	232
28	Off Aldeburgh	Lifeboat duties	-	232
29	Off Aldeburgh	Lifeboat duties	-	232
30	Off Aldeburgh	Lifeboat duties	-	232
31	Off Aldeburgh	Lifeboat duties	-	232
32	Off Aldeburgh	Lifeboat duties	-	232
33	Off Aldeburgh	Lifeboat duties	-	232
34	Off Aldeburgh	Lifeboat duties	-	232
35	Off Aldeburgh	Lifeboat duties	-	232
36	Off Aldeburgh	Lifeboat duties	-	232
37	Off Aldeburgh	Lifeboat duties	-	232
38	Off Aldeburgh	Lifeboat duties	-	232
306	River Alde and River Ore	Sailing	-	216
307	River Alde and River Ore	Sailing	-	216
308	River Alde and River Ore	Sailing	-	216
309	River Alde and River Ore	Sailing	-	216
310	River Alde and River Ore	Sailing	-	216
642	Butley River	Oyster farming	-	212
526	Off Southwold and River Blyth	Cruise boat skipper	-	200
550	Off Southwold	Trawling and netting	-	180
556	Off Southwold	Trawling and netting	-	180
514	Southwold to Aldeburgh and the River Blyth and River Alde	Canoeing	-	150
512	Off Southwold and River Blyth	Sailing	-	144

Table 16. Adults' occupancy rates in and on water in the Sizewell aquatic survey area (h y⁻¹)

Observation number	Location	Activity	In water	On water
517	Southwold harbour	Passenger ferry crew	-	140
518	Southwold harbour	Passenger ferry crew	-	140
519	Southwold harbour	Passenger ferry crew	-	140
350	River Alde and River Ore	Sailing	-	120
351	River Alde and River Ore	Sailing	-	120
540	Off Southwold and River Blyth	Sailing	-	120
541	Off Southwold and River Blyth	Sailing	-	120
304	Butley River	Passenger ferry crew	-	116
	River Alde and River Ore	Sailing and operating rescue boat	-	
365	River Alde and River Ore	Sailing	-	108
527	Off Southwold and River Blyth	Cruise boat crew	-	100
528	Off Southwold and River Blyth	Cruise boat crew	-	100
529	Off Southwold and River Blyth	Cruise boat crew	-	100
530	Off Southwold and River Blyth	Cruise boat crew	-	100
311	Orford and River Alde	Boat angling	-	96
312	Orford and River Alde	Boat angling	-	96
313	Orford and River Alde	Boat angling	-	96
531	Off Southwold and River Blyth	Lifeboat duties	-	90
532	Off Southwold and River Blyth	Lifeboat duties	-	90
533	Off Southwold and River Blyth	Lifeboat duties	-	90
566	Off Southwold	Trawling	-	88
279	River Alde	Sailing	-	80
524	Off Southwold	Boat angling	-	72
243	River Alde	Sailing	-	65
217	Dunwich to Thorpeness	Netting and long-lining	-	60
218	Dunwich to Thorpeness	Netting and long-lining	-	60
284	Off Sizewell	Boat angling	-	50
359	River Alde and River Ore	Sailing	-	42
360	River Alde and River Ore	Sailing	-	42
361	River Alde and River Ore	Sailing	-	42
362	River Alde and River Ore	Sailing	-	42
521	Off Southwold	Boat angling	-	36
612	River Alde	Fixing moorings	-	36
613	River Alde	Fixing moorings	-	36
355	River Alde and River Ore	Sailing	-	24

Table 16. Adults' occupancy rates in and on water in the Sizewell aquatic survey area (h y⁻¹)

Observation number	Location	Activity	In water	On water
356	River Alde and River Ore	Sailing	-	24
520	Off Southwold	Boat angling	-	24
644	River Blyth (near Blythburgh)	Oyster farming	-	16
178	Dunwich	Paddling	-	8
478	Southwold	Paddling	-	7
363	Butley River	Passenger ferry crew	-	6
3	Aldeburgh	Paddling	-	3
276	Slaughden	Paddling	-	2
277	Slaughden	Paddling	-	2
166	Dunwich	Paddling	-	1
199	Dunwich	Paddling	-	1
200	Dunwich	Paddling	-	1

Table 17. Children's occupancy rates in and on water in the Sizewell aquatic survey area (h y⁻¹)

10-year-old age group (6 - 15 years old)

Observation number	Age	Location	Activity	In water	On water
597	15	Sizewell	Swimming	100	-
598	13	Sizewell	Swimming	100	-
493	14	Walberswick	Swimming	35	-
494	9	Walberswick	Swimming	35	-
483	11	Walberswick	Swimming	24	-
484	7	Walberswick	Swimming	24	-
489	7	Walberswick	Swimming	10	-
498	13	Walberswick	Swimming	6	-
499	15	Walberswick	Swimming	6	-
500	14	Walberswick	Swimming	6	-
141	10	Dunwich Heath	Swimming	5	-
142	11	Dunwich Heath	Swimming	5	-
143	8	Dunwich Heath	Swimming	5	-
144	7	Dunwich Heath	Swimming	5	-
265	9	River Alde (at Slaughden)	Swimming	5	-
266	7	River Alde (at Slaughden)	Swimming	5	-
267	13	River Alde (at Slaughden)	Swimming	5	-
251	12	North Aldeburgh	Swimming	3	-
252	15	North Aldeburgh	Swimming	3	-
253	9	North Aldeburgh	Swimming	3	-
148	14	Dunwich Heath	Swimming	1	-
173	6	Dunwich	Swimming	1	-
174	9	Dunwich	Swimming	1	-
479	9	Southwold	Paddling	-	14
480	7	Southwold	Paddling	-	14
278	10	Southwold	Paddling	-	2
151	8	Dunwich Heath	Paddling	-	1
161	12	Dunwich	Paddling	-	1
162	10	Dunwich	Paddling	-	1
163	9	Dunwich	Paddling	-	1
167	7	Dunwich	Paddling	-	1
579	8	Aldeburgh	Paddling	-	1
580	8	Aldeburgh	Paddling	-	1
581	11	Aldeburgh	Paddling	-	1
583	7	Aldeburgh	Paddling	-	1

1-year-old age group (0 - 5 years old)

Observation number	Age	Location	Activity	In water	On water
357	5	River Alde and River Ore	Sailing	-	24
358	3	River Alde and River Ore	Sailing	-	24
490	2	Walberswick	Paddling	-	10
4	2	Aldeburgh	Paddling	-	3
259	5	North Aldeburgh	Paddling	-	2
150	5	Dunwich Heath	Paddling	-	1
159	4	Dunwich	Paddling	-	1
164	4	Dunwich	Paddling	-	1
201	4	Dunwich	Paddling	-	1
202	2	Dunwich	Paddling	-	1
584	3	Aldeburgh	Paddling	-	1

Table 18. Adults' consumption rates of green vegetables from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Artichoke	Asparagus	Broccoli	Brussels sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Gherkin	Herbs	Kale	Lettuce	Marrow	Rocket	Spinach	Total
85	-	13.2	11.6	11.8	22.4	7.9	11.8	-	9.2	-	-	-	-	0.8	-	-	2.6	91.2
86	-	13.2	11.6	11.8	22.4	7.9	11.8	-	9.2	-	-	-	-	0.8	-	-	2.6	91.2
63	-	3.0	16.8	13.7	18.3	16.8	-	-	16.6	-	-	-	-	0.6	-	-	-	85.7
64	-	3.0	16.8	13.7	18.3	16.8	-	-	16.6	-	-	-	-	0.6	-	-	-	85.7
72	-	-	-	10.2	22.8	-	16.9	-	15.2	-	-	-	-	-	-	-	10.2	75.3
73	-	-	-	10.2	22.8	-	16.9	-	15.2	-	-	-	-	-	-	-	10.2	75.3
281	-	11.2	6.8	9.1	12.2	-	6.8	-	6.1	3.4	-	-	-	2.0	-	-	-	57.6
282	-	11.2	6.8	9.1	12.2	-	6.8	-	6.1	3.4	-	-	-	2.0	-	-	-	57.6
283	-	11.2	6.8	9.1	12.2	-	6.8	-	6.1	3.4	-	-	-	2.0	-	-	-	57.6
127	-	-	3.4	-	14.3	-	4.1	-	18.4	5.7	-	0.4	-	3.4	-	0.2	1.7	51.5
128	-	-	3.4	-	14.3	-	4.1	-	18.4	5.7	-	0.4	-	3.4	-	0.2	1.7	51.5
122	14.6	-	-	6.8	-	-	5.0	1.9	13.8	5.7	-	-	-	1.0	-	-	-	48.8
192	-	-	-	9.1	6.8	2.7	4.1	-	7.4	6.8	0.9	0.6	-	2.4	-	-	-	40.8
193	-	-	-	9.1	6.8	2.7	4.1	-	7.4	6.8	0.9	0.6	-	2.4	-	-	-	40.8
51	-	-	-	2.3	25.6	-	1.9	1.6	1.2	1.1	-	-	-	1.5	1.2	-	1.7	38.1
52	-	-	-	2.3	25.6	-	1.9	1.6	1.2	1.1	-	-	-	1.5	1.2	-	1.7	38.1
53	-	-	-	2.3	25.6	-	1.9	1.6	1.2	1.1	-	-	-	1.5	1.2	-	1.7	38.1
194	-	-	18.7	-	-	2.8	2.8	-	-	-	-	-	11.2	1.1	-	-	-	36.7
195	-	-	18.7	-	-	2.8	2.8	-	-	-	-	-	11.2	1.1	-	-	-	36.7
67	-	-	4.5	4.1	7.3	-	1.1	-	9.2	-	-	0.3	-	5.8	-	-	2.0	34.3
68	-	-	4.5	4.1	7.3	-	1.1	-	9.2	-	-	0.3	-	5.8	-	-	2.0	34.3
69	-	-	4.5	4.1	7.3	-	1.1	-	9.2	-	-	0.3	-	5.8	-	-	2.0	34.3
70	-	-	4.5	4.1	7.3	-	1.1	-	9.2	-	-	0.3	-	5.8	-	-	2.0	34.3
123	-	-	-	6.8	-	-	5.0	1.9	13.8	5.7	-	-	-	1.0	-	-	-	34.2
291	-	-	-	5.5	12.8	-	2.8	-	7.4	-	-	-	-	4.5	-	-	-	32.9
292	-	-	-	5.5	12.8	-	2.8	-	7.4	-	-	-	-	4.5	-	-	-	32.9
125	-	-	-	-	16.0	-	-	-	12.7	-	-	-	-	2.3	-	-	-	30.9
126	-	-	-	-	16.0	-	-	-	12.7	-	-	-	-	2.3	-	-	-	30.9
104	-	-	-	-	24.1	-	-	-	-	-	-	-	-	6.1	-	-	-	30.2
105	-	-	-	-	24.1	-	-	-	-	-	-	-	-	6.1	-	-	-	30.2
65	-	1.0	7.5	4.6	6.1	-	-	-	1.8	6.8	-	-	-	-	-	-	1.7	29.5
66	-	1.0	7.5	4.6	6.1	-	-	-	1.8	6.8	-	-	-	-	-	-	1.7	29.5
284	-	-	7.5	4.6	1.5	-	5.6	-	1.7	-	-	-	6.4	1.2	-	-	-	28.5
285	-	-	7.5	4.6	1.5	-	5.6	-	1.7	-	-	-	6.4	1.2	-	-	-	28.5
295	-	-	7.5	4.6	12.2	-	-	-	-	-	-	-	-	3.0	-	-	-	27.2
296	-	-	7.5	4.6	12.2	-	-	-	-	-	-	-	-	3.0	-	-	-	27.2
463	-	-	9.7	-	-	-	-	-	7.4	8.5	-	-	-	1.5	-	-	-	27.1
464	-	-	9.7	-	-	-	-	-	7.4	8.5	-	-	-	1.5	-	-	-	27.1
60	-	-	-	9.1	9.1	-	7.5	-	-	-	-	-	-	-	-	-	-	25.7
61	-	-	-	9.1	9.1	-	7.5	-	-	-	-	-	-	-	-	-	-	25.7
62	-	-	-	9.1	9.1	-	7.5	-	-	-	-	-	-	-	-	-	-	25.7
75	-	-	9.0	-	9.1	-	-	-	5.5	-	-	-	-	0.4	-	-	1.7	25.7
76	-	-	9.0	-	9.1	-	-	-	5.5	-	-	-	-	0.4	-	-	1.7	25.7
91	-	-	-	2.0	5.5	-	-	-	14.7	2.6	-	-	-	0.8	-	-	-	25.5
92	-	-	-	2.0	5.5	-	-	-	14.7	2.6	-	-	-	0.8	-	-	-	25.5
116	-	-	1.4	0.9	8.2	-	3.0	-	8.3	2.6	-	-	-	0.4	-	-	-	24.7
117	-	-	1.4	0.9	8.2	-	3.0	-	8.3	2.6	-	-	-	0.4	-	-	-	24.7
118	-	-	1.4	0.9	8.2	-	3.0	-	8.3	2.6	-	-	-	0.4	-	-	-	24.7
119	-	-	1.4	0.9	8.2	-	3.0	-	8.3	2.6	-	-	-	0.4	-	-	-	24.7
179	-	17.6	-	-	-	-	-	6.4	-	-	-	-	-	-	-	-	-	24.0
180	-	17.6	-	-	-	-	-	6.4	-	-	-	-	-	-	-	-	-	24.0
82	-	-	3.4	2.1	11.1	-	-	-	-	-	-	-	-	2.1	0.8	-	-	19.5
83	-	-	3.4	2.1	11.1	-	-	-	-	-	-	-	-	2.1	0.8	-	-	19.5
84	-	-	3.4	2.1	11.1	-	-	-	-	-	-	-	-	2.1	0.8	-	-	19.5
87	-	-	-	-	-	-	7.5	-	7.4	-	-	0.3	-	2.7	-	-	-	17.8
88	-	-	-	-	-	-	7.5	-	7.4	-	-	0.3	-	2.7	-	-	-	17.8
77	-	-	3.4	2.1	11.1	-	-	-	-	-	-	-	-	0.2	0.8	-	-	17.6

Table 18. Adults' consumption rates of green vegetables from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Artichoke	Asparagus	Broccoli	Brussels sprout	Cabbage	Calabrese	Cauliflower	Chard	Courgette	Cucumber	Gherkin	Herbs	Kale	Lettuce	Marrow	Rocket	Spinach	Total
78	-	-	3.4	2.1	11.1	-	-	-	-	-	-	-	-	0.2	0.8	-	-	17.6
79	-	-	3.4	2.1	11.1	-	-	-	-	-	-	-	-	0.2	0.8	-	-	17.6
120	-	-	1.4	0.9	8.2	-	3.0	-	-	2.6	-	-	-	0.4	-	-	-	16.4
121	-	-	1.4	0.9	8.2	-	3.0	-	-	2.6	-	-	-	0.4	-	-	-	16.4
111	-	-	-	8.2	6.1	-	-	-	-	-	-	-	-	-	-	-	-	14.3
112	-	-	-	8.2	6.1	-	-	-	-	-	-	-	-	-	-	-	-	14.3
113	-	-	-	8.2	6.1	-	-	-	-	-	-	-	-	-	-	-	-	14.3
114	-	-	-	8.2	6.1	-	-	-	-	-	-	-	-	-	-	-	-	14.3
115	-	-	-	8.2	6.1	-	-	-	-	-	-	-	-	-	-	-	-	14.3
54	-	-	-	-	11.2	-	-	2.3	-	-	-	-	-	-	-	-	-	13.5
55	-	-	-	-	11.2	-	-	2.3	-	-	-	-	-	-	-	-	-	13.5
56	-	-	-	-	11.2	-	-	2.3	-	-	-	-	-	-	-	-	-	13.5
57	-	-	-	-	11.2	-	-	2.3	-	-	-	-	-	-	-	-	-	13.5
129	-	-	3.4	-	-	-	-	-	-	5.7	-	-	-	3.4	-	-	-	12.5
130	-	-	3.4	-	-	-	-	-	-	5.7	-	-	-	3.4	-	-	-	12.5
286	-	-	6.7	-	-	-	-	-	-	-	-	-	-	5.4	-	-	-	12.1
287	-	-	6.7	-	-	-	-	-	-	-	-	-	-	5.4	-	-	-	12.1
288	-	-	6.7	-	-	-	-	-	-	-	-	-	-	5.4	-	-	-	12.1
289	-	-	6.7	-	-	-	-	-	-	-	-	-	-	5.4	-	-	-	12.1
290	-	-	6.7	-	-	-	-	-	-	-	-	-	-	5.4	-	-	-	12.1
106	-	-	-	2.4	1.6	-	-	-	4.6	-	-	-	-	1.6	-	-	-	10.1
107	-	-	-	2.4	1.6	-	-	-	4.6	-	-	-	-	1.6	-	-	-	10.1
110	-	-	-	2.4	1.6	-	-	-	4.6	-	-	-	-	1.6	-	-	-	10.1
89	-	-	-	-	-	-	3.7	-	3.7	-	-	0.3	-	1.4	-	-	-	9.0
93	-	-	-	-	3.8	-	-	-	0.3	-	-	-	-	3.2	0.3	-	-	7.5
94	-	-	-	-	3.8	-	-	-	0.3	-	-	-	-	3.2	0.3	-	-	7.5
95	-	-	-	-	3.8	-	-	-	0.3	-	-	-	-	3.2	0.3	-	-	7.5
96	-	-	-	-	3.8	-	-	-	0.3	-	-	-	-	3.2	0.3	-	-	7.5
99	-	-	-	-	3.8	-	-	-	0.3	-	-	-	-	3.2	0.3	-	-	7.5
100	-	-	-	-	3.8	-	-	-	0.3	-	-	-	-	3.2	0.3	-	-	7.5
101	-	-	-	-	3.8	-	-	-	0.3	-	-	-	-	3.2	0.3	-	-	7.5
102	-	-	-	-	3.8	-	-	-	0.3	-	-	-	-	3.2	0.3	-	-	7.5
103	-	-	-	-	3.8	-	-	-	0.3	-	-	-	-	3.2	0.3	-	-	7.5
108	-	-	-	2.4	1.6	-	-	-	-	-	-	-	-	1.6	-	-	-	5.5
109	-	-	-	2.4	1.6	-	-	-	-	-	-	-	-	1.6	-	-	-	5.5
457	-	-	-	-	-	-	-	-	2.3	0.9	-	0.1	-	1.0	-	0.2	0.5	5.0
458	-	-	-	-	-	-	-	-	2.3	0.9	-	0.1	-	1.0	-	0.2	0.5	5.0
132	-	-	-	-	-	-	-	-	-	4.3	-	-	-	-	-	-	-	4.3
455	-	-	-	-	-	-	-	-	-	-	-	-	-	4.0	-	-	-	4.0
392	-	-	-	-	2.8	-	-	-	-	-	-	-	-	0.7	-	-	-	3.5
393	-	-	-	-	2.8	-	-	-	-	-	-	-	-	0.7	-	-	-	3.5
394	-	-	-	-	2.8	-	-	-	-	-	-	-	-	0.7	-	-	-	3.5
456	-	-	-	-	-	-	-	-	1.4	-	-	-	-	-	-	-	-	1.4
222	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	0.3
223	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	0.3

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables based on the 28 high-rate adult consumers is 49.9 kg y⁻¹

The observed 97.5th percentile rate based on 102 observations is 85.7 kg y⁻¹

Table 19. Adults' consumption rates of other vegetables from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Aubergine	Broad bean	Butter bean	Chilli pepper	French bean	Mangetout	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
91	-	24.6	-	-	5.6	-	25.0	-	-	24.5	-	2.8	3.6	86.0
92	-	24.6	-	-	5.6	-	25.0	-	-	24.5	-	2.8	3.6	86.0
111	-	8.5	-	-	-	-	22.5	-	-	20.4	-	-	16.2	67.6
463	-	10.0	-	-	9.4	-	3.4	-	-	15.1	-	6.3	19.8	64.0
464	-	10.0	-	-	9.4	-	3.4	-	-	15.1	-	6.3	19.8	64.0
194	-	-	-	-	2.7	-	17.0	2.6	-	14.8	0.2	-	21.4	58.7
195	-	-	-	-	2.7	-	17.0	2.6	-	14.8	0.2	-	21.4	58.7
85	-	19.1	-	-	-	-	9.5	-	-	28.6	0.3	-	-	57.5
86	-	19.1	-	-	-	-	9.5	-	-	28.6	0.3	-	-	57.5
122	-	18.2	-	-	3.0	-	6.0	3.3	1.5	18.1	0.7	-	6.0	56.8
123	-	18.2	-	-	3.0	-	6.0	3.3	1.5	18.1	0.7	-	6.0	56.8
104	-	22.1	-	-	-	-	-	-	-	27.5	-	-	5.4	55.1
105	-	22.1	-	-	-	-	-	-	-	27.5	-	-	5.4	55.1
66	-	9.1	-	-	-	-	4.5	2.5	-	27.2	-	2.8	9.0	55.0
179	-	18.2	-	-	-	-	-	-	-	22.4	-	0.7	10.8	52.1
180	-	18.2	-	-	-	-	-	-	-	22.4	-	0.7	10.8	52.1
192	-	3.2	-	-	1.3	-	3.2	4.9	0.9	7.1	0.2	4.6	21.6	46.9
193	-	3.2	-	-	1.3	-	3.2	4.9	0.9	7.1	0.2	4.6	21.6	46.9
72	-	20.5	-	-	-	-	-	-	-	23.3	-	-	-	43.7
73	-	20.5	-	-	-	-	-	-	-	23.3	-	-	-	43.7
60	-	24.0	-	-	5.4	-	9.0	-	-	3.2	-	-	-	41.7
61	-	24.0	-	-	5.4	-	9.0	-	-	3.2	-	-	-	41.7
62	-	24.0	-	-	5.4	-	9.0	-	-	3.2	-	-	-	41.7
87	-	-	-	-	1.8	-	11.3	-	-	27.2	-	0.5	-	40.7
88	-	-	-	-	1.8	-	11.3	-	-	27.2	-	0.5	-	40.7
127	-	3.5	-	2.0	2.4	-	-	1.0	-	6.1	1.2	-	19.2	35.4
128	-	3.5	-	2.0	2.4	-	-	1.0	-	6.1	1.2	-	19.2	35.4
116	-	20.9	-	-	3.1	-	1.3	-	-	4.7	0.3	-	-	30.4
117	-	20.9	-	-	3.1	-	1.3	-	-	4.7	0.3	-	-	30.4
118	-	20.9	-	-	3.1	-	0.6	-	-	4.7	0.3	-	-	29.7
119	-	20.9	-	-	3.1	-	0.6	-	-	4.7	0.3	-	-	29.7
112	-	8.5	-	-	-	-	-	-	-	20.4	-	-	-	28.9
113	-	8.5	-	-	-	-	-	-	-	20.4	-	-	-	28.9
114	-	8.5	-	-	-	-	-	-	-	20.4	-	-	-	28.9
291	-	6.8	-	-	8.1	-	3.4	-	-	10.2	-	-	-	28.5
292	-	6.8	-	-	8.1	-	3.4	-	-	10.2	-	-	-	28.5
51	2.7	-	2.3	0.6	1.8	-	-	1.3	0.3	10.2	-	3.5	5.4	28.1
52	2.7	-	2.3	0.6	1.8	-	-	1.3	0.3	10.2	-	3.5	5.4	28.1
53	2.7	-	2.3	0.6	1.8	-	-	1.3	0.3	10.2	-	3.5	5.4	28.1
125	-	22.8	-	-	-	-	3.4	-	-	-	-	1.7	-	27.9

Table 19. Adults' consumption rates of other vegetables from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Aubergine	Broad bean	Butter bean	Chilli pepper	French bean	Mangetout	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
126	-	22.8	-	-	-	-	3.4	-	-	-	-	1.7	-	27.9
284	-	2.3	-	-	3.0	-	6.2	-	-	13.6	-	-	2.7	27.7
285	-	2.3	-	-	3.0	-	6.2	-	-	13.6	-	-	2.7	27.7
129	-	-	-	-	-	-	-	1.0	-	6.1	1.2	-	19.2	27.5
130	-	-	-	-	-	-	-	1.0	-	6.1	1.2	-	19.2	27.5
295	-	4.6	-	-	-	-	9.0	-	-	13.6	-	-	-	27.2
296	-	4.6	-	-	-	-	9.0	-	-	13.6	-	-	-	27.2
54	-	18.3	-	-	2.9	-	4.3	-	-	-	-	-	-	25.5
55	-	18.3	-	-	2.9	-	4.3	-	-	-	-	-	-	25.5
56	-	18.3	-	-	2.9	-	4.3	-	-	-	-	-	-	25.5
57	-	18.3	-	-	2.9	-	4.3	-	-	-	-	-	-	25.5
63	-	-	-	-	-	-	-	-	-	20.4	-	3.5	-	23.9
64	-	-	-	-	-	-	-	-	-	20.4	-	3.5	-	23.9
67	-	-	-	-	2.2	0.5	2.7	-	-	16.3	0.3	-	-	21.9
68	-	-	-	-	2.2	0.5	2.7	-	-	16.3	0.3	-	-	21.9
69	-	-	-	-	2.2	0.5	2.7	-	-	16.3	0.3	-	-	21.9
70	-	-	-	-	2.2	0.5	2.7	-	-	16.3	0.3	-	-	21.9
281	-	3.0	-	-	-	-	-	-	1.3	5.1	-	2.3	9.0	20.7
282	-	3.0	-	-	-	-	-	-	1.3	5.1	-	2.3	9.0	20.7
283	-	3.0	-	-	-	-	-	-	1.3	5.1	-	2.3	9.0	20.7
286	-	6.6	-	-	3.2	-	4.1	-	-	4.9	-	-	1.8	20.5
287	-	6.6	-	-	3.2	-	4.1	-	-	4.9	-	-	1.8	20.5
288	-	6.6	-	-	3.2	-	4.1	-	-	4.9	-	-	1.8	20.5
289	-	6.6	-	-	3.2	-	4.1	-	-	4.9	-	-	1.8	20.5
290	-	6.6	-	-	3.2	-	4.1	-	-	4.9	-	-	1.8	20.5
115	-	-	-	-	-	-	-	-	-	20.4	-	-	-	20.4
89	-	-	-	-	0.9	-	5.6	-	-	13.6	-	0.2	-	20.4
132	-	-	-	-	-	-	-	-	-	-	-	-	19.2	19.2
65	-	2.0	-	-	-	-	0.9	2.5	-	0.9	-	2.8	9.0	18.1
222	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0
223	-	-	-	-	-	-	-	-	-	-	-	-	18.0	18.0
106	-	3.8	-	-	0.9	-	2.3	-	-	7.1	-	2.8	-	16.9
107	-	3.8	-	-	0.9	-	2.3	-	-	7.1	-	2.8	-	16.9
108	-	3.8	-	-	0.9	-	2.3	-	-	7.1	-	2.8	-	16.9
109	-	3.8	-	-	0.9	-	2.3	-	-	7.1	-	2.8	-	16.9
110	-	3.8	-	-	0.9	-	2.3	-	-	7.1	-	2.8	-	16.9
75	5.1	9.1	-	-	-	1.1	-	-	-	-	-	-	0.9	16.2
76	5.1	9.1	-	-	-	1.1	-	-	-	-	-	-	0.9	16.2
455	-	0.5	-	-	-	-	0.5	-	3.9	-	-	2.8	5.4	13.0
93	-	7.3	-	-	-	-	2.3	-	-	0.5	-	0.1	1.0	11.1

Table 19. Adults' consumption rates of other vegetables from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Aubergine	Broad bean	Butter bean	Chilli pepper	French bean	Mangetout	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
94	-	7.3	-	-	-	-	2.3	-	-	0.5	-	0.1	1.0	11.1
95	-	7.3	-	-	-	-	2.3	-	-	0.5	-	0.1	1.0	11.1
96	-	7.3	-	-	-	-	2.3	-	-	0.5	-	0.1	1.0	11.1
99	-	7.3	-	-	-	-	2.3	-	-	0.5	-	0.1	1.0	11.1
100	-	7.3	-	-	-	-	2.3	-	-	0.5	-	0.1	1.0	11.1
102	-	7.3	-	-	-	-	2.3	-	-	0.5	-	0.1	1.0	11.1
103	-	7.3	-	-	-	-	2.3	-	-	0.5	-	0.1	1.0	11.1
101	-	7.3	-	-	-	-	2.3	-	-	-	-	0.1	1.0	10.6
392	-	1.1	-	-	-	-	-	-	-	2.4	-	-	5.3	8.8
393	-	1.1	-	-	-	-	-	-	-	2.4	-	-	5.3	8.8
394	-	1.1	-	-	-	-	-	-	-	2.4	-	-	5.3	8.8
78	-	-	-	-	0.8	-	-	-	-	6.2	-	0.2	-	7.3
79	-	-	-	-	0.8	-	-	-	-	6.2	-	0.2	-	7.3
82	-	-	-	-	0.8	-	-	-	-	6.2	-	0.2	-	7.2
83	-	-	-	-	0.8	-	-	-	-	6.2	-	0.2	-	7.2
84	-	-	-	-	0.8	-	-	-	-	6.2	-	-	-	7.0
457	0.2	-	-	-	1.1	-	-	-	-	1.1	-	-	2.3	4.8
458	0.2	-	-	-	1.1	-	-	-	-	1.1	-	-	2.3	4.8
77	-	-	-	-	0.8	-	-	-	-	3.1	-	0.1	-	4.0
635	-	-	-	-	-	-	-	-	-	-	-	-	3.0	3.0
636	-	-	-	-	-	-	-	-	-	-	-	-	3.0	3.0
637	-	-	-	-	-	-	-	-	-	-	-	-	3.0	3.0
456	-	-	-	-	-	-	-	-	-	-	-	-	2.3	2.3
120	-	-	-	-	-	-	0.6	-	-	-	0.3	-	-	1.0
121	-	-	-	-	-	-	0.6	-	-	-	0.3	-	-	1.0
459	-	-	-	-	-	-	-	-	-	0.9	-	-	-	0.9
460	-	-	-	-	-	-	-	-	-	0.9	-	-	-	0.9

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of other vegetables based on the 34 high-rate adult consumers is 48.5 kg y⁻¹

The observed 97.5th percentile rate based on 107 observations is 65.3 kg y⁻¹

Table 20. Adults' consumption rates of root vegetables from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Beetroot	Carrot	Celeriac	Celery	Garlic	Jerusalem artichoke	Kohl rabi	Leek	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Turnip	Total
72	16.2	27.0	-	-	-	-	-	24.3	24.3	-	-	-	6.0	-	-	97.8
73	16.2	27.0	-	-	-	-	-	24.3	24.3	-	-	-	6.0	-	-	97.8
85	12.9	21.2	-	-	1.4	-	-	7.1	15.1	3.8	-	-	-	14.3	-	75.7
86	12.9	21.2	-	-	1.4	-	-	7.1	15.1	3.8	-	-	-	14.3	-	75.7
60	24.6	4.5	-	-	-	-	-	24.3	-	4.5	-	-	-	15.3	-	73.2
61	24.6	4.5	-	-	-	-	-	24.3	-	4.5	-	-	-	15.3	-	73.2
62	24.6	4.5	-	-	-	-	-	24.3	-	4.5	-	-	-	15.3	-	73.2
104	19.4	-	-	-	-	-	-	9.7	16.2	14.6	-	3.5	2.2	-	-	65.5
105	19.4	-	-	-	-	-	-	9.7	16.2	14.6	-	3.5	2.2	-	-	65.5
125	20.3	-	-	-	2.5	-	-	-	22.5	8.1	-	9.6	-	-	-	63.0
126	20.3	-	-	-	2.5	-	-	-	22.5	8.1	-	9.6	-	-	-	63.0
291	12.3	13.5	-	-	-	-	-	10.1	16.2	5.4	-	4.8	-	-	-	62.3
292	12.3	13.5	-	-	-	-	-	10.1	16.2	5.4	-	4.8	-	-	-	62.3
91	14.8	6.1	-	-	1.4	-	-	10.1	11.3	2.3	-	1.4	-	14.3	-	61.7
92	14.8	6.1	-	-	1.4	-	-	10.1	11.3	2.3	-	1.4	-	14.3	-	61.7
75	4.1	4.5	-	-	-	-	-	2.0	27.0	5.4	-	-	-	13.6	-	56.6
76	4.1	4.5	-	-	-	-	-	2.0	27.0	5.4	-	-	-	13.6	-	56.6
87	5.0	9.8	-	-	-	-	-	6.8	5.8	7.2	-	-	-	13.6	-	48.1
88	5.0	9.8	-	-	-	-	-	6.8	5.8	7.2	-	-	-	13.6	-	48.1
295	8.2	4.5	-	5.4	-	-	9.0	9.0	-	3.6	5.4	-	-	-	-	45.1
296	8.2	4.5	-	5.4	-	-	9.0	9.0	-	3.6	5.4	-	-	-	-	45.1
122	13.1	3.0	-	-	1.4	-	-	-	17.3	4.3	-	4.3	-	-	-	43.4
123	13.1	3.0	-	-	1.4	-	-	-	17.3	4.3	-	4.3	-	-	-	43.4
281	8.2	4.5	-	-	-	9.1	-	-	7.2	3.6	-	6.4	-	-	-	38.9
282	8.2	4.5	-	-	-	9.1	-	-	7.2	3.6	-	6.4	-	-	-	38.9
283	8.2	4.5	-	-	-	9.1	-	-	7.2	3.6	-	6.4	-	-	-	38.9
179	5.7	-	-	-	-	-	-	-	30.0	-	-	-	-	-	-	35.7
180	5.7	-	-	-	-	-	-	-	30.0	-	-	-	-	-	-	35.7
284	9.0	2.3	-	-	-	-	-	9.0	5.0	4.0	-	4.8	-	-	-	34.0
285	9.0	2.3	-	-	-	-	-	9.0	5.0	4.0	-	4.8	-	-	-	34.0
192	6.2	8.6	-	5.0	1.7	-	-	1.6	-	1.3	-	2.9	-	-	-	27.2
193	6.2	8.6	-	5.0	1.7	-	-	1.6	-	1.3	-	2.9	-	-	-	27.2
67	9.8	4.1	-	-	-	-	-	10.8	1.0	1.0	-	-	0.1	-	-	26.8
116	1.6	6.9	2.9	-	1.2	-	-	1.9	2.5	2.8	-	3.3	2.3	-	-	25.4
117	1.6	6.9	2.9	-	1.2	-	-	1.9	2.5	2.8	-	3.3	2.3	-	-	25.4
89	2.5	4.9	-	-	-	-	-	3.4	2.9	3.6	-	-	-	6.8	-	24.0

Table 20. Adults' consumption rates of root vegetables from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Beetroot	Carrot	Celeriac	Celery	Garlic	Jerusalem artichoke	Kohl rabi	Leek	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Turnip	Total
463	10.7	5.9	-	-	0.7	-	-	-	3.6	-	-	1.6	-	-	-	22.4
464	10.7	5.9	-	-	0.7	-	-	-	3.6	-	-	1.6	-	-	-	22.4
106	4.3	7.0	-	-	-	-	-	-	-	9.4	-	-	1.0	-	-	21.7
107	4.3	7.0	-	-	-	-	-	-	-	9.4	-	-	1.0	-	-	21.7
108	4.3	7.0	-	-	-	-	-	-	-	9.4	-	-	1.0	-	-	21.7
109	4.3	7.0	-	-	-	-	-	-	-	9.4	-	-	1.0	-	-	21.7
110	4.3	7.0	-	-	-	-	-	-	-	9.4	-	-	1.0	-	-	21.7
194	20.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.2
195	20.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.2
51	4.1	4.5	-	-	0.7	-	-	-	5.4	-	-	3.2	1.0	-	-	18.9
52	4.1	4.5	-	-	0.7	-	-	-	5.4	-	-	3.2	1.0	-	-	18.9
53	4.1	4.5	-	-	0.7	-	-	-	5.4	-	-	3.2	1.0	-	-	18.9
68	-	4.1	-	-	-	-	-	10.8	1.0	1.0	-	-	0.1	-	-	17.0
69	-	4.1	-	-	-	-	-	10.8	1.0	1.0	-	-	0.1	-	-	17.0
70	-	4.1	-	-	-	-	-	10.8	1.0	1.0	-	-	0.1	-	-	17.0
65	4.1	2.3	1.6	-	0.2	-	-	-	4.5	2.3	-	-	2.0	-	-	16.9
66	4.1	2.3	1.6	-	0.2	-	-	-	4.5	2.3	-	-	2.0	-	-	16.9
118	1.6	6.9	-	-	1.2	-	-	1.2	2.5	2.8	-	-	-	-	-	16.1
119	1.6	6.9	-	-	1.2	-	-	1.2	2.5	2.8	-	-	-	-	-	16.1
120	1.6	6.9	-	-	1.2	-	-	1.2	2.5	2.8	-	-	-	-	-	16.1
121	1.6	6.9	-	-	1.2	-	-	1.2	2.5	2.8	-	-	-	-	-	16.1
93	2.5	2.8	-	-	-	-	-	-	-	1.8	0.5	5.8	0.5	-	0.7	14.5
94	2.5	2.8	-	-	-	-	-	-	-	1.8	0.5	5.8	0.5	-	0.7	14.5
95	2.5	2.8	-	-	-	-	-	-	-	1.8	0.5	5.8	0.5	-	0.7	14.5
96	2.5	2.8	-	-	-	-	-	-	-	1.8	0.5	5.8	0.5	-	0.7	14.5
99	2.5	2.8	-	-	-	-	-	-	-	1.8	0.5	5.8	0.5	-	0.7	14.5
100	2.5	2.8	-	-	-	-	-	-	-	1.8	0.5	5.8	0.5	-	0.7	14.5
101	2.5	2.8	-	-	-	-	-	-	-	1.8	0.5	5.8	0.5	-	0.7	14.5
102	2.5	2.8	-	-	-	-	-	-	-	1.8	0.5	5.8	0.5	-	0.7	14.5
127	6.2	-	-	-	-	-	-	3.0	4.4	-	-	-	-	-	-	13.6
128	6.2	-	-	-	-	-	-	3.0	4.4	-	-	-	-	-	-	13.6
103	2.5	2.8	-	-	-	-	-	-	-	-	0.5	5.8	0.5	-	0.7	12.7
129	6.2	-	-	-	-	-	-	3.0	-	-	-	-	-	-	-	9.2
130	6.2	-	-	-	-	-	-	3.0	-	-	-	-	-	-	-	9.2
279	-	-	-	-	-	-	-	-	8.0	-	-	-	-	-	-	8.0
280	-	-	-	-	-	-	-	-	8.0	-	-	-	-	-	-	8.0

Table 20. Adults' consumption rates of root vegetables from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Beetroot	Carrot	Celeriac	Celery	Garlic	Jerusalem artichoke	Kohl rabi	Leek	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Turnip	Total
111	-	3.4	-	-	-	-	-	-	3.6	-	-	-	-	-	-	7.0
112	-	3.4	-	-	-	-	-	-	3.6	-	-	-	-	-	-	7.0
113	-	3.4	-	-	-	-	-	-	3.6	-	-	-	-	-	-	7.0
114	-	3.4	-	-	-	-	-	-	3.6	-	-	-	-	-	-	7.0
115	-	3.4	-	-	-	-	-	-	3.6	-	-	-	-	-	-	7.0
132	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.2
54	-	-	-	-	-	-	-	-	-	4.3	-	-	-	-	-	4.3
55	-	-	-	-	-	-	-	-	-	4.3	-	-	-	-	-	4.3
56	-	-	-	-	-	-	-	-	-	4.3	-	-	-	-	-	4.3
57	-	-	-	-	-	-	-	-	-	4.3	-	-	-	-	-	4.3
78	-	1.3	-	-	0.4	-	-	-	0.8	1.6	-	-	-	-	-	4.2
79	-	1.3	-	-	0.4	-	-	-	0.8	1.6	-	-	-	-	-	4.2
82	-	1.3	-	-	0.4	-	-	-	0.8	1.6	-	-	-	-	-	4.2
63	-	-	-	-	-	-	-	-	-	-	4.1	-	-	-	-	4.1
64	-	-	-	-	-	-	-	-	-	-	4.1	-	-	-	-	4.1
83	-	1.3	-	-	-	-	-	-	0.8	1.6	-	-	-	-	-	3.8
84	-	1.3	-	-	-	-	-	-	0.8	1.6	-	-	-	-	-	3.8
455	1.4	-	-	-	0.4	-	-	-	-	-	-	-	0.2	-	-	2.0
219	-	0.9	-	-	-	-	-	-	0.9	-	-	-	-	-	-	1.8
220	-	0.9	-	-	-	-	-	-	0.9	-	-	-	-	-	-	1.8
77	-	0.3	-	-	-	-	-	-	0.4	0.3	-	-	-	-	-	1.0

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables based on the 30 high-rate adult consumers is 57.1 kg y⁻¹

The observed 97.5th percentile rate based on 93 observations is 75.7 kg y⁻¹

Table 21. Adults' consumption rates of potato from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Potato
72	116.9
73	116.9
74	116.9
194	112.2
195	112.2
85	91.7
86	91.7
60	91.0
61	91.0
62	91.0
295	91.0
296	91.0
179	90.0
180	90.0
104	88.5
105	88.5
125	73.9
126	73.9
111	68.3
112	68.3
113	68.3
114	68.3
54	64.8
55	64.8
56	64.8
57	64.8
284	63.7
285	63.7
463	59.2
464	59.2
91	58.2
92	58.2
65	50.8
66	50.8
291	47.8
292	47.8
63	41.0
64	41.0
93	41.0
94	41.0
95	41.0
96	41.0
99	41.0
100	41.0
101	41.0
102	41.0
103	41.0
462	38.1
192	34.8
193	34.8
281	33.7
282	33.7
283	33.7
106	28.4

Table 21. Adults' consumption rates of potato from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Potato
107	28.4
108	28.4
109	28.4
110	28.4
116	28.3
117	28.3
118	28.3
119	28.3
120	28.3
121	28.3
279	28.0
280	28.0
87	27.3
88	27.3
122	26.2
123	26.2
51	13.7
52	13.7
53	13.7
89	13.7
75	12.5
76	12.5
298	11.8
299	11.8
635	10.1
636	10.1
637	10.1
392	7.6
393	7.6
394	7.6
67	4.5
68	4.5
69	4.5
70	4.5
455	2.7
459	1.4
460	1.4
457	0.5
458	0.5

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of potato based on the 47 high-rate adult consumers is 69.4 kg y⁻¹

The observed 97.5th percentile rate based on 93 observations is 115.4 kg y⁻¹

Table 22. Adults' consumption rates of domestic fruit from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Apple	Blackberry	Blackcurrant	Blueberry	Boysenberry	Cherry	Damson	Fig	Gooseberry	Jostaberry	Loganberry	Peach	Pear	Plum	Raspberry	Redcurrants	Rhubarb	Strawberry	Tayberry	Whitecurrant	Total	
91	38.1	0.7	6.4	-	-	-	-	-	-	-	-	-	-	-	6.9	-	9.2	9.9	-	-	71.1	
92	38.1	0.7	6.4	-	-	-	-	-	-	-	-	-	-	-	6.9	-	9.2	9.9	-	-	71.1	
192	22.7	-	2.8	1.3	-	-	13.6	-	4.1	-	1.0	-	-	-	0.3	2.3	-	9.4	-	-	57.4	
193	22.7	-	2.8	1.3	-	-	13.6	-	4.1	-	1.0	-	-	-	0.3	2.3	-	9.4	-	-	57.4	
463	27.2	0.5	1.1	-	-	4.5	-	0.7	1.1	-	-	-	4.5	2.3	1.4	4.5	-	9.5	-	-	57.4	
464	27.2	0.5	1.1	-	-	4.5	-	0.7	1.1	-	-	-	4.5	2.3	1.4	4.5	-	9.5	-	-	57.4	
122	-	5.3	5.7	-	-	-	-	-	4.1	-	2.7	-	-	-	6.8	4.5	0.8	8.2	-	-	38.0	
123	-	5.3	5.7	-	-	-	-	-	4.1	-	2.7	-	-	-	6.8	4.5	0.8	8.2	-	-	38.0	
179	-	2.3	5.7	-	-	-	-	-	6.1	-	-	-	-	-	4.8	2.3	-	6.8	-	-	27.9	
180	-	2.3	5.7	-	-	-	-	-	6.1	-	-	-	-	-	4.8	2.3	-	6.8	-	-	27.9	
393	12.1	-	2.3	-	-	0.9	-	-	-	-	-	-	-	4.5	3.0	-	1.9	-	-	-	24.7	
392	12.1	-	2.3	-	-	-	-	-	-	-	-	-	-	4.5	3.0	-	1.9	-	-	-	23.8	
394	12.1	-	2.3	-	-	-	-	-	-	-	-	-	-	4.5	3.0	-	1.9	-	-	-	23.8	
77	9.7	1.9	-	-	-	-	-	-	-	-	-	-	3.2	0.4	1.9	-	2.1	1.9	-	-	21.3	
65	0.5	0.5	-	-	-	0.5	-	-	0.5	-	-	0.5	0.5	0.5	4.1	-	2.3	10.2	-	-	19.8	
66	0.5	0.5	-	-	-	0.5	-	-	0.5	-	-	0.5	0.5	0.5	4.1	-	0.5	10.2	-	-	17.9	
127	13.6	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	3.1	-	-	-	17.1	
128	13.6	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	3.1	-	-	-	17.1	
132	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	-	-	16.7	
121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.1	4.5	0.1	6.1	-	-	13.9	
129	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.6	
130	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.6	
85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.6	8.5	-	-	13.1	
86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.6	8.5	-	-	13.1	
75	-	-	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	12.5	
76	-	-	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	12.5	
78	1.9	1.9	-	-	-	-	-	-	-	-	-	-	3.2	0.4	1.9	-	0.2	1.9	-	-	11.6	
79	1.9	1.9	-	-	-	-	-	-	-	-	-	-	3.2	0.4	1.9	-	0.2	1.9	-	-	11.6	
82	1.9	1.9	-	-	-	-	-	-	-	-	-	-	3.2	0.4	1.9	-	0.2	1.9	-	-	11.6	
83	1.9	1.9	-	-	-	-	-	-	-	-	-	-	3.2	0.4	1.9	-	0.2	1.9	-	-	11.6	
84	1.9	1.9	-	-	-	-	-	-	-	-	-	-	3.2	0.4	1.9	-	0.2	1.9	-	-	11.6	
116	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	0.1	6.1	-	-	10.6	
117	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	0.1	6.1	-	-	10.6	
93	-	1.6	5.1	0.3	-	-	-	-	0.7	-	1.6	-	-	-	-	-	-	-	-	-	1.4	10.6
94	-	1.6	5.1	0.3	-	-	-	-	0.7	-	1.6	-	-	-	-	-	-	-	-	-	1.4	10.6
95	-	1.6	5.1	0.3	-	-	-	-	0.7	-	1.6	-	-	-	-	-	-	-	-	-	1.4	10.6
96	-	1.6	5.1	0.3	-	-	-	-	0.7	-	1.6	-	-	-	-	-	-	-	-	-	1.4	10.6
99	-	1.6	5.1	0.3	-	-	-	-	0.7	-	1.6	-	-	-	-	-	-	-	-	-	1.4	10.6
100	-	1.6	5.1	0.3	-	-	-	-	0.7	-	1.6	-	-	-	-	-	-	-	-	-	1.4	10.6
101	-	1.6	5.1	0.3	-	-	-	-	0.7	-	1.6	-	-	-	-	-	-	-	-	-	1.4	10.6
102	-	1.6	5.1	0.3	-	-	-	-	0.7	-	1.6	-	-	-	-	-	-	-	-	-	1.4	10.6
103	-	1.6	5.1	0.3	-	-	-	-	0.7	-	1.6	-	-	-	-	-	-	-	-	-	1.4	10.6
284	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6	-	2.9	0.9	4.0	-	-	10.3
285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6	-	2.9	0.9	4.0	-	-	10.3
295	-	-	-	-	-	-	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.0
296	-	-	-	-	-	-	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.0
118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	0.1	6.1	-	-	-	9.3
119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	0.1	6.1	-	-	-	9.3
120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	0.1	6.1	-	-	-	9.3
281	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	6.8	-	-	-	8.5
282	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	6.8	-	-	-	8.5
283	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	6.8	-	-	-	8.5
455	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.6	3.0	-	-	-	7.6
54	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.9	-	-	-	7.0
55	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.9	-	-	-	7.0
56	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.9	-	-	-	7.0
57	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.9	-	-	-	7.0

Table 22. Adults' consumption rates of domestic fruit from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Apple	Blackberry	Blackcurrant	Blueberry	Boysenberry	Cherry	Damson	Fig	Gooseberry	Jostaberry	Loganberry	Peach	Pear	Plum	Raspberry	Redcurrants	Rhubarb	Strawberry	Tayberry	Whitecurrant	Total
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.9	-	-	-	6.9
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.9	-	-	-	6.9
181	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	6.8
182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	6.8
183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	6.8
186	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	6.8
187	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	6.8
222	-	-	-	-	-	-	-	-	-	-	-	-	3.2	-	-	-	-	3.4	-	-	6.6
223	-	-	-	-	-	-	-	-	-	-	-	-	3.2	-	-	-	-	3.4	-	-	6.6
51	-	2.4	-	-	-	-	1.8	-	-	-	-	-	-	1.8	-	-	0.5	-	-	-	6.5
52	-	2.4	-	-	-	-	1.8	-	-	-	-	-	-	1.8	-	-	0.5	-	-	-	6.5
53	-	2.4	-	-	-	-	1.8	-	-	-	-	-	-	1.8	-	-	0.5	-	-	-	6.5
106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8	-	-	-	3.8
107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8	-	-	-	3.8
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8	-	-	-	3.8
290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.3	-	-	3.3
228	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0
635	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0
636	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0
637	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0
67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	1.4	0.3	-	-	1.8
68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	1.4	0.3	-	-	1.8
87	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8
88	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8
614	-	-	0.2	-	0.2	-	-	-	0.2	0.2	0.2	-	-	-	0.2	0.2	-	0.2	0.2	-	1.8
615	-	-	0.2	-	0.2	-	-	-	0.2	0.2	0.2	-	-	-	0.2	0.2	-	0.2	0.2	-	1.8
69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	0.3	-	-	1.7
70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	0.3	-	-	1.7
447	0.6	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	1.7
448	0.6	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	1.7
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	-	-	-	1.4
111	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4
457	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	-	1.1
458	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	-	1.1
89	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
104	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
105	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
279	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	0.5
280	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	0.5
125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2	-	-	0.3
126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2	-	-	0.3
219	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
220	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2
287	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2
288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2
289	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2
370	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
371	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
372	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
373	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit based on the 13 high-rate adult consumers is 44.3 kg y⁻¹

The observed 97.5th percentile rate based on 108 observations is 57.4 kg y⁻¹

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

Observation number	Milk
286	219.0
287	219.0
288	219.0
289	219.0
290	219.0

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of milk based on the 5 high-rate adult consumers is $219.0\ l\ y^{-1}$

The observed 97.5th percentile rate based on 5 observations is $219.0\ l\ y^{-1}$

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

Observation number	Beef
286	37.8
287	37.8
288	37.8
289	37.8
290	37.8
369	37.8
370	37.8
371	37.8
372	37.8
373	37.8
279	26.0
280	26.0
291	23.7
292	23.7
293	23.7
294	23.7
400	23.7
401	23.7
122	2.7
123	2.7

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of cattle meat based on the 18 high-rate adult consumers is $31.8\ kg\ y^{-1}$

The observed 97.5th percentile rate based on 20 observations is $37.8\ kg\ y^{-1}$

Table 25. Adults' consumption rates of pig meat from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Pork
286	42.5
287	42.5
288	42.5
289	42.5
290	42.5
179	19.0
180	19.0
291	12.7
292	12.7
293	12.7
294	12.7
369	10.1
370	10.1
371	10.1
372	10.1
373	10.1

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of pig meat based on the 7 high-rate adult consumers is 35.7 kg y⁻¹

The observed 97.5th percentile rate based on 16 observations is 42.5 kg y⁻¹

Table 26. Adults' consumption rates of sheep meat from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Lamb
179	4.2
180	4.2
447	3.4
448	3.4
291	2.8
292	2.8
293	2.8
294	2.8
286	2.3
287	2.3
288	2.3
289	2.3
290	2.3
369	2.3
370	2.3
371	2.3
372	2.3
373	2.3

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of sheep meat based on the 18 high-rate adult consumers is 2.7 kg y⁻¹

The observed 97.5th percentile rate based on 18 observations is 4.2 kg y⁻¹

Table 27. Adults' consumption rates of poultry from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Chicken	Partridge	Pheasant	Pigeon	Total
192	-	1.5	9.0	2.3	12.8
193	-	1.5	9.0	2.3	12.8
72	-	-	4.5	6.9	11.4
73	-	-	4.5	6.9	11.4
60	-	-	9.0	-	9.0
61	-	-	9.0	-	9.0
62	-	-	9.0	-	9.0
279	-	-	9.0	-	9.0
280	-	-	9.0	-	9.0
281	-	-	-	6.9	6.9
286	3.8	0.4	1.1	-	5.2
287	3.8	0.4	1.1	-	5.2
288	3.8	0.4	1.1	-	5.2
289	3.8	0.4	1.1	-	5.2
290	3.8	0.4	1.1	-	5.2
395	-	1.9	2.9	-	4.8
396	-	1.9	2.9	-	4.8
397	-	1.9	2.9	-	4.8
398	-	1.9	2.9	-	4.8
399	-	1.9	2.9	-	4.8
194	-	-	3.6	-	3.6
300	-	1.2	1.8	-	3.0
301	-	1.2	1.8	-	3.0
302	-	1.2	1.8	-	3.0
303	-	1.2	1.8	-	3.0
370	-	0.5	0.9	1.4	2.7
459	-	-	2.7	-	2.7
460	-	-	2.7	-	2.7
295	-	-	1.8	-	1.8
296	-	-	1.8	-	1.8
369	-	0.5	0.9	-	1.4
457	-	-	0.7	-	0.7
458	-	-	0.7	-	0.7
455	-	-	0.5	-	0.5
51	-	-	0.3	-	0.3
52	-	-	0.3	-	0.3
53	-	-	0.3	-	0.3

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of poultry based on the 20 high-rate adult consumers is 7.5 kg y⁻¹

The observed 97.5th percentile rate based on 37 observations is 12.8 kg y⁻¹

Table 28. Adults' consumption rates of eggs from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Chicken egg
194	41.6
195	41.6
455	39.9
93	34.2
94	34.2
95	34.2
96	34.2
99	34.2
100	34.2
101	34.2
102	34.2
103	34.2
111	27.4
286	21.3
287	21.3
288	21.3
289	21.3
290	21.3
87	19.1
88	19.1
89	19.1
635	11.9
636	11.9
637	11.9
281	8.9
282	8.9
283	8.9
300	8.9
301	8.9
302	8.9
303	8.9
116	8.8
117	8.8
118	8.8
119	8.8
121	8.8
392	8.2
393	8.2
463	7.9
464	7.9
222	6.8
223	6.8
298	6.8
299	6.8
284	4.1
447	3.0
448	3.0

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of eggs based on the 21 high-rate adult consumers is 29.6 kg y⁻¹

The observed 97.5th percentile rate based on 47 observations is 41.4 kg y⁻¹

Table 29. Adults' consumption rates of wild/free foods from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Blackberry	Bullace plum	Chestnut	Elderberry	Sloe	Total
279	5.0	-	-	-	1.3	6.3
280	5.0	-	-	-	1.3	6.3
127	3.4	-	-	-	1.6	5.0
128	3.4	-	-	-	1.6	5.0
295	3.5	-	-	-	-	3.5
296	3.5	-	-	-	-	3.5
395	3.0	-	-	-	-	3.0
60	-	-	-	-	2.1	2.1
61	-	-	-	-	2.1	2.1
62	-	-	-	-	2.1	2.1
281	1.5	-	-	-	-	1.5
282	1.5	-	-	-	-	1.5
283	1.5	-	-	-	-	1.5
284	1.1	-	-	-	-	1.1
381	1.1	-	-	-	-	1.1
382	1.1	-	-	-	-	1.1
447	0.2	0.2	-	-	0.5	0.9
448	0.2	0.2	-	-	0.5	0.9
455	0.9	-	-	-	-	0.9
51	-	-	-	0.5	-	0.5
52	-	-	-	0.5	-	0.5
53	-	-	-	0.5	-	0.5
457	0.5	-	-	-	-	0.5
458	0.5	-	-	-	-	0.5
286	0.4	-	-	-	-	0.4
287	0.4	-	-	-	-	0.4
288	0.4	-	-	-	-	0.4
289	0.4	-	-	-	-	0.4
290	0.4	-	-	-	-	0.4
93	-	-	0.4	-	-	0.4
94	-	-	0.4	-	-	0.4
95	-	-	0.4	-	-	0.4
96	-	-	0.4	-	-	0.4
99	-	-	0.4	-	-	0.4
100	-	-	0.4	-	-	0.4
101	-	-	0.4	-	-	0.4
102	-	-	0.4	-	-	0.4
103	-	-	0.4	-	-	0.4
291	0.3	-	-	-	-	0.3
292	0.3	-	-	-	-	0.3
116	-	-	-	-	0.2	0.2
117	-	-	-	-	0.2	0.2
369	0.2	-	-	-	-	0.2
300	0.2	-	-	-	-	0.2
301	0.2	-	-	-	-	0.2
302	0.2	-	-	-	-	0.2
303	0.2	-	-	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild/free foods based on the 10 high-rate adult consumers is 3.9 kg y⁻¹

The observed 97.5th percentile rate based on 47 observations is 6.1 kg y⁻¹

Table 30. Adults' consumption rates of rabbits/hares from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Rabbit
60	10.8
61	10.8
62	10.8
281	7.9
283	7.9
72	6.8
73	6.8
395	3.6
192	1.4
193	1.4
369	0.5
370	0.5
455	0.5
286	0.3
287	0.3
288	0.3
289	0.3
290	0.3
51	0.3
52	0.3
53	0.3
300	0.2
301	0.2
302	0.2
303	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of rabbits/hares based on the 8 high-rate adult consumers is 8.2 kg y⁻¹

The observed 97.5th percentile rate based on 25 observations is 10.8 kg y⁻¹

Table 31. Adults' consumption rates of honey from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Honey
392	5.4
393	5.4
297	1.1

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of honey based on the 2 high-rate adult consumers is 5.4 kg y⁻¹

The observed 97.5th percentile rate based on 3 observations is 5.4 kg y⁻¹

Table 32. Adults' consumption rates of wild fungi from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Mushrooms
287	1.1
288	1.1
289	1.1
290	1.1
179	0.8
77	0.7
78	0.7
79	0.7
82	0.7
51	0.7
52	0.7
53	0.7
93	0.6
395	0.5
180	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild fungi based on the 14 high-rate adult consumers is 0.8 kg y⁻¹

The observed 97.5th percentile rate based on 15 observations is 1.1 kg y⁻¹

Table 33. Adults' consumption rates of venison from the Sizewell terrestrial survey area (kg y⁻¹)

Observation number	Venison
300	36.3
301	36.3
302	36.3
303	36.3
279	30.0
280	30.0
395	7.3
396	7.3
397	7.3
398	7.3
399	7.3
77	3.2
369	1.4
370	1.4
78	0.6
79	0.6
82	0.6
83	0.6
84	0.6

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of venison based on the 6 high-rate adult consumers is 34.2 kg y⁻¹

The observed 97.5th percentile rate based on 19 observations is 36.3 kg y⁻¹

Table 34. Children's consumption rates of green vegetables from the Sizewell terrestrial survey area (kg y⁻¹)

10-year-old age group (6 - 15 years old)

Observation number	Age	Broccoli	Brussel sprout	Cabbage	Cauliflower	Chard	Courgette	Cucumber	Herbs	Lettuce	Marrow	Total
124	15	-	6.8	-	5.0	1.9	4.6	5.7	-	1.0	-	25.0
90	12	-	-	-	3.7	-	3.7	-	0.3	1.4	-	9.0
80	8	1.7	1.0	5.6	-	-	-	-	-	0.1	0.4	8.8
81	11	1.7	1.0	5.6	-	-	-	-	-	0.1	0.4	8.8
131	10	-	-	-	-	-	-	4.3	-	-	-	4.3
98	7	-	-	1.9	-	-	0.1	-	-	1.6	0.1	3.8
59	6	-	-	1.6	-	0.5	-	-	-	-	-	2.1

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables for the 10-year-old age group based upon the 4 high-rate consumers is 12.9 kg y⁻¹

The observed 97.5th percentile rate based on 7 observations is 22.6 kg y⁻¹

1-year-old age group (0 - 5 years old)

Observation number	Age	Broccoli	Brussel sprout	Cabbage	Cauliflower	Chard	Courgette	Cucumber	Herbs	Lettuce	Marrow	Total
97	5	-	-	1.9	-	-	0.1	-	-	1.6	0.1	3.8
58	5	-	-	1.6	-	0.5	-	-	-	-	-	2.1

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of green vegetables for the 1-year-old age group based upon the 2 high-rate consumers is 2.9 kg y⁻¹

The observed 97.5th percentile rate based on 2 observations is 3.7 kg y⁻¹

Table 35. Children's consumption rates of other vegetables from the Sizewell terrestrial survey area (kg y⁻¹)

10-year-old age group (6 - 15 years old)

Observation number	Age	Broad bean	French bean	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
124	15	9.1	3.0	6.0	3.3	1.5	9.1	0.7	-	6.0	38.6
131	10	-	-	-	-	-	4.6	-	-	9.6	14.2
90	12	-	0.9	5.6	-	-	6.8	-	0.2	-	13.6
59	6	2.6	0.6	0.9	-	-	-	-	-	-	4.1
98	7	1.8	-	1.1	-	-	0.2	-	0.1	0.5	3.7
80	8	-	0.4	-	-	-	3.1	-	0.1	-	3.6
81	11	-	0.4	-	-	-	3.1	-	0.1	-	3.6

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of other vegetables for the 10-year-old age group based upon the 3 high-rate consumers is 22.1 kg y⁻¹

The observed 97.5th percentile rate based on 7 observations is 34.9 kg y⁻¹

1-year-old age group (0 - 5 years old)

Observation number	Age	Broad bean	French bean	Pea	Pepper	Pumpkin	Runner bean	Squash	Sweetcorn	Tomato	Total
97	5	1.8	-	1.1	-	-	0.2	-	0.1	0.5	3.7
58	5	1.8	0.6	0.9	-	-	-	-	-	-	3.3

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of other vegetables for the 1-year-old age group based upon the 2 high-rate consumers is 3.5 kg y⁻¹

The observed 97.5th percentile rate based on 2 observations is 3.7 kg y⁻¹

Table 36. Children's consumption rates of root vegetables from the Sizewell terrestrial survey area (kg y⁻¹)

10-year-old age group (6 - 15 years old)

Observation number	Age	Beetroot	Carrot	Garlic	Leek	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Turnip	Total
124	15	10.8	3.0	1.4	-	9.6	4.3	-	4.3	-	-	-	33.4
90	12	2.5	4.9	-	3.4	2.9	3.6	-	-	-	6.8	-	24.0
98	7	1.2	1.4	-	-	-	0.9	0.2	2.9	0.3	-	0.3	7.2
131	10	4.6	-	-	-	-	-	-	-	-	-	-	4.6
80	8	-	0.6	0.2	-	0.4	0.8	-	-	-	-	-	2.1
81	11	-	0.6	0.2	-	0.4	0.8	-	-	-	-	-	2.1
59	6	-	-	-	-	-	0.9	-	-	-	-	-	0.9

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables for the 10-year-old age group based upon the 2 high-rate consumers is 28.7 kg y⁻¹

The observed 97.5th percentile rate based on 7 observations is 32.0 kg y⁻¹

1-year-old age group (0 - 5 years old)

Observation number	Age	Beetroot	Carrot	Garlic	Leek	Onion	Parsnip	Radish	Shallot	Spring onion	Swede	Turnip	Total
97	5	1.2	1.4	-	-	-	0.9	0.2	1.0	0.3	-	0.3	5.3
58	5	-	-	-	-	-	0.9	-	-	-	-	-	0.9

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of root vegetables for the 1-year-old age group based upon the only high-rate consumer is 5.3 kg y⁻¹

The observed 97.5th percentile rate based on 2 observations is 5.2 kg y⁻¹

Table 37. Children's consumption rates of potato from the Sizewell terrestrial survey area (kg y⁻¹)

10-year-old age group (6 - 15 years old)

Observation number	Age	Potato
124	15	17.5
90	12	13.7
59	6	13.0
98	7	10.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of potato for the 10-year-old age group based upon the 4 high-rate consumers is 13.6 kg y⁻¹

The observed 97.5th percentile rate based on 4 observations is 17.2 kg y⁻¹

1-year-old age group (0 - 5 years old)

Observation number	Age	Potato
58	5	13.0
97	5	10.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of potato for the 1-year-old age group based upon the 2 high-rate consumers is 11.6 kg y⁻¹

The observed 97.5th percentile rate based on 2 observations is 12.9 kg y⁻¹

Table 38. Children's consumption rates of domestic fruit from the Sizewell terrestrial survey area (kg y⁻¹)

10-year-old age group (6 - 15 years old)

Observation number	Age	Apple	Blackberry	Blackcurrant	Blueberry	Gooseberry	Loganberry	Pear	Plum	Raspberry	Redcurrants	Rhubarb	Strawberry	Whitecurrant	Total
124	15	-	5.3	5.7	-	4.1	2.7	-	-	6.8	4.5	0.8	8.2	-	38.0
80	8	1.0	1.0	-	-	-	-	1.6	0.2	1.0	-	0.1	1.0	-	5.8
81	11	1.0	1.0	-	-	-	-	1.6	0.2	1.0	-	0.1	1.0	-	5.8
98	7	-	0.8	2.6	0.1	0.4	0.8	-	-	-	-	-	-	0.7	5.3
131	10	2.8	-	-	-	-	-	-	-	-	-	-	-	-	2.8
449	13	0.6	-	-	-	-	-	-	1.1	-	-	-	-	-	1.7
450	11	0.6	-	-	-	-	-	-	1.1	-	-	-	-	-	1.7
59	6	-	0.0	-	-	-	-	-	-	-	-	-	1.4	-	1.4
90	12	-	0.9	-	-	-	-	-	-	-	-	-	-	-	0.9
221	7	-	0.2	-	-	-	-	-	-	-	-	-	-	-	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit for the 10-year-old age group based upon the only high-rate consumer is 38.0 kg y⁻¹

The observed 97.5th percentile rate based on 10 observations is 30.7 kg y⁻¹

1-year-old age group (0 - 5 years old)

Observation number	Age	Apple	Blackberry	Blackcurrant	Blueberry	Gooseberry	Loganberry	Pear	Plum	Raspberry	Redcurrants	Rhubarb	Strawberry	Whitecurrant	Total
97	5	-	0.8	2.6	0.1	0.4	0.8	-	-	-	-	-	-	0.7	5.3
58	5	-	0.1	-	-	-	-	-	-	-	-	-	1.4	-	1.5
188	3	-	-	-	-	-	-	-	-	-	-	-	1.4	-	1.4
189	4	-	-	-	-	-	-	-	-	-	-	-	1.4	-	1.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of domestic fruit for the 1-year-old age group based upon the only high-rate consumer is 5.3 kg y⁻¹

The observed 97.5th percentile rate based on 4 observations is 5.0 kg y⁻¹

Table 39. Children's consumption rates of sheep meat from the Sizewell terrestrial survey area (kg y⁻¹)

10-year-old age group (6 - 15 years old)

Observation number	Age	Lamb
449	13	3.4
450	11	3.4

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of sheep meat for the 10-year-old age group based upon the 2 high-rate consumers is 3.4 kg y⁻¹

The observed 97.5th percentile rate based on 2 observations is 3.4 kg y⁻¹

Table 40. Children's consumption rates of eggs from the Sizewell terrestrial survey area (kg y⁻¹)

10-year-old age group (6 - 15 years old)

Observation number	Age	Chicken egg
90	12	11.4
98	7	8.6
449	13	3.0
450	11	3.0

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of eggs for the 10-year-old age group based upon the 2 high-rate consumers is 10.0 kg y⁻¹

The observed 97.5th percentile rate based on 4 observations is 11.2 kg y⁻¹

1-year-old age group (0 - 5 years old)

Observation number	Age	Chicken egg
97	5	8.6

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of eggs for the 1-year-old age group based upon the only high-rate consumer is 8.6 kg y⁻¹

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

Table 41. Children's consumption rates of wild/free foods from the Sizewell terrestrial survey area (kg y⁻¹)

10-year-old age group (6 - 15 years old)

Observation number	Age	Blackberry	Bullace plum	Chestnut	Total
449	13	0.2	0.2	-	0.5
450	11	0.2	0.2	-	0.5
98	7	-	-	0.2	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild/free foods for the 10-year-old age group based upon the 3 high-rate consumers is 0.4 kg y⁻¹

The observed 97.5th percentile rate based on 3 observations is 0.5 kg y⁻¹

1-year-old age group (0 - 5 years old)

Observation number	Age	Blackberry	Bullace plum	Chestnut	Total
97	5	-	-	0.2	0.2

Notes

Emboldened observations are the high-rate consumers

The mean consumption rate of wild/free foods for the 1-year-old age group based upon the only high-rate consumer is 0.2 kg y⁻¹

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

Table 42. Percentage contribution each food type makes to its terrestrial food group for adults

<p>Green vegetables</p> <p><i>Cabbage</i> 29.6 % Courgettes 15.4 % Brussel sprout 11.5 % Broccoli 11.4 % Cauliflower 7.7 % Lettuce 7.3 % Cucumber 4.8 % Asparagus 4.1 % Calabrese 2.4 % Spinach 2.0 % Kale 1.4 % Chard 1.2 % Artichoke 0.6 % Marrow 0.4 % Herbs 0.2 % Gherkin 0.1 % Rocket 0.03 %</p>	<p>Potato</p> <p><i>Potato</i> 100.0 %</p>	<p>Eggs</p> <p>Chicken egg 100.0 %</p>
<p>Other vegetables</p> <p><i>Runner bean</i> 33.4 % Broad bean 27.2 % Tomato 15.8 % Pea 12.0 % French bean 5.5 % Sweetcorn 2.9 % Pepper 1.2 % Aubergine 0.7 % Pumpkin 0.5 % Squash 0.4 % Butter Bean 0.2 % Chilli pepper 0.2 % Mangetout 0.1 %</p>	<p>Domestic fruit</p> <p><i>Apple</i> 25.2 % Strawberry 23.8 % Blackcurrant 8.9 % Rhubarb 8.2 % Raspberry 7.7 % Blackberry 5.5 % Damson 4.4 % Gooseberry 3.2 % Pear 3.0 % Redcurrants 2.6 % Plum 2.4 % Loganberry 1.8 % Whitecurrant 1.0 % Cherry 0.9 % Tayberry 0.7 % Blueberry 0.4 % Fig 0.1 % Peach 0.1 % Jostaberry 0.03 % Boysenberry 0.03 %</p>	<p>Wild/free foods</p> <p><i>Blackberry</i> 68.7 % Sloe 22.7 % Chestnut 5.5 % Elderberry 2.3 % Bullace plum 0.8 %</p>
	<p>Milk</p> <p><i>Cow's milk</i> 100.0 %</p>	<p>Honey</p> <p><i>Honey</i> 100.0 %</p>
<p>Root vegetables</p> <p>Beetroot 22.4 % <i>Onion</i> 19.8 % Carrot 15.9 % Leek 12.5 % Parsnip 10.2 % Swede 6.4 % Shallot 6.0 % Spring onion 1.5 % Garlic 1.1 % Artichoke 1.1 % Radish 0.9 % Celery 0.8 % Kohl rabi 0.7 % Celeriac 0.4 % Turnip 0.2 %</p>	<p>Wild fungi</p> <p>Mushrooms 100.0 %</p>	<p>Rabbits/hares</p> <p>Rabbit 100.0 %</p>
	<p>Cattle meat</p> <p>Beef 100.0 %</p>	<p>Venison</p> <p>Venison 100.0 %</p>
	<p>Pig meat</p> <p>Pork 100.0 %</p>	
	<p>Sheep meat</p> <p>Lamb 100.0 %</p>	
	<p>Poultry</p> <p>Pheasant 63.9 % Pigeon 14.7 % Partridge 11.1 % Chicken 10.3 %</p>	

Notes

Food types in emboldened italics were monitored by FSA in 2009 (EA, FSA, NIEA and SEPA, 2010).

Wheat was also monitored.

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

Table 43. Adults' occupancy rates on water in the Sizewell terrestrial survey area (h y⁻¹)

Observation number	Location	Activity	On water
648	Thorpeness Meare	Reedcutting	480
649	Thorpeness Meare	Reedcutting	480
647	Minsmere	Reedcutting	80

Table 44. Direct radiation occupancy rates for adults and children in the Sizewell area (h y⁻¹)

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
Within the nuclear licensed site area						
406	M	U	Working	950	950	1900
405	M	U	Working	570	570	1140
0 to 0.25 km zone						
456	F	45	Residing	8369	183	8552
402	M	U	Residing and working	7899	525	8424
455	F	46	Residing	6149	1925	8074
459	M	57	Residing, fishing and preparing fishing gear	5662	2080	7742
635	M	64	Residing	7464	180	7644
457	M	68	Residing	5820	1764	7584
458	F	67	Residing	5820	1764	7584
403	F	U	Residing and working	7416	48	7464
636	F	62	Residing	7204	180	7384
637	M	16	Residing	6736	180	6916
460	F	62	Residing	5988	328	6316
462	F	37	Residing	5418	90	5508
404	F	U	Working	2178	50	2228
622	M	43	Working	1824	96	1920
623	F	U	Working	1824	96	1920
461	M	U	Fishing and preparing fishing gear	-	1360	1360
624	F	U	Working	760	40	800
627	F	U	Visiting	570	30	600
625	F	U	Working	456	24	480
626	F	U	Working	456	24	480
586	M	65	Dog walking	-	262	262
587	F	65	Dog walking	-	262	262
628	M	66	Dog walking	-	240	240
87	M	40	Angling	-	234	234
77	M	77	Angling	-	200	200
594	M	70	Dog walking	-	175	175
271	M	50	Angling	-	170	170
629	M	61	Dog walking	-	168	168
630	F	61	Dog walking	-	168	168
595	F	78	Playing	-	162	162
596	F	49	Playing	-	162	162
597	M	15	Playing and swimming	-	162	162
598	M	13	Playing and swimming	-	162	162
44	M	9	Visiting	108	36	144
45	M	12	Visiting	108	36	144
601	M	74	Dog walking	-	120	120
602	M	36	Dog walking	-	56	56
122	M	48	Walking	-	50	50
123	F	44	Walking	-	50	50
124	M	15	Walking	-	50	50
171	M	48	Supervising youth group	-	50	50
172	F	47	Supervising youth group	-	50	50
603	F	33	Dog walking	-	39	39
604	F	3	Dog walking	-	39	39
106	M	49	Walking	-	33	33
107	F	46	Walking	-	33	33
175	M	59	Walking	-	30	30
176	F	49	Walking	-	30	30
588	M	19	Sunbathing	-	28	28
589	F	22	Sunbathing	-	28	28

Table 44. Direct radiation occupancy rates for adults and children in the Sizewell area (h y⁻¹)

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
590	F	54	Dog walking	-	9	9
127	M	68	Walking	-	7	7
128	F	65	Walking	-	7	7
133	M	49	Walking	-	6	6
134	F	52	Walking	-	6	6
152	F	57	Walking and swimming	-	6	6
591	M	35	Playing	-	5	5
592	F	35	Playing and swimming	-	5	5
593	F	1	Playing	-	5	5
>0.25 to 0.5 km zone						
42	M	76	Residing	6727	1278	8005
43	F	68	Residing	6727	1278	8005
228	M	63	Residing, fishing and preparing fishing gear	5756	300	6056
41	M	68	Staying at a holiday home	3090	210	3300
40	F	65	Staying at a holiday home	2690	610	3300
434	U	U	Working	552	2208	2760
435	U	U	Working	552	2208	2760
436	U	U	Working	552	2208	2760
437	U	U	Working	552	2208	2760
438	U	U	Working	552	2208	2760
439	U	U	Working	552	2208	2760
440	U	U	Working	552	2208	2760
441	U	U	Working	552	2208	2760
442	U	U	Working	552	2208	2760
443	U	U	Working	552	2208	2760
407	M	U	Working	1332	1332	2664
408	M	U	Working	1332	1332	2664
409	M	U	Working	1332	1332	2664
410	M	U	Working	1332	1332	2664
411	M	U	Working	1332	1332	2664
412	M	U	Working	1332	1332	2664
413	M	U	Working	1332	1332	2664
414	M	U	Working	2112	48	2160
415	M	U	Working	2112	48	2160
416	M	U	Working	2112	48	2160
417	M	U	Working	2112	48	2160
422	F	U	Working	2112	48	2160
423	F	U	Working	2112	48	2160
418	M	U	Working	540	1620	2160
419	M	U	Working	540	1620	2160
420	M	U	Working	540	1620	2160
421	M	U	Working	540	1620	2160
424	M	U	Working	540	1620	2160
425	M	U	Working	540	1620	2160
426	M	U	Working	540	1620	2160
427	M	U	Working	540	1620	2160
428	M	U	Working	540	1620	2160
429	M	U	Working	540	1620	2160
430	M	U	Working	540	1620	2160
431	M	U	Working	540	1620	2160
432	M	U	Working	540	1620	2160
433	M	U	Working	540	1620	2160
232	M	80	Sitting on the beach and swimming	-	1183	1183
233	F	80	Sitting on the beach and swimming	-	1183	1183

Table 44. Direct radiation occupancy rates for adults and children in the Sizewell area (h y⁻¹)

Observation Number	Sex	Age (years)	Main activity	Indoor occupancy	Outdoor occupancy	Total occupancy
230	F	50	Sitting on the beach	-	578	578
234	F	85	Sitting on the beach	-	390	390
229	M	63	Fishing and preparing fishing gear	-	300	300
231	M	50	Sitting on the beach	-	298	298
447	F	38	Dog walking	-	156	156
>0.5 to 1 km zone						
179	M	69	Residing	6452	2100	8552
180	F	61	Residing	7147	1260	8407
223	F	44	Residing	6187	1800	7987
222	M	46	Residing	5662	2325	7987
220	F	55	Residing	7194	675	7869
374	M	65	Residing and working	7298	224	7522
375	F	65	Residing and working	6878	644	7522
463	M	79	Residing	6510	920	7430
464	F	63	Residing	6510	920	7430
192	M	77	Residing	5380	1434	6814
193	F	74	Residing	5380	1434	6814
219	M	62	Residing	6175	550	6725
382	F	55	Residing and working	5845	448	6293
383	M	50	Residing and working	5845	448	6293
384	F	51	Residing and working	5845	448	6293
381	M	59	Residing and working	5621	672	6293
226	M	40	Residing (part time) and working	2424	1660	4084
225	M	34	Working	2526	64	2590
190	M	37	Residing (part time)	2496	-	2496
221	F	7	Visiting	2295	201	2496
385	M	54	Working	1018	980	1998
380	M	U	Working	260	1660	1920
378	F	29	Working	1860	50	1910
377	M	31	Working	1535	375	1910
376	M	32	Working	1380	530	1910
224	M	61	Working	-	1380	1380
181	F	86	Visiting	1008	336	1344
191	M	2	Visiting	1248	-	1248
379	F	U	Working	728	49	776
185	F	0	Visiting	650	23	672
182	F	31	Visiting	627	45	672
184	M	3	Visiting	627	45	672
183	M	34	Visiting	314	23	336
186	F	41	Visiting	314	23	336
187	M	34	Visiting	314	23	336
188	F	3	Visiting	314	23	336
189	M	4	Visiting	314	23	336
386	F	U	Working	275	5	280
387	F	U	Working	275	5	280
388	F	U	Working	275	5	280
389	F	U	Working	275	5	280
390	F	U	Working	155	5	160
391	F	U	Working	155	5	160
599	M	54	Visiting and sunbathing	32	24	56
600	F	16	Visiting and sunbathing	32	24	56

Notes

U = Unknown

Table 45. Analysis of direct radiation occupancy rates for adults and children in the Sizewell area

Number of hours	Number of observations
Within the nuclear licensed site area	
1000 to 2000	2
0 to 8760	2
0 to 0.25 km zone	
8000 to 8760	3
7000 to 8000	6
6000 to 7000	2
5000 to 6000	1
4000 to 5000	0
3000 to 4000	0
2000 to 3000	1
1000 to 2000	3
0 to 1000	43
0 to 8760	59
>0.25 to 0.5 km zone	
8000 to 8760	2
7000 to 8000	0
6000 to 7000	1
5000 to 6000	0
4000 to 5000	0
3000 to 4000	2
2000 to 3000	37
1000 to 2000	2
0 to 1000	5
0 to 8760	49
>0.5 to 1 km zone	
8000 to 8760	2
7000 to 8000	7
6000 to 7000	7
5000 to 6000	0
4000 to 5000	1
3000 to 4000	0
2000 to 3000	3
1000 to 2000	8
0 to 1000	17
0 to 8760	45

Table 46. Gamma dose rate measurements for the Sizewell direct radiation survey ($\mu\text{Gy h}^{-1}$)

Residences and businesses

Location	Indoor substrate	Indoor gamma dose rate at 1 metre ^a	Outdoor substrate	Outdoor gamma dose rate at 1 metre ^a
Residence 1	Concrete	0.084	Grass	0.054
Residence 2	Wood	0.087	Grass	0.060
Residence 3	Concrete	0.078	Grass	0.067
Residence 4	Wood	0.068	Grass	0.062
Residence 5	Concrete	0.073	Grass	0.067
Residence 6	Wood	0.086	Grass	0.053
Residence 7	Concrete	0.064	Grass	0.062
Residence 8	Concrete	0.078	Grass	0.052
Residence 9	Concrete	0.086	Grass	0.061
Residence 10	Wood	0.095	Grass	0.061
Residence 11	Concrete	0.079	Grass	0.066
Residence 12	Concrete	0.088	Grass	0.071
Residence 13 (with associated business)	Wood	0.053	Grass	0.059
Residence 14 (with associated business)	Concrete	0.072	Grass	0.052
Business 1	Concrete	0.053	Grass	0.049
Business 2	-	Not taken	Grass	0.059
Business 3	Wood	0.052	Sand and stones	0.061
Business 4	Wood	0.070	Sandy soil	0.065
Business 5	-	Not taken	Grass	0.067

Backgrounds

Location	NGR	Substrate	Background gamma dose rate at 1 metre
Background 1	North of Aldeburgh	Grass	0.048
Background 2	Westleton Heath	Grass	0.052

Notes

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

Table 47. Combinations of adult pathways for consideration in dose assessments in the Sizewell area

Combination number	Fish	Crustaceans	Molluscs	Marine plants/algae	Wildfowl	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 boat on mud	Intertidal occupancy over mud and stones	Intertidal occupancy over mud	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over salt marsh	Handling fishing gear	Handling sediment	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area	Occupancy on water in the terrestrial survey area	Indoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary				
1																																								
2	X	X								X																														
3				X																					X															
4	X					X	X	X		X											X	X					X	X											X	
5			X																					X			X				X									
6																							X													X				
7	X	X				X	X		X	X						X	X											X					X					X	X	
8	X	X		X	X	X	X	X	X	X						X	X	X			X													X				X	X	
9						X	X	X	X	X						X	X											X												
10						X	X	X	X	X						X	X	X	X									X					X					X	X	
11						X	X	X	X	X						X	X				X																			
12						X	X	X	X	X		X															X												X	
13																											X							X					X	
14	X					X	X	X	X	X		X	X								X																	X	X	
15	X					X	X	X	X	X						X		X																				X	X	
16	X	X				X	X	X	X	X						X	X	X	X																				X	X
17	X				X	X		X								X											X		X	X				X				X	X	
18																																								
19																																								
20																									X															
21					X			X	X	X		X				X	X											X										X	X	
22	X					X	X	X	X	X						X	X																						X	
23						X	X	X	X	X		X	X	X	X	X	X	X			X																			
24						X	X	X	X			X	X	X			X																							
25						X	X		X	X						X				X																				
26					X											X	X	X	X		X																			
27	X																																						X	
28																																								
29	X																																						X	
30	X	X																																					X	
31					X							X	X	X	X		X	X			X																			
32					X					X		X	X	X	X						X																			
33	X				X											X	X	X			X	X																		
34	X									X					X	X	X																						X	
35	X																									X														
36	X	X				X	X	X	X	X						X												X											X	X
37																																								
38	X	X	X																																					
39																																								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 for intertidal occupancy over stones and occupancy on water in the aquatic survey area.

Annex 1. Adults' consumption rates (kg y⁻¹ or l y⁻¹) and occupancy rates (h y⁻¹) in the Sizewell area

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Marine plants/algae	Wildfowl	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 stones	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area	Occupancy on water in the terrestrial survey area	Indoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary
93	M	68	-	-	-	-	-	7.5	11.1	14.5	41.0	10.6	-	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94	F	U	-	-	-	-	-	7.5	11.1	14.5	41.0	10.6	-	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	F	29	-	-	-	-	-	7.5	11.1	14.5	41.0	10.6	-	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96	F	29	-	-	-	-	-	7.5	11.1	14.5	41.0	10.6	-	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99	M	62	-	-	-	-	-	7.5	11.1	14.5	41.0	10.6	-	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-
100	F	53	-	-	-	-	-	7.5	11.1	14.5	41.0	10.6	-	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101	F	29	-	-	-	-	-	7.5	10.6	14.5	41.0	10.6	-	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102	F	21	-	-	-	-	-	7.5	11.1	14.5	41.0	10.6	-	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
103	M	23	-	-	-	-	-	7.5	11.1	12.7	41.0	10.6	-	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
104	M	75	-	-	-	-	-	30.2	55.1	65.5	88.5	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105	F	69	-	-	-	-	-	30.2	55.1	65.5	88.5	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106	M	49	-	-	-	-	-	10.1	16.9	21.7	28.4	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	33
107	F	46	-	-	-	-	-	10.1	16.9	21.7	28.4	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	33
108	M	80	-	-	-	-	-	5.5	16.9	21.7	28.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
109	F	75	-	-	-	-	-	5.5	16.9	21.7	28.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	M	18	-	-	-	-	-	10.1	16.9	21.7	28.4	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111	M	51	-	-	-	-	-	14.3	67.6	7.0	68.3	1.4	-	-	-	-	-	27.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
112	F	48	-	-	-	-	-	14.3	28.9	7.0	68.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
113	F	44	-	-	-	-	-	14.3	28.9	7.0	68.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
114	M	60	-	-	-	-	-	14.3	28.9	7.0	68.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
115	M	47	-	-	-	-	-	14.3	20.4	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
116	M	59	-	-	-	-	-	24.7	30.4	25.4	28.3	10.6	-	-	-	-	-	8.8	0.2	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-
117	F	54	-	-	-	-	-	24.7	30.4	25.4	28.3	10.6	-	-	-	-	-	8.8	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
118	M	38	-	-	-	-	-	24.7	29.7	16.1	28.3	9.3	-	-	-	-	-	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
119	F	36	-	-	-	-	-	24.7	29.7	16.1	28.3	9.3	-	-	-	-	-	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120	F	36	-	-	-	-	-	16.4	1.0	16.1	28.3	9.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
121	M	39	-	-	-	-	-	16.4	1.0	16.1	28.3	13.9	-	-	-	-	-	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
122	M	48	-	-	-	-	-	48.8	56.8	43.4	26.2	38.0	-	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	-	-	-	-	100
123	F	44	-	-	-	-	-	34.2	56.8	43.4	26.2	38.0	-	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	-	-	-	-	100
125	M	74	-	-	-	-	-	30.9	27.9	63.0	73.9	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126	F	70	-	-	-	-	-	30.9	27.9	63.0	73.9	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
127	M	68	-	-	-	-	-	51.5	35.4	13.6	-	17.1	-	-	-	-	-	5.0	-	-	-	-	-	-	-	-	-	22	-	-	-	-	-	-	-	-	7
128	F	65	-	-	-	-	-	51.5	35.4	13.6	-	17.1	-	-	-	-	-	5.0	-	-	-	-	-	-	-	-	-	22	-	-	-	-	-	-	-	-	7
129	F	43	-	-	-	-	-	12.5	27.5	9.2	-	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
130	M	43	-	-	-	-	-	12.5	27.5	9.2	-	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
132	F	70	-	-	-	-	-	4.3	19.2	6.2	-	16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
133	M	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	6
134	F	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	6
135	M	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-	-
136	F	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	-	-	-	-	-	-	-	-	-
137	M	63	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	15	-	-	-	-

Annex 1. Adults' consumption rates (kg y⁻¹ or l y⁻¹) and occupancy rates (h y⁻¹) in the Sizewell area

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Marine plants/algae	Wildfowl	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 stones	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area	Occupancy on water in the terrestrial survey area	Indoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary	
138	F	63	0.6																							19												
139	M	56																									9						2					
140	F	42																									9											
145	M	56																									3											
146	F	54																									3											
147	F	21																									2						1					
149	F	42																									1						1					
152	F	57	11.7																								13						21					6
153	F	31	3.9																								28											
154	M	50	1.8																								54											
155	M	54	0.2																								77											
156	F	52	0.2																								77											
157	M	41																									10						2	1				
158	F	41																									10						2	1				
160	F	29																									3											
165	M	45	3.0																								84											
166	M	40																									84							1				
168	M	48																									71											
169	F	47																									70						2					
171	M	48																									178						1					50
172	F	47																									89						1					50
175	M	59																									62						1	1				30
176	F	49																									62						1	1				30
177	F	29																									23						2					
178	M	37																									21							8				
179	M	69	0.4				24.0	52.1	35.7	90.0	27.9				19.0	4.2						0.8														6452	2100	
180	F	61	0.4				24.0	52.1	35.7	90.0	27.9				19.0	4.2					0.2															7147	1260	
181	F	86									6.8																										1008	336
182	F	31									6.8																										627	45
183	M	34									6.8																										314	23
186	F	41									6.8																										314	23
187	M	34									6.8																										314	23
190	M	37																																			2496	
192	M	77	6.7				40.8	46.9	27.2	34.8	57.4						12.8		1.4														6				5380	1434
193	F	74	6.7				40.8	46.9	27.2	34.8	57.4						12.8		1.4														6				5380	1434
194	M	67	2.3				36.7	58.7	20.2	112.2							3.6	41.6																				
195	F	67	2.3				36.7	58.7	20.2	112.2								41.6																				
196	M	59																														238			1120			
197	M	26																													56			448				
198	F	79	4.6																																			
199	M	39	0.3																								25							1				

Annex 1. Adults' consumption rates (kg y⁻¹ or l y⁻¹) and occupancy rates (h y⁻¹) in the Sizewell area

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Marine plants/algae	Wildfowl	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 stones	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area	Occupancy on water in the terrestrial survey area	Indoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary
299	M	U	-	-	-	-	-	-	-	-	11.8	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
300	F	45	-	-	-	-	1.8	-	-	-	-	-	-	-	-	-	3.0	8.9	0.2	0.2	-	-	-	36.3	-	-	-	-	-	-	-	-	-	-	-	-	-
301	M	56	-	-	-	-	1.8	-	-	-	-	-	-	-	-	-	3.0	8.9	0.2	0.2	-	-	-	36.3	-	-	-	-	-	-	-	-	-	-	-	-	-
302	F	21	-	-	-	-	1.8	-	-	-	-	-	-	-	-	-	3.0	8.9	0.2	0.2	-	-	-	36.3	-	-	-	-	-	-	-	-	-	-	-	-	-
303	M	17	-	-	-	-	1.8	-	-	-	-	-	-	-	-	-	3.0	8.9	0.2	0.2	-	-	-	36.3	-	-	-	-	-	-	-	-	-	-	-	-	-
304	M	56	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	116	-	-	
305	F	U	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
306	U	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	216	-	-	
307	U	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	216	-	-	
308	U	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	216	-	-	
309	U	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	216	-	-	
310	U	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	216	-	-	
311	M	68	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	96	-	-	
312	M	24	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	96	-	-	
313	M	27	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	96	-	-	
314	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	411	-	411	-	823	-	-	-	-	-	-	-	-	-
315	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	
316	U	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	
317	U	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	
318	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
319	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
320	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
321	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
322	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
323	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
324	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
325	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
326	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
327	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
328	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
329	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
330	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
331	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
332	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
333	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	
334	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192	-	-	
335	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192	-	-	
336	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192	-	-	
337	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192	-	-	
338	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192	-	-	
339	M	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192	-	-	

Annex 1. Adults' consumption rates (kg y⁻¹ or l y⁻¹) and occupancy rates (h y⁻¹) in the Sizewell area

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Marine plants/algae	Wildfowl	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 stones	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area	Occupancy on water in the terrestrial survey area	Indoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary				
469	M	59	2.3																																						
470	F	57	2.3																									48													
471	M	56																										48													
472	M	36																										24													
473	F	35																										8													
474	F	27																										8													
475	M	53	22.7																								233														
476	F	53	22.7																									200	600												
477	M	35																										40						5							
478	F	32																									105								7						
481	M	48																								81								12							
482	F	44																								81								12							
485	M	55																								9		12													
486	F	53																								9		12													
487	M	41																								90								10							
488	F	39																								90								10							
491	F	48																								70								35							
492	M	16																								70								35							
495	F	42																								32	18						32								
496	F	19																								32	12						32		6						
497	F	16																								32	12						32		6						
501	M	30																								18							18								
502	F	30																								18							18								
506	F	40																								9							9								
507	M	48																								9							9								
510	M	55																																		390					
511	M	45																																		390					
512	M	30																																		144					
513	M	64																																144	150						
514	F	60																																		150					
515	M	55																																		350					
516	F	U																																		350					
517	U	U																																		140					
518	U	U																																		140					
519	U	U																																		140					
520	M	73																																		24					
521	M	70	11.3	1.9																																36					
523	M	U																																			375				
524	M	U																																			72				
525	M	U																							8												290				
526	M	U																							5												200				

Annex 1. Adults' consumption rates (kg y⁻¹ or l y⁻¹) and occupancy rates (h y⁻¹) in the Sizewell area

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Marine plants/algae	Wildfowl	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 stones	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Intertidal occupancy over boat on mud	Handling fishing gear	Handling sediment	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area	Occupancy on water in the terrestrial survey area	Indoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary			
622	M	43	28.1																																	1824	96			
623	F	U																																			1824	96		
624	F	U																																			760	40		
625	F	U																																			456	24		
626	F	U																																			456	24		
627	F	U	28.1																																		570	30		
628	M	66																																				240		
629	M	61																																				168		
630	F	61																																				168		
631	M	52																																				72		
632	M	56																																				72		
633	M	73																																				900		
634	F	72																																				900		
635	M	64	0.9						3.0		10.1	2.0						11.9																				7464	180	
636	F	62	0.9						3.0		10.1	2.0						11.9																				7204	180	
637	M	16	0.9						3.0		10.1	2.0						11.9																				6736	180	
638	M	U	11.0	0.9	0.4																										299			595						
639	M	U	11.0	0.9																											299			595						
640	M	U																													299			595						
641	M	U																													299			595						
642	M	46																													212			212						
643	F	U	11.0	0.9	0.4																																			
644	M	58			1.7																										8			150			8	16		
645	M	87			1.7																																			
647	M	U																																				80		
648	M	U																																				480		
649	M	U																																				480		

Notes
 Emboldened observations are the high-rate individuals
 U = Unknown

Annex 2. Children's consumption rates (kg y⁻¹) and occupancy rates (h y⁻¹) in the Sizewell area

Observation number	Sex	Age (years)	Fish	Crustaceans	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Sheep meat	Eggs	Wild/free foods	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Handling fishing gear	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area	Indoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary
10-year-old age group (6 - 15 year old)																						
10	M	9	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	F	7	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	M	9	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	108	36	-
45	M	12	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	108	36	-
59	F	6	-	-	-	2.1	4.1	0.9	13.0	1.4	-	-	-	-	-	-	-	-	-	-	-	-
80	M	8	-	-	-	8.8	3.6	2.1	-	5.8	-	-	-	-	-	-	-	-	-	-	-	-
81	M	11	-	-	-	8.8	3.6	2.1	-	5.8	-	-	-	-	-	-	-	-	-	-	-	-
90	M	12	-	-	-	9.0	13.6	24.0	13.7	0.9	-	11.4	-	-	-	-	-	-	-	-	-	-
98	M	7	-	-	-	3.8	3.7	7.2	10.2	5.3	-	8.6	0.2	-	-	-	-	-	-	-	-	-
124	M	15	-	-	-	25.0	38.6	33.4	17.5	38.0	-	-	-	-	50	-	-	-	-	-	-	100
131	F	10	-	-	-	4.3	14.2	4.6	-	2.8	-	-	-	-	-	-	-	-	-	-	-	-
141	F	10	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	5	-	-	-	-
142	M	11	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	5	-	-	-	-
143	M	8	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	5	-	-	-	-
144	F	7	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	5	-	-	-	-
148	M	14	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-
151	M	8	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-
161	M	12	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	1	-	-	-
162	M	10	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	1	-	-	-
163	M	9	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	1	-	-	-
167	F	7	-	-	-	-	-	-	-	-	-	-	-	-	84	-	-	-	1	-	-	-
170	F	11	-	-	-	-	-	-	-	-	-	-	-	-	72	-	-	-	-	-	-	-
173	F	6	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-	1	-	-	-	-
174	M	9	-	-	-	-	-	-	-	-	-	-	-	-	39	-	-	1	-	-	-	-
211	F	7	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
221	F	7	0.2	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	2295	201	-

Annex 2. Children's consumption rates (kg y⁻¹) and occupancy rates (h y⁻¹) in the Sizewell area

Observation number	Sex	Age (years)	Fish	Crustaceans	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Sheep meat	Eggs	Wild/free foods	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Handling fishing gear	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area	Indoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary
555	F	14	20.8	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
561	F	12	14.1	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
579	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	1	-	-
580	F	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	1	-	-
581	M	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	1	-	-
583	M	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	1	-	-
597	M	15	-	-	-	-	-	-	-	-	-	-	-	-	-	62	-	-	100	-	-	162
598	M	13	-	-	-	-	-	-	-	-	-	-	-	-	-	62	-	-	100	-	-	162
618	M	9	13.4	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
619	M	6	6.7	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
646	M	11	17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-year-old age group (0 - 5 years old)																						
4	F	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64	-	-	3	-	-
58	M	5	-	-	-	2.1	3.3	0.9	13.0	1.5	-	-	-	-	-	-	-	-	-	-	-	-
97	M	5	-	-	-	3.8	3.7	5.3	10.2	5.3	-	8.6	0.2	-	-	-	-	-	-	-	-	-
150	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-
159	F	4	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	1	-	-
164	M	4	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	1	-	-
184	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	627	45
185	F	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	650	23
188	F	3	-	-	-	-	-	-	-	1.4	-	-	-	-	-	-	-	-	-	-	314	23
189	M	4	-	-	-	-	-	-	-	1.4	-	-	-	-	-	-	-	-	-	-	314	23
191	M	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1248	-
201	M	4	0.2	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-	1	-	-
202	F	2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-	1	-	-
212	M	5	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
258	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	-	-	-	-	-

Annex 2. Children's consumption rates (kg y⁻¹) and occupancy rates (h y⁻¹) in the Sizewell area

Observation number	Sex	Age (years)	Fish	Crustaceans	Marine plants/algae	Green vegetables	Other vegetables	Root vegetables	Potato	Domestic fruit	Sheep meat	Eggs	Wild/free foods	Intertidal occupancy over salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Handling fishing gear	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area	Indoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary
259	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	-	-	2	-	-
270	F	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-
357	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-
358	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-
468	F	5	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-
490	F	2	-	-	-	-	-	-	-	-	-	-	-	-	90	-	-	-	-	10	-	-
505	F	4	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	18	-	-	-	-
584	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	1	-	-
593	F	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	5
604	F	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39

Notes

U=Unknown

Emboldened observations are the high-rate individuals

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

Details of activity	Exposure pathways involved	Estimated rate
None identified	None identified	Not applicable

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

Group	Ratio child/adult ^a	
	1-year-old ^e	10-year-old ^e
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

^aExcepting notes b and c, consumption ratios were derived from Byrom et al., (1995) which presented data for infants aged 6 to 12 months (classified here as 1-year-old) and children aged 10 to 11 years (classified here as 10-year-old).

^bRatios were derived from Smith and Jones, (2003) which presented data for infants and children.

^cRatios were derived from FSA data for wild fruit and nuts for infants and 10-year-old children.

^dGame includes rabbits/hares and venison.

^eNote 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 Sizewell area, for use in foetal dose assessments

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Marine plants/algae	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 salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Handling fishing gear	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area inoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary
2	F	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
3	F	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64	-	-	3	-	-
9	F	33	-	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-
37	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	232	-
38	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	232	-
48	F	40	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	112	-	-	-	-
50	F	31	35.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	F	30	-	-	-	-	-	13.5	25.5	4.3	64.8	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69	F	25	-	-	-	-	-	34.3	21.9	17.0	4.5	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76	F	34	-	-	-	-	-	25.7	16.2	56.6	12.5	12.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79	F	40	0.5	-	-	-	-	17.6	7.3	4.2	-	11.6	-	-	-	-	-	-	-	-	-	0.7	0.6	-	-	-	-	-	-	-
82	F	19	0.5	-	-	-	-	19.5	7.2	4.2	-	11.6	-	-	-	-	-	-	-	-	-	0.7	0.6	-	-	-	-	-	-	-
84	F	28	0.5	-	-	-	-	19.5	7.0	3.8	-	11.6	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-
88	F	38	-	-	-	-	-	17.8	40.7	48.1	27.3	1.8	-	-	-	-	19.1	-	-	-	-	-	-	-	-	-	-	-	-	-
89	F	16	-	-	-	-	-	9.0	20.4	24.0	13.7	0.9	-	-	-	-	19.1	-	-	-	-	-	-	-	-	-	-	-	-	-
94	F	U	-	-	-	-	-	7.5	11.1	14.5	41.0	10.6	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-
95	F	29	-	-	-	-	-	7.5	11.1	14.5	41.0	10.6	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-
96	F	29	-	-	-	-	-	7.5	11.1	14.5	41.0	10.6	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-
101	F	29	-	-	-	-	-	7.5	10.6	14.5	41.0	10.6	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-
102	F	21	-	-	-	-	-	7.5	11.1	14.5	41.0	10.6	-	-	-	-	34.2	0.4	-	-	-	-	-	-	-	-	-	-	-	-
113	F	44	-	-	-	-	-	14.3	28.9	7.0	68.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
119	F	36	-	-	-	-	-	24.7	29.7	16.1	28.3	9.3	-	-	-	-	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-
120	F	36	-	-	-	-	-	16.4	1.0	16.1	28.3	9.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
123	F	44	-	-	-	-	-	34.2	56.8	43.4	26.2	38.0	2.7	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	100
129	F	43	-	-	-	-	-	12.5	27.5	9.2	-	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140	F	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-
147	F	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-
149	F	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-
153	F	31	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	-	-	-	-	-
158	F	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	2	1	-	-
160	F	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-

Annex 5. Consumption rates (kg y⁻¹) and occupancy rates (h y⁻¹) for women of childbearing age^a in the Sizewell area, for use in foetal dose assessments

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Marine plants/algae	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 salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Handling fishing gear	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area in indoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary	
177	F	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-	2	-	-	-	
182	F	31	-	-	-	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	627	45
186	F	41	-	-	-	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	314	23
200	F	41	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-	1	-	-
210	F	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
223	F	44	-	-	-	-	0.3	18.0	-	-	-	6.6	-	-	-	-	6.8	-	-	-	-	-	-	-	-	-	-	-	-	6187	1800
238	F	U	8.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
241	F	U	15.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
245	F	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-
246	F	40	22.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400	-	-	-	-	-
248	F	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	-	-	-
256	F	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	-	-	-	-	-
264	F	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	5	-	-	-	-
269	F	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-
274	F	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-	-
277	F	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	2	-	-
279	F	27	-	-	-	-	2.8	-	-	8.0	28.0	0.5	26.0	-	-	9.0	-	6.3	-	-	-	30.0	-	-	5	-	-	-	80	-	-
292	F	42	-	-	-	-	32.9	28.5	62.3	47.8	-	23.7	12.7	2.8	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
302	F	21	-	-	-	-	1.8	-	-	-	-	-	-	-	-	3.0	8.9	0.2	0.2	-	-	36.3	-	-	-	-	-	-	-	-	-
305	F	U	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
315	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-
326	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-
327	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-
328	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-
329	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-
330	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-
331	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-
332	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-
333	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-
353	F	U	2.8	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
356	F	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-

Annex 5. Consumption rates (kg y⁻¹) and occupancy rates (h y⁻¹) for women of childbearing age^a in the Sizewell area, for use in foetal dose assessments

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Marine plants/algae	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 salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Handling fishing gear	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area in indoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary		
364	F	43	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	108	-	-		
367	F	U	-	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	
371	F	20	-	-	-	-	-	-	-	-	-	0.2	37.8	10.1	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
378	F	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1860	50	
379	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	728	49	
386	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	275	5	
387	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	275	5	
388	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	275	5	
389	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	275	5	
390	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	155	5	
391	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	155	5	
392	F	U	-	-	-	-	-	3.5	8.8	-	7.6	23.8	-	-	-	-	8.2	-	-	5.4	-	-	-	-	-	-	-	-	-	-	-	-
397	F	U	-	-	-	-	7.0	-	-	-	-	-	-	-	-	4.8	-	-	-	-	-	7.3	-	-	-	-	-	-	-	-	-	-
398	F	U	-	-	-	-	7.0	-	-	-	-	-	-	-	-	4.8	-	-	-	-	-	7.3	-	-	-	-	-	-	-	-	-	-
401	F	U	-	-	-	-	-	-	-	-	-	-	23.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
403	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7416	48	
404	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2178	50	
422	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2112	48	
423	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2112	48	
446	F	U	9.6	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
447	F	38	-	0.3	-	-	-	-	-	-	-	1.7	-	-	3.4	-	3.0	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	156
462	F	37	-	-	-	-	-	-	-	-	38.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5418	90	
466	F	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-
473	F	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-
474	F	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	233	-	-	-	-	-	-	-
478	F	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	105	-	-	-	7	-	-	-
482	F	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	81	-	-	-	12	-	-	-	-
488	F	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	-	-	-	10	-	-	-	-
495	F	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	18	-	-	32	-	-	-	-	-
496	F	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	12	-	-	32	6	-	-	-	-
497	F	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	12	-	-	32	6	-	-	-	-

Annex 5. Consumption rates (kg y⁻¹) and occupancy rates (h y⁻¹) for women of childbearing age^a in the Sizewell area, for use in foetal dose assessments

Observation number	Sex	Age (years)	Fish	Crustaceans	Molluscs	Marine plants/algae	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 salt marsh	Intertidal occupancy over sand	Intertidal occupancy over sand and stones	Intertidal occupancy over stones	Handling fishing gear	Occupancy in water in the aquatic survey area	Occupancy on water in the aquatic survey area in indoor occupancy within 1 km of the site boundary	Outdoor occupancy within 1 km of the site boundary
502	F	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	18	-	-	-
506	F	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	9	-	-	-
516	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350	-	-
539	F	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-
541	F	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	-	-
549	F	22	28.1	0.9	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
554	F	19	28.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
558	F	42	14.1	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
567	F	U	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
569	F	U	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
571	F	U	42.6	11.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
578	F	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-
582	F	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-
589	F	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	-	-	-	28
592	F	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	1	-	-	5
600	F	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	32	24
603	F	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39
606	F	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600	-
617	F	34	26.8	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
623	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1824	96
624	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	760	40
625	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	456	24
626	F	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	456	24
627	F	U	28.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	570	30
643	F	U	11.0	0.9	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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 Sizewell area

Profile Name	Pathway Name																											
	Number of individuals	Crustacea	Direct radiation ^a	Eggs	Fish - Sea	Fruit - Domestic	Fruit and nuts - Wild	Gamma ext - Sediment ^b	Honey	Marine plants/algae	Meat - Cow	Meat - Game ^c	Meat - Pig	Meat - Poultry	Meat - Sheep	Milk	Mollusca	Mushrooms	Occupancy IN water	Occupancy ON water	Occupancy ON water (terrestrial survey area)	Plume (IN; 0-0.25km) ^d	Plume (MID; >0.25-0.5km) ^d	Plume (OUT; >0.5-1.0km) ^d	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root
	kg	-	kg	kg	kg	kg	h	kg	kg	kg	kg	kg	kg	kg	kg	l	kg	kg	h	h	h	h	h	h	kg	kg	kg	kg
Crustacean consumers	5	13.9	0.4	-	24.1	0.4	0.6	20	-	-	-	3.6	-	1	-	-	0.1	-	430	-	-	1270	-	-	-	-	-	-
Occupants for direct radiation	142	0.3	1	0.9	1.4	3.5	0.1	40	-	-	-	0.1	0.3	0.2	0.1	-	-	-	30	-	740	860	1000	3.1	4.7	4.1	2.7	
Egg consumers	21	-	0.1	29.6	0.2	5.4	0.3	20	-	-	9	0.1	10.1	1.4	0.5	52.1	-	0.2	-	-	400	-	-	12.6	23.9	34.9	14.2	
Sea fish consumers	33	2.3	0.1	-	28.1	0.3	0.1	60	-	-	-	0.7	-	0.5	-	-	1	-	340	-	80	190	-	2	3.3	7.5	4.6	
Domestic fruit consumers	13	0.3	0.6	2.5	2.7	44.3	-	10	0.8	-	0.4	0.2	2.9	2	0.7	-	-	0.1	-	-	20	-	3500	25.3	49.1	43	29.3	
Wild fruit and nut consumers	10	0.8	0.2	-	4.8	5.5	3.9	10	-	-	5.2	11.6	-	5.3	-	-	-	-	10	20	-	-	-	-	23.5	25	51.1	35.3
Occupants for exposure - sediment	2	-	-	-	-	-	-	2300	-	-	-	-	-	-	-	-	-	-	280	-	-	-	-	-	-	-	-	-
Honey consumers	2	-	-	8.2	-	24.3	-	-	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	8.8	7.6	-
Marine plants/algae consumers	4	-	-	-	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cattle meat consumers	18	-	-	5.9	-	0.3	0.9	-	-	-	31.8	4	17.4	2.7	1.9	60.8	-	0.3	-	10	-	-	-	-	7	8.9	8.4	7.8
Game meat consumers	13	0.6	-	2.7	0.5	0.1	1.2	10	-	-	4	25	-	5.9	-	-	-	-	10	10	-	-	-	-	11.6	6.7	22.3	16.3
Pig meat consumers	7	0.1	0.3	15.2	-	8.6	0.3	-	-	-	27	0.2	35.7	3.7	2.8	156.4	-	0.8	-	-	-	-	2420	15.5	29.6	25.7	10.2	
Poultry meat consumers	20	0.5	0.1	5.8	3.7	6.4	1.3	-	-	-	12.1	10.8	10.6	7.5	0.6	54.8	-	0.2	-	10	-	-	-	680	21.4	21.5	33.3	26.2
Sheep meat consumers	18	0.1	0.2	6.3	-	3.6	0.3	-	-	-	26.3	0.3	19.5	1.7	2.7	60.8	-	0.3	-	-	-	-	10	940	9.7	14.7	15.3	10.9
Milk consumers	5	-	-	21.3	-	0.8	0.4	-	-	-	37.8	0.3	42.5	5.2	2.3	219	-	0.9	-	-	-	-	-	-	12.1	20.5	-	-
Mollusc consumers	8	0.6	-	-	21.1	-	-	20	-	-	-	-	-	-	-	-	4.2	-	-	400	-	-	-	-	-	-	-	-
Mushroom consumers	14	0.7	0.1	8.5	1	8.4	0.5	30	-	-	10.8	1.9	13.5	1.9	0.9	62.6	-	0.8	-	-	10	-	610	19	18.2	12.3	8.6	
Occupancy IN water	2	-	-	-	-	0.2	3.1	-	-	-	13	16.4	-	4.5	-	-	-	-	110	120	-	-	-	-	-	-	14	4
Occupancy ON water	15	0.6	0.1	-	12.9	-	-	10	-	-	-	0.2	-	0.2	-	0.7	-	-	1980	-	610	-	-	-	-	0.1	0.1	-
Occupancy ON water (terrestrial survey area)	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480	-	-	-	-	-	-	-	-
Occupants for plume pathways (inner area)	12	0.1	1	6.3	2.2	1.3	0.2	90	-	-	-	0.5	-	0.6	-	-	-	-	110	-	7430	-	-	-	1.3	3	6.2	0.2
Occupants for plume pathways (mid area)	15	1.2	1	-	1.2	0.1	-	30	-	-	-	-	-	-	-	-	-	-	30	-	-	3750	-	-	-	-	-	-
Occupants for plume pathways (outer area)	17	0.4	1	1.7	2.1	17.6	0.1	30	-	-	-	0.2	2.2	1.5	0.5	-	-	0.1	-	-	-	-	7080	10.8	21.3	21.6	10.2	
Green vegetable consumers	28	0.3	0.2	3.9	2.2	11.3	0.6	10	-	-	1.9	1.8	0.9	2.1	0.2	-	-	0.1	-	-	10	-	490	49.9	35.4	44.6	38.1	
Other domestic vegetable consumers	34	0.1	0.3	5.9	2.8	18.5	0.5	10	-	-	0.2	1.9	1.1	2.3	0.2	-	-	-	-	-	10	-	1340	34.9	48.5	62.3	40.3	
Potato consumers	47	0.1	0.1	9.3	3	11.9	0.4	-	-	-	1	1.4	1.3	1.2	0.3	-	-	-	-	-	-	-	680	28.6	35.3	69.4	34.1	
Root vegetable consumers	30	0.2	0.2	2.3	2.9	13.2	0.7	10	-	-	1.8	2.6	2.1	2	0.5	-	-	-	-	-	10	-	570	38.4	40.9	65	57.1	

Notes

^aExpressed as the proportion of the profile members who are exposed to direct radiation

^bGamma ext - sediment includes occupancy over mud; mud and stones; salt marsh; sand; sand and stones; stones; and boat on mud. Boat on mud is counted as half actual time.

^cGame meat includes the food groups rabbits/hares, venison and wildfowl

^dPlume 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 children in the 10-year-old age group in the Sizewell area

Profile Name	Number of individuals	Pathway Name																	
		Crustacea kg	Direct radiation ^a -	Eggs kg	Fish - Sea kg	Fruit - Domestic kg	Fruit and nuts - Wild kg	Gamma ext - Sediment ^b h	Marine plants/algae kg	Meat - Sheep kg	Occupancy IN water h	Occupancy ON water h	Plume (IN; 0-0.25km) ^c h	Plume (OUT; >0.5-1.0km) ^c h	Vegetables - Green kg	Vegetables - Other Domestic kg	Vegetables - Potatoes kg	Vegetables - Root kg	
Crustacean consumers	2	1.3	-	-	12.4	-	-	-	-	-	-	-	-	-	-	-	-	-	
Occupants for direct radiation	6	-	1	-	-	6.4	-	40	-	-	30	-	120	420	4.2	6.4	2.9	5.6	
Egg consumers	2	-	-	10	-	3.1	0.1	-	-	-	-	-	-	-	6.4	8.6	11.9	15.6	
Sea fish consumers	7	0.5	-	-	15.8	-	-	20	-	-	-	-	-	-	-	-	-	-	
Domestic fruit consumers	1	-	1	-	-	38	-	50	-	-	-	-	100	-	25	38.6	17.5	33.4	
Wild fruit and nut consumers	3	0.2	-	4.8	-	2.9	0.4	-	-	2.3	-	-	-	-	1.3	1.2	3.4	2.4	
Occupants for exposure - sediment	16	-	0.2	-	1	2.4	-	70	-	-	20	-	30	-	1.6	2.4	1.1	2.1	
Marine plants/algae consumers	2	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	
Sheep meat consumers	2	0.3	-	3	-	1.7	0.5	-	-	3.4	-	-	-	-	-	-	-	-	
Occupancy IN water	4	-	0.5	-	-	-	-	70	-	-	70	-	80	-	-	-	-	-	
Occupancy ON water	2	-	-	-	-	-	-	100	-	-	-	10	-	-	-	-	-	-	
Occupants for plume pathways (inner area)	5	-	1	-	-	7.6	-	50	-	-	40	-	140	-	5	7.7	3.5	6.7	
Occupants for plume pathways (outer area)	1	-	1	-	0.2	0.2	-	-	-	-	-	-	-	2500	-	-	-	-	
Green vegetable consumers	4	-	0.3	2.9	-	12.6	-	10	-	-	-	-	30	-	12.9	14.9	7.8	15.4	
Other domestic vegetable consumers	3	-	0.3	3.8	-	13.9	-	20	-	-	-	-	30	-	12.8	22.1	10.4	20.7	
Potato consumers	4	-	0.3	5	-	11.4	-	10	-	-	-	-	30	-	10	15	13.6	16.4	
Root vegetable consumers	2	-	0.5	5.7	-	19.4	-	30	-	-	-	-	50	-	17	26.1	15.6	28.7	

Notes

^aExpressed as the proportion of the profile members who are exposed to direct radiation

^bGamma ext - sediment includes occupancy over salt marsh; sand; sand and stones; and stones.

^cPlume 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 children in the 1-year-old age group in the Sizewell area

Profile Name	Number of individuals	Pathway Name												
		Direct radiation ^a	Eggs	Fish - Sea	Fruit - Domestic	Fruit and nuts - Wild	Gamma ext - Sediment ^b	Occupancy ON water	Plume (IN; 0-0.25km) ^c	Plume (OUT; >0.5-1.0km) ^c	Vegetables - Green	Vegetables - Other Domestic	Vegetables - Potatoes	Vegetables - Root
		-	kg	kg	kg	kg	h	h	h	h	kg	kg	kg	kg
Occupants for direct radiation	7	1	-	-	0.4	-	-	-	10	470	-	-	-	-
Egg consumers	1	-	8.6	-	5.3	0.2	-	-	-	-	3.8	3.7	10.2	5.3
Sea fish consumers	2	-	-	0.2	-	-	20	-	-	-	-	-	-	-
Domestic fruit consumers	1	-	8.6	-	5.3	0.2	-	-	-	-	3.8	3.7	10.2	5.3
Wild fruit and nut consumers	1	-	8.6	-	5.3	0.2	-	-	-	-	3.8	3.7	10.2	5.3
Occupants for exposure - sediment	5	-	-	-	-	-	50	-	-	-	-	-	-	-
Occupancy ON water	3	-	-	-	-	-	30	20	-	-	-	-	-	-
Occupants for plume pathways (inner area)	1	1	-	-	-	-	-	-	40	-	-	-	-	-
Occupants for plume pathways (outer area)	3	1	-	-	-	-	-	-	-	860	-	-	-	-
Green vegetable consumers	2	-	4.3	-	3.4	0.1	-	-	-	-	2.9	3.5	11.6	3.1
Other domestic vegetable consumers	2	-	4.3	-	3.4	0.1	-	-	-	-	2.9	3.5	11.6	3.1
Potato consumers	2	-	4.3	-	3.4	0.1	-	-	-	-	2.9	3.5	11.6	3.1
Root vegetable consumers	1	-	8.6	-	5.3	0.2	-	-	-	-	3.8	3.7	10.2	5.3

Notes

^aExpressed as the proportion of the profile members who are exposed to direct radiation

^bGamma ext - sediment includes occupancy over salt marsh; sand; sand and stones; and stones.

^cPlume 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 Sizewell area, for use in foetal dose assessments

Profile Name	Number of individuals	Pathway Name																									
		Crustacea kg	Direct radiation ^a -	Eggs kg	Fish - Sea kg	Fruit - Domestic kg	Fruit and nuts - Wild kg	Gamma ext - Sediment ^b h	Honey kg	Marine plants/algae kg	Meat - Cow kg	Meat - Game ^c kg	Meat - Pig kg	Meat - Poultry kg	Meat - Sheep kg	Mollusca kg	Mushrooms kg	Occupancy IN water h	Occupancy ON water h	Plume (IN; 0-0.25km) ^d h	Plume (MID; >0.25-0.5km) ^d h	Plume (OUT; >0.5-1.0km) ^d h	Vegetables - Green kg	Vegetables - Other Domestic kg	Vegetables - Potatoes kg	Vegetables - Root kg	
Crustacean consumers	1	11.6	-	-	42.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Occupants for direct radiation	27	-	1	0.4	1	2.2	-	-	-	0.1	-	-	-	0.1	-	-	-	-	-	730	170	490	1.3	2.8	2.4	1.6	
Egg consumers	7	-	-	29.9	-	8	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.2	16.6	35.1	20.6	
Sea fish consumers	8	1.8	0.1	-	28.4	-	-	50	-	-	-	-	-	-	-	0.6	-	-	-	80	-	-	-	-	-	-	-
Domestic fruit consumers	3	-	0.3	2.7	-	25.1	-	20	1.8	-	0.9	-	-	-	-	-	-	-	-	30	-	-	16.7	31	11.3	17.5	
Wild fruit and nut consumers	1	-	-	-	-	0.5	6.3	10	-	-	26	32.8	-	9	-	-	-	-	80	-	-	-	-	-	28	8	
Occupants for exposure - sediment	2	-	-	-	11.3	-	-	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Honey consumers	1	-	-	8.2	-	23.8	-	-	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	8.8	7.6	-	
Marine plants/algae consumers	2	-	-	-	-	-	-	10	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cattle meat consumers	4	-	-	-	-	0.2	1.6	-	-	-	27.8	8.2	5.7	2.3	1.3	-	-	-	20	-	-	-	8.2	7.1	18.9	17.6	
Game meat consumers	4	-	-	2.2	-	0.1	1.6	-	-	6.5	24.9	-	5.4	-	-	-	-	20	-	-	-	-	-	-	7	2	
Pig meat consumers	2	-	-	-	-	0.1	0.2	-	-	-	30.7	-	11.4	-	2.5	-	-	-	-	-	-	-	16.5	14.3	23.9	31.2	
Poultry meat consumers	4	-	-	2.2	-	0.1	1.6	-	-	-	6.5	24.9	-	5.4	-	-	-	20	-	-	-	-	-	-	7	2	
Sheep meat consumers	3	0.1	0.3	1	-	0.6	0.4	-	-	-	20.5	-	7.6	-	2.8	-	-	-	-	50	-	11	9.5	15.9	20.8		
Mollusc consumers	1	0.9	-	-	28.1	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	
Mushroom consumers	2	-	-	-	0.5	11.6	-	-	-	-	0.6	-	-	-	-	0.7	-	-	-	-	-	-	18.5	7.3	-	4.2	
Occupancy IN water	4	-	-	-	0.8	-	-	40	-	-	-	-	-	-	-	-	20	30	-	-	-	-	-	-	-	-	
Occupancy ON water	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350	-	-	-	-	-	-	-	-	
Occupants for plume pathways (inner area)	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6490	-	-	-	-	-	19.1	-
Occupants for plume pathways (mid area)	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2160	-	-	-	-	-	
Occupants for plume pathways (outer area)	1	-	1	6.8	-	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7990	0.3	18	-	-	
Green vegetable consumers	13	-	0.1	2.1	0.1	9.9	-	-	-	2	0.1	1	-	0.2	-	0.1	-	-	10	-	-	21.8	22.9	23.7	22.5		
Other domestic vegetable consumers	9	-	0.1	5.2	-	8	-	10	-	2.9	-	1.4	-	0.3	-	-	-	-	10	-	-	21.5	31.1	31.2	25.7		
Potato consumers	14	-	0.1	14.2	-	8.5	0.6	-	-	3.7	2.3	0.9	0.6	0.2	-	-	-	10	400	-	-	13.7	19	40.1	19.8		
Root vegetable consumers	5	-	0.2	7.6	-	10.6	0.1	10	-	5.3	-	2.5	-	0.6	-	-	-	-	20	-	-	23.9	32.5	25.5	46.9		

Notes

- ^aExpressed as the proportion of the profile members who are exposed to direct radiation
 - ^bGamma ext - sediment includes occupancy over salt marsh; sand; sand and stones; and stones.
 - ^cGame meat includes rabbits/hares, venison and wildfowl
 - ^dPlume 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

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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.co.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.
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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.

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

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