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Radon in Homes in Northern Ireland: 2016 Data Report

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Radon in Homes in Northern Ireland: 2016 Data Report

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Abstract

This report provides a summary of just over 24,000 radon measurements made in homes in Northern Ireland between 1983 and 2015. It updates the previous data review published in 2009 and complements the radon atlas of Northern Ireland which was published in 2015. Results are displayed in summary tables for a range of administrative areas, postcodes and NHS bodies and are accompanied by a short descriptive text.

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1 Introduction

Radon is a naturally occurring radioactive gas that is present in all homes and is the major source of ionising radiation exposure to the UK population. Where high levels are found, a radon Action Level (200 Bq m⁻³) is used to advise householders on the need to take remedial action in the home. For further information about the sources and properties of radon, its health effects and the UK control strategy, please consult either the general Public Health England (PHE) website www.gov.uk/government/organisations/public-health-england or the dedicated PHE radon website at www.ukradon.org.

This report summarises and presents the data that PHE holds from just over 24,000 radon measurements conducted in homes in Northern Ireland in the period between 1983 and 2015. Results are presented in tabular format to illustrate the range and distribution of radon levels in local Government administrative areas down to electoral ward. Results are also presented using the postcode system down to sector level and by NHS Health and Social Care Trust. To preserve confidentiality, results are not reported when there are fewer than five measurements in the grouping.

This report complements the indicative atlas of Northern Ireland (Daraktchieva et al, 2015) which shows the radon potential in map format and it updates and replaces the data tables contained within the previous result summary (Green et al, 2009).

2 Measurements

Radon measurements are normally made with two passive integrating detectors in each home - one in the main living area and the other in a regularly used bedroom. This reflects the parts of the home that are most occupied. The detectors are left in place for three months and the individual results combined by applying both occupancy ratios to reflect typical occupancy patterns and seasonal correction factors to reflect typical seasonal variations in radon levels (Miles and Howarth, 2008) thereby giving an estimate of the annual average for exposure from radon in the individual home. In some homes multiple measurements have been recorded, for example when radon remedial works are undertaken. Throughout this report only the earliest valid measurement for an address is used. The results rely on the householder placing the detectors in accordance with our instructions.

The measurement results contained within this report have been collected from various measurement programmes conducted by PHE (and previously HPA and NRPB) from 1983 through to 2015. These surveys were undertaken with the aim of finding homes with high radon levels within the radon Affected Areas identified through the publication of radon maps (NRPB, (1993), NRPB (1999a), NRPB (1999b), Green et al (2009), Daraktchieva et al (2015)). These surveys were not designed to be statistically representative of large areas. To date only one fully representative UK survey has been undertaken. That national survey (Wrixon et al, 1988) was designed to obtain a population weighted sample of results throughout the UK. The results from that survey remain the best estimate of the average domestic radon exposure for Northern Ireland.

Within previously published reports, result summaries were prepared alongside radon maps and due to positional uncertainties a small number of results were excluded from the mapping and the associated data. That constraint is not present in this report and therefore allows a more comprehensive summary of the results than in previous publications. Due to data cleaning some results that have appeared in previous reports are no longer contained within this report as information now available indicates that the measurement is invalid.

3 Results

Tables 1 to 6 show the number and distribution of radon measurements in homes grouped by three different boundary systems relating to local authorities, postcodes and NHS bodies.

The tables show

- The total number of homes in the area
- How many homes in the area have PHE radon measurements
- The arithmetic and geometric average of the measured radon levels in the area
- The highest individual measurement in the area
- The number of homes measured at or above the Action Level in the area

The data is available in digital format for download on the gov.uk website.

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General notes

- In tables 1 - 6 the estimates of the number of addresses are derived from the Royal Mail[®] Postal Address File (PAF[®]). PAF also provides administrative and health authority information for each delivery point in Great Britain and Northern Ireland
- To avoid undue precision, all numbers other than averages have been rounded to two or three significant figures
- For tables 3, 4 and 5 only, where there are fewer than 5 results for a particular grouping the data are not presented. For this reason, the sum of the sub-totals for a set of constituent areas may be slightly less than the total for the aggregate data
- Royal Mail[®] postcodes have four parts and read from left to right, representing progressively smaller groups of addresses
- Postcodes have two elements (of two parts each) separated by a space

- The largest part (both in terms of geographical area and addresses) is the postcode area
- Postcode districts consist of the postcode area and the numbers that make up the first element of the full postcode. The postcode district of BT4 3TT would be BT4
- Postcode sectors consist of the postcode district together with the numerical part of the second element. The postcode sector of BT4 3TT would be BT4 3
- Neither postcode districts nor sectors are aligned to administrative boundaries. A single postcode district or sector may cover two or more local authorities or electoral wards
- There are over 100 postcode areas in the United Kingdom, however all Northern Ireland addresses are within the BT (for Belfast) post town

4 Conclusions

This report presents summary results of the distribution of measured radon levels in homes in Northern Ireland, grouped by various geographical areas. It complements the full radon probability dataset described elsewhere (Daraktchieva et al, 2015).

While the data in this report give the distribution of measured radon levels in different areas the results are biased towards measurements in targeted areas with higher radon probability. The probability of any address exceeding the Action Level is best assessed using the full radon probability dataset, accessible through www.ukradon.org. The actual level of radon at any specific address can only be determined through an appropriate radon measurement.

5 Acknowledgements

We wish to thank present and past members of the radon team at PHE and previously HPA and NRPB for all their efforts.

The data reported were collected during many surveys carried out on behalf of the government, local councils, landlords and individual householders.

6 References

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7 Glossary of terms

Averages. Within this report numerical data are presented in two ways: arithmetic average and geometric average. The arithmetic average is derived from summing the results by grouped unit then dividing by the number of results. The geometric average is the nth root of the product of n results.

Becquerel. Symbol Bq. The SI unit of radioactivity and measures the activity of a radionuclide transformation or decay. An activity of 1 becquerel denotes an activity of 1 nuclear transformation or decay per second.

Becquerel per cubic metre of air. Symbol Bq m⁻³. A quantity indicating the amount of radionuclide transformation in each cubic metre of air per second. Often referred to as the activity concentration.

Population-weighted average. The value obtained for the analysis of a sample selected in which each member of the population has an equal chance of inclusion in the sample. In the specific case of the UK National Radon Survey (Wrixon et al 1988), the population was every domestic address in the UK and a systematic sample was taken, ie every Nth address, from all domestic addresses listed in postcode order.

Radon Action Level. The activity concentration of radon in UK homes above which reduction is advised. Its value, expressed as the annual average radon gas concentration in the home, is 200 Bq m⁻³.

Radon Affected Areas. Parts of the country with a 1% or greater probability of present or future homes being at or above the Action Level.

8 Tabular data

Table 1 Summary data by home nation for the United Kingdom

Nation	Homes		Results Bq m ⁻³			At or above Action Level
	Total	Measured	Arithmetic Average	Geometric Average	Population Weighted Average	
England	23,500,000	525,000	105	55	21	64,900
Northern Ireland	790,000	24,400	70	46	19	1,300
Scotland	2,570,000	27,900	58	28	16	1,400
Wales	1,400,000	18,400	90	51	20	1,900
UK Total	28,260,000	595,700	101	53	20	69,500

Table 2 Summary data by local authority

Local Authority Name	Homes		Results Bq m ⁻³			At or above Action Level
	Total	Measured	Arithmetic Average	Geometric Average	Highest	
Antrim and Newtownabbey	60,000	200	25	18	360	1
Armagh, Banbridge and Craigavon	84,200	1,000	44	33	380	18
Belfast	157,000	54	23	19	73	0
Causeway Coast and Glens	64,600	710	38	27	400	8
Derry and Strabane	60,800	5,000	80	51	4,900	340
Fermanagh and Omagh	49,000	2,300	60	37	3,900	110
Lisburn and Castlereagh	59,800	440	46	34	1,300	3
Mid and East Antrim	59,900	300	24	18	220	2
Mid Ulster	53,800	1,400	57	38	2,000	40
Newry, Mourne and Down	70,300	12,000	78	53	2,500	750
North Down and Ards	71,900	1,000	43	33	460	7

Table 3 Summary data by electoral ward (minimum 5 results)

Electoral Ward	Homes		Results Bq m ⁻³			At or above Action Level
	Total	Measured	Arithmetic Average	Geometric Average	Highest	
Antrim and Newtownabbey						
Aldergrove	1,600	25	23	19	54	0
Antrim Centre	2,000	8	21	20	29	0
Ballyclare West	1,500	5	21	18	28	0
Ballynure	1,400	7	27	22	57	0
Clady	1,300	11	20	17	53	0
Cranfield	1,200	7	13	11	25	0
Doagh	1,400	13	33	30	59	0
Jordanstown	1,200	8	28	15	130	0
Mallusk	2,300	5	20	16	48	0
Mossley	1,600	8	26	18	66	0
Parkgate	1,200	21	34	24	150	0
Randalstown	1,600	6	11	10	16	0
Shilvodan	1,300	14	17	15	39	0
Templepatrick	1,400	9	66	33	360	1
Toome	1,300	17	28	24	72	0
Armagh, Banbridge and Craigavon						
Aghagallon	1,600	13	27	21	71	0
Ballybay	2,300	8	19	17	30	0
Banbridge East	1,600	25	35	29	100	0
Banbridge North	1,800	7	43	35	81	0
Banbridge South	2,200	5	30	28	53	0
Blackwatertown	1,900	68	49	38	220	1
Bleary	1,700	11	31	28	53	0
Brownlow	2,500	5	13	12	23	0
Cathedral	2,000	17	75	58	290	1
Corcrain	2,200	5	19	15	38	0
Demesne	2,200	5	26	24	37	0
Derrytrasna	1,700	12	44	34	190	0
Donaghcloney	1,700	14	35	32	69	0
Dromore	1,900	12	30	26	73	0
Gilford	2,000	14	55	32	330	1
Gransha	1,800	74	45	33	210	2
Hamiltonsbawn	1,800	26	43	32	170	0
Keady	2,200	56	30	24	99	0
Loughbrickland	2,000	80	51	37	380	3
Loughgall	2,000	45	39	29	130	0
Mahon	2,100	7	25	19	62	0
Markethill	2,100	32	47	35	180	0
Navan	1,800	100	61	45	250	5
Quilly	1,800	32	41	30	190	0
Rathfriland	2,000	190	41	33	230	2
Richhill	1,900	20	51	41	180	0
Seagahan	1,900	59	46	33	200	1

Table 3 Summary data by electoral ward (minimum 5 results)

Electoral Ward	Homes		Results Bq m ⁻³			At or above Action Level
	Total	Measured	Arithmetic Average	Geometric Average	Highest	
Tandragee	2,100	6	20	14	63	0
The Birches	2,100	41	33	27	190	0
The Mall	2,500	32	57	38	230	2
Waringstown	2,100	5	28	26	47	0
Belfast						
Central	6,100	5	41	38	67	0
Legoniel	2,600	5	16	15	23	0
Causeway Coast and Glens						
Aghadowey	1,300	27	22	18	60	0
Altahullion	1,200	28	39	30	110	0
Ballykelly	1,200	36	33	24	130	0
Ballymoney North	1,600	8	31	30	46	0
Ballymoney South	1,300	8	21	17	47	0
Castlerock	1,800	11	28	24	77	0
Clogh Mills	1,400	16	20	17	47	0
Dervock	1,500	11	21	17	49	0
Drumsum	1,400	7	22	19	51	0
Dundooan	1,700	12	32	26	79	0
Dungiven	1,200	25	34	27	93	0
Dunloy	1,200	20	20	18	59	0
Feeny	1,300	84	68	50	310	4
Garvagh	1,400	17	22	19	46	0
Giant's Causeway	2,000	20	31	22	120	0
Greysteel	1,900	57	75	53	400	3
Kilrea	1,400	18	24	21	48	0
Kinbane	1,700	29	45	27	250	1
Loughguile and Stranocum	1,400	20	22	16	74	0
Lurigethan	1,400	36	40	28	170	0
Macosquin	1,300	24	28	25	74	0
Magilligan	1,300	50	31	23	190	0
Portrush and Dunluce	2,700	9	18	14	64	0
Portstewart	2,500	5	25	23	38	0
Rasharkin	1,400	16	17	14	36	0
Route	1,400	5	28	26	54	0
Torr Head and Rathlin	1,600	85	38	30	140	0
Derry and Strabane						
Artigarvan	1,400	450	83	62	710	30
Ballycolman	1,400	58	26	22	94	0
Ballymagroarty	1,500	7	28	22	52	0
Brandywell	1,600	5	77	51	220	1
Carn Hill	1,300	8	33	24	90	0

Table 3 Summary data by electoral ward (minimum 5 results)

Electoral Ward	Homes		Results Bq m ⁻³			At or above Action Level
	Total	Measured	Arithmetic Average	Geometric Average	Highest	
Castleberg	1,600	260	75	54	1,400	14
Caw	1,900	27	70	54	290	2
City Walls	2,100	6	38	32	57	0
Claudy	1,300	300	84	57	840	26
Clondermot	1,400	140	67	48	780	4
Creggan	1,400	5	38	26	59	0
Creggan South	1,500	5	97	74	220	1
Culmore	1,400	50	55	46	160	0
Drumahoe	1,700	290	72	46	1,100	12
Dunnamanagh	1,400	550	135	78	1,500	94
Ebrington	2,000	15	44	32	120	0
Eglinton	1,500	200	54	43	220	5
Enagh	1,600	95	82	50	1,300	4
Finn	1,600	120	89	66	730	10
Foyle Springs	1,200	9	32	30	49	0
Galliagh	1,600	19	28	22	84	0
Glenderg	1,300	270	81	54	1,600	18
Glenelly Valley	1,300	140	77	45	960	9
Kilfennan	1,600	30	44	33	170	0
Lisnagelvin	1,600	36	32	25	140	0
Madam's Bank	1,300	9	32	27	67	0
New Buildings	1,500	250	61	43	610	9
Newtownstewart	1,400	230	72	50	620	13
Northland	2,300	10	32	28	73	0
Park	1,200	270	95	60	2,200	23
Shantallow	1,500	6	32	24	73	0
Shantallow East	1,500	14	48	40	120	0
Sheriff's Mountain	1,300	32	81	50	490	4
Sion Mills	1,600	250	67	44	1,300	9
Skeoge	1,600	7	68	55	170	0
Slievekirk	1,300	330	95	57	4,900	29
Springtown	1,200	5	40	35	66	0
Strabane North	1,800	280	76	54	710	19
Strabane West	1,400	200	34	26	180	0
Victoria	1,900	17	61	40	220	1
Fermanagh and Omagh						
Ballinamallard	1,200	23	34	29	100	0
Belcoo and Garrison	1,200	160	90	31	3,900	9
Belleek and Boa	1,500	150	61	40	500	7
Beragh	1,100	99	56	42	290	1
Boho, Cleenish and Letterbreen	1,300	88	59	31	1,200	3
Brookeborough	990	44	43	31	140	0
Camowen	1,300	17	46	36	180	0

Table 3 Summary data by electoral ward (minimum 5 results)

Electoral Ward	Homes		Results Bq m ⁻³			At or above Action Level
	Total	Measured	Arithmetic Average	Geometric Average	Highest	
Castlecoole	1,400	19	43	35	110	0
Coolnagard	1,300	8	35	34	52	0
Dergmoney	1,400	7	43	26	180	0
Derrygonnelly	1,200	83	88	48	660	12
Derrylin	1,200	94	35	25	260	1
Donagh	1,000	55	58	31	830	2
Dromore	1,100	18	34	28	110	0
Drumnakilly	1,100	96	68	49	380	8
Drumquin	1,100	77	42	29	290	3
Ederney and Kesh	1,400	64	83	49	610	5
Erne	1,400	16	24	19	86	0
Fairy Water	1,000	89	53	42	190	0
Fintona	1,100	27	36	26	160	0
Florence Court and Kinawley	1,200	100	43	28	470	4
Gortin	1,200	120	68	51	600	6
Gortrush	1,400	9	21	19	39	0
Irvinestown	1,500	27	39	29	190	0
Killiclogher	1,300	12	41	34	97	0
Lisbellaw	1,200	29	46	34	290	1
Lisnarrick	1,400	40	50	39	180	0
Lisnaskea	1,400	17	51	37	230	1
Maguiresbridge	1,400	52	32	26	160	0
Newtownbutler	1,200	97	56	34	540	5
Newtownsaville	1,000	95	73	47	440	6
Owenkillew	960	120	77	50	490	12
Portora	1,700	20	43	32	190	0
Rosslea	970	60	45	34	200	1
Rossorry	1,100	17	49	35	260	1
Sixmilecross	990	150	78	54	660	13
Strule	1,500	8	41	40	56	0
Tempo	1,200	39	38	26	210	1
Termon	880	70	76	45	750	3
Trillick	1,000	32	35	27	110	0
Lisburn and Castlereagh						
Ballinderry	1,400	16	30	23	100	0
Ballymacbrennan	1,100	110	54	45	290	1
Carryduff East	1,400	93	58	38	1,300	1
Carryduff West	1,400	29	48	43	130	0
Dromara	1,300	43	43	35	150	0
Drumbo	1,200	22	51	42	150	0
Glenavy	1,400	14	24	20	64	0
Hillsborough	1,500	17	38	30	97	0
Lagan	1,300	11	27	18	140	0
Maze	1,200	7	30	26	55	0

Table 3 Summary data by electoral ward (minimum 5 results)

Electoral Ward	Homes		Results Bq m ⁻³			At or above Action Level
	Total	Measured	Arithmetic Average	Geometric Average	Highest	
Moira	1,500	5	34	26	76	0
Moneyreagh	1,100	9	38	30	90	0
Ravernet	1,200	17	36	32	60	0
Stonyford	1,100	8	25	20	56	0
Mid and East Antrim						
Ahoghill	1,500	5	29	28	35	0
Ardeevin	1,500	10	18	17	28	0
Ballycarry and Glynn	1,500	13	30	22	130	0
Broughshane	1,600	5	24	22	31	0
Cairncastle	1,400	10	31	23	91	0
Carmlough and Glenarm	1,500	35	25	16	220	1
Galgorm	1,300	7	20	18	36	0
Glenravel	1,300	17	21	18	37	0
Glenwhirry	1,200	21	21	16	88	0
Grange	1,300	13	28	19	130	0
Islandmagee	1,400	13	27	25	48	0
Kells	1,400	6	24	22	36	0
Kilwaughter	1,700	22	30	18	220	1
Kirkinriola	1,200	9	24	23	35	0
Maine	1,100	15	24	20	57	0
Portglenone	1,300	8	25	23	48	0
Slemish	1,200	35	20	17	41	0
Woodburn	1,400	11	15	12	25	0
Mid Ulster						
Ardboe	1,200	24	92	29	1,500	1
Augher and Clogher	1,300	89	62	47	300	2
Aughnacloy	1,300	74	49	35	290	2
Ballygawley	1,300	50	55	35	440	2
Ballymaguigan	1,300	12	34	27	71	0
Ballysaggart	1,900	8	40	38	66	0
Bellaghy	1,200	13	27	21	99	0
Caledon	1,300	110	65	48	330	5
Castlecaulfield	1,200	28	62	44	230	1
Castledawson	1,500	6	30	22	88	0
Coagh	1,200	7	27	24	45	0
Coalisland North	1,400	13	53	38	150	0
Coalisland South	1,700	5	28	23	58	0
Cookstown East	1,500	20	55	44	170	0
Cookstown South	1,400	19	43	34	160	0
Cookstown West	1,500	30	36	32	100	0
Coolshinny	1,200	35	37	28	170	0
Donaghmore	1,300	45	47	36	190	0

Table 3 Summary data by electoral ward (minimum 5 results)

Electoral Ward	Homes		Results Bq m ⁻³			At or above Action Level
	Total	Measured	Arithmetic Average	Geometric Average	Highest	
Draperstown	1,200	34	91	32	2,000	1
Fivemiletown	1,300	56	49	32	300	1
Killyman	1,300	13	55	37	170	0
Killymeal	1,700	14	47	35	180	0
Lissan	1,300	48	65	44	390	2
Loughry	1,200	31	86	56	430	4
Lower Glenshane	950	46	32	21	280	1
Maghera	1,500	11	23	18	47	0
Moy	1,400	26	51	35	250	2
Moygashel	1,500	9	49	46	80	0
Mullaghmore	1,500	8	45	36	90	0
Oaklands	1,100	150	64	48	970	3
Pomeroy	1,400	180	79	46	960	12
Stewartstown	1,100	36	46	35	130	0
Swatragh	1,100	17	27	24	63	0
Tamlaght O'crilly	1,300	8	22	20	40	0
The Loup	1,400	12	28	24	65	0
Tobermore	1,300	35	40	29	320	1
Valley	1,200	10	31	23	73	0
Washing Bay	1,200	23	33	28	77	0
Newry, Mourne and Down						
Abbey	1,800	260	66	46	720	11
Annalong	1,700	600	126	90	1,300	94
Ballybot	2,400	300	48	38	440	5
Ballydugan	1,500	190	46	34	330	3
Ballynahinch	2,100	250	45	37	300	2
Ballyward	1,500	130	58	40	920	4
Bessbrook	2,000	230	56	45	300	4
Binnian	1,600	460	139	102	1,100	86
Burren	1,400	390	90	67	2,500	26
Camlough	1,400	180	76	53	860	8
Castlewellan	1,700	41	36	27	140	0
Cathedral	1,900	180	51	35	460	4
Crossgar and Killyleagh	1,900	250	60	46	470	6
Crossmaglen	1,500	43	47	35	250	1
Damolly	1,700	240	53	41	630	3
Derryboy	1,600	250	51	40	320	2
Derryleckagh	1,500	350	99	67	1,900	38
Donard	2,000	400	41	30	370	3
Drumalane	1,900	330	67	50	910	11
Drumaness	1,500	150	49	38	300	2
Dundrum	1,900	270	47	33	320	7
Fathom	1,500	340	118	75	1,900	43
Forkhill	1,400	360	106	72	1,100	35

Table 3 Summary data by electoral ward (minimum 5 results)

Electoral Ward	Homes		Results Bq m ⁻³			At or above Action Level
	Total	Measured	Arithmetic Average	Geometric Average	Highest	
Hilltown	1,700	250	69	47	610	9
Kilkeel	1,700	490	91	68	940	38
Kilmore	1,400	230	52	43	180	0
Knocknashinna	1,800	320	78	54	580	22
Lecale	1,800	390	80	51	1,300	26
Lisnacree	1,800	470	95	71	760	37
Mayobridge	1,600	210	54	42	540	4
Mullaghbane	1,600	170	85	58	800	14
Murlough	2,000	350	40	30	370	4
Newtownhamilton	1,500	62	40	33	150	0
Quoile	1,500	310	58	41	390	8
Rostrevor	2,000	620	105	79	2,000	63
Saintfield	1,700	220	50	42	160	0
St. Patrick's	1,900	300	81	59	860	22
Strangford	1,700	460	108	65	1,600	57
Tollymore	1,600	280	51	38	340	5
Warrenpoint	2,100	480	85	64	1,600	29
Whitecross	1,400	210	73	54	450	11
North Down and Ards						
Ballygowan	1,600	170	56	46	210	2
Ballymagee	1,400	5	28	26	40	0
Ballywalter	2,100	23	23	20	49	0
Carrowdore	1,800	19	32	27	81	0
Comber South	1,600	65	49	43	180	0
Comber West	1,700	5	40	34	65	0
Cronstown	1,600	5	25	24	41	0
Cultra	1,600	5	50	45	92	0
Donaghadee	1,900	7	53	33	220	1
Glen	1,700	5	38	32	67	0
Hollywood	2,000	7	33	28	66	0
Killinchy	1,500	220	47	37	180	0
Kircubbin	1,900	57	32	26	120	0
Loughries	1,600	31	41	29	180	0
Movilla	1,700	6	23	22	35	0
Portaferry	1,600	280	41	29	460	4
Portavogie	1,700	29	29	25	71	0
Warren	2,000	21	40	31	140	0

Table 4 Summary data by postcode district (minimum 5 results)

Postcode District	Homes		Results Bq m ⁻³			At or above Action Level
	Totals	Measured	Arithmetic Average	Geometric Average	Highest	
BT5	19,100	7	29	26	59	0
BT7	9,500	5	31	28	54	0
BT8	12,300	110	54	35	1,300	1
BT14	14,700	7	14	13	23	0
BT15	12,900	5	16	16	22	0
BT17	13,400	11	21	15	74	0
BT18	6,500	15	37	30	92	0
BT19	16,400	19	30	23	93	0
BT20	12,600	10	19	13	46	0
BT21	3,800	31	46	32	220	1
BT22	9,900	420	37	28	460	4
BT23	23,900	540	50	40	210	2
BT24	7,400	880	49	41	300	3
BT25	6,200	140	42	32	250	1
BT26	3,800	79	46	36	180	0
BT27	9,800	97	50	40	290	1
BT28	18,200	39	28	20	230	1
BT29	5,300	40	23	20	64	0
BT30	14,500	2,500	71	46	1,600	130
BT31	3,400	190	51	34	920	6
BT32	10,500	110	38	29	260	1
BT33	5,400	1,000	43	32	370	16
BT34	23,900	5,300	93	66	2,500	460
BT35	17,800	2,400	77	53	1,900	130
BT36	20,100	24	21	16	66	0
BT37	11,900	16	25	15	130	0
BT38	18,300	34	20	17	62	0
BT39	10,300	67	29	20	360	1
BT40	12,200	54	30	21	220	1
BT41	17,300	89	22	18	130	0
BT42	15,100	86	26	21	150	0
BT43	9,500	44	23	20	80	0
BT44	10,000	170	27	19	220	1
BT45	13,400	190	45	26	2,000	3
BT46	3,900	53	28	22	120	0
BT47	24,600	2,100	74	49	4,900	110
BT48	24,200	200	51	37	490	6
BT49	9,600	110	32	24	190	0
BT51	11,000	100	25	21	77	0
BT52	7,900	9	21	19	33	0
BT53	10,700	92	24	19	95	0
BT54	3,900	74	43	31	250	1
BT55	5,200	6	28	26	48	0
BT56	4,600	11	13	11	35	0
BT57	2,800	25	34	25	120	0
BT60	12,600	310	48	35	250	7

Table 4 Summary data by postcode district (minimum 5 results)

Postcode District	Homes		Results Bq m ⁻³			At or above Action Level
	Totals	Measured	Arithmetic Average	Geometric Average	Highest	
BT61	6,600	100	57	42	290	3
BT62	13,800	93	30	24	190	0
BT63	8,500	29	42	30	330	1
BT65	3,400	5	13	12	23	0
BT66	13,900	27	36	29	190	0
BT67	9,700	31	36	24	160	0
BT68	400	65	77	60	330	4
BT69	1,000	65	54	37	290	3
BT70	8,100	410	73	45	960	23
BT71	15,300	210	49	32	1,500	3
BT74	7,800	170	47	31	710	4
BT75	1,600	55	41	29	160	0
BT76	770	35	54	35	300	1
BT77	520	19	55	41	140	0
BT78	12,300	540	52	38	430	12
BT79	10,500	750	67	46	960	40
BT80	9,300	360	61	45	970	11
BT81	3,300	620	81	56	1,600	42
BT82	10,900	2,000	90	55	1,500	180
BT92	7,700	440	47	31	830	14
BT93	5,100	440	82	39	3,900	33
BT94	6,800	210	38	29	290	2

Table 5 Summary data by postcode sector (minimum 5 results)

Postcode Sector	Homes		Results Bq m ⁻³			At or above Action Level
	Totals	Measured	Arithmetic Average	Geometric Average	Highest	
BT8 8	3,900	98	55	36	1,300	1
BT14 8	4,300	7	14	13	23	0
BT17 0	9,300	5	10	8	16	0
BT17 9	4,100	6	30	25	74	0
BT18 0	2,400	8	46	40	92	0
BT18 9	4,200	7	26	22	59	0
BT19 1	6,400	6	32	20	93	0
BT19 6	5,200	5	26	24	40	0
BT19 7	4,800	8	30	25	58	0
BT21 0	3,800	31	46	32	220	1
BT22 1	4,900	360	39	28	460	4
BT22 2	5,000	64	30	24	170	0
BT23 4	6,300	9	27	20	56	0
BT23 5	5,800	140	58	49	210	2
BT23 6	3,200	360	48	39	180	0
BT23 7	4,000	10	41	34	92	0
BT23 8	4,700	20	35	30	90	0
BT24 7	2,300	310	51	43	170	0
BT24 8	5,100	570	48	40	300	3
BT25 1	4,100	68	44	34	190	0
BT25 2	2,100	67	39	30	250	1
BT26 6	3,800	79	46	36	180	0
BT27 5	4,600	26	49	40	150	0
BT27 6	640	68	51	42	290	1
BT28 2	7,000	27	31	22	230	1
BT28 3	6,700	8	22	16	56	0
BT29 4	5,300	40	23	20	64	0
BT30 6	4,700	720	68	46	580	38
BT30 7	3,200	740	91	55	1,600	66
BT30 8	2,300	370	64	41	950	16
BT30 9	4,300	640	53	41	470	10
BT31 9	3,400	190	51	34	920	6
BT32 3	5,400	30	35	26	150	0
BT32 4	3,700	32	36	29	100	0
BT32 5	1,300	49	40	30	260	1
BT33 0	5,400	1,000	43	32	370	16
BT34 1	3,300	520	70	51	860	26
BT34 2	4,500	750	78	55	720	53
BT34 3	5,700	1,600	95	71	2,500	120
BT34 4	6,500	1,900	114	83	1,300	250
BT34 5	3,800	540	58	41	610	14
BT35 0	1,500	54	40	32	120	0
BT35 6	3,500	510	54	41	450	13
BT35 7	3,400	390	65	48	860	11

Table 5 Summary data by postcode sector (minimum 5 results)

Postcode Sector	Homes		Results Bq m ⁻³			At or above Action Level
	Totals	Measured	Arithmetic Average	Geometric Average	Highest	
BT35 8	5,500	1,000	91	60	1,900	78
BT35 9	4,000	400	86	60	1,000	32
BT36 4	2,000	6	28	21	66	0
BT36 5	5,500	12	20	16	42	0
BT36 6	6,600	5	14	11	27	0
BT37 0	6,900	12	26	15	130	0
BT38 8	8,400	12	19	17	30	0
BT38 9	4,500	18	19	17	43	0
BT39 0	3,400	27	40	24	360	1
BT39 9	6,900	40	22	18	65	0
BT40 1	4,200	5	24	18	45	0
BT40 2	5,200	21	34	19	220	1
BT40 3	2,900	28	28	23	130	0
BT41 2	4,300	21	18	17	39	0
BT41 3	4,200	43	25	19	130	0
BT41 4	4,000	21	23	20	54	0
BT42 1	4,600	17	28	23	57	0
BT42 2	3,900	20	18	17	36	0
BT42 3	3,100	23	34	24	150	0
BT42 4	3,500	26	22	19	41	0
BT43 5	2,600	7	31	23	80	0
BT43 6	3,800	17	23	20	47	0
BT43 7	3,100	20	20	18	38	0
BT44 0	3,500	110	31	21	220	1
BT44 8	3,400	24	21	18	55	0
BT44 9	3,100	38	20	17	59	0
BT45 5	3,000	42	42	32	320	1
BT45 6	3,000	16	34	27	100	0
BT45 7	3,900	110	51	26	2,000	2
BT45 8	3,400	24	28	22	99	0
BT46 5	3,900	53	28	22	120	0
BT47 2	5,300	490	64	45	780	19
BT47 3	6,200	920	75	49	4,900	42
BT47 4	5,000	580	84	54	2,200	47
BT47 5	2,400	59	38	29	170	0
BT47 6	5,700	80	62	47	290	2
BT48 0	5,700	32	34	29	69	0
BT48 6	2,100	5	38	31	57	0
BT48 7	3,500	15	30	24	73	0
BT48 8	8,200	100	47	37	170	0
BT48 9	4,800	43	82	52	490	6
BT49 0	6,000	55	31	24	190	0
BT49 9	3,600	55	32	23	130	0
BT51 3	4,500	9	22	18	41	0
BT51 4	3,300	51	25	21	77	0
BT51 5	3,200	40	25	22	48	0

Table 5 Summary data by postcode sector (minimum 5 results)

Postcode Sector	Homes		Results Bq m ⁻³			At or above Action Level
	Totals	Measured	Arithmetic Average	Geometric Average	Highest	
BT52 1	4,100	8	21	20	33	0
BT53 6	3,800	17	26	24	49	0
BT53 7	3,900	32	22	18	54	0
BT53 8	3,000	43	25	18	95	0
BT54 6	3,900	74	43	31	250	1
BT55 7	5,200	6	28	26	48	0
BT56 8	4,600	11	13	11	35	0
BT57 8	2,800	25	34	25	120	0
BT60 1	3,500	42	44	31	220	1
BT60 2	3,100	66	51	37	200	1
BT60 3	3,200	81	32	25	130	0
BT60 4	2,800	120	60	47	250	5
BT61 7	1,500	8	34	32	57	0
BT61 8	2,500	59	62	46	290	2
BT61 9	2,600	33	53	39	230	1
BT62 1	4,400	47	30	25	73	0
BT62 2	2,700	13	21	18	63	0
BT62 3	4,400	11	21	19	38	0
BT62 4	2,200	22	38	27	190	0
BT63 5	6,200	16	32	27	80	0
BT63 6	2,300	13	55	32	330	1
BT66 6	3,800	13	43	33	190	0
BT66 7	6,300	13	31	29	69	0
BT67 0	5,800	25	38	25	160	0
BT67 9	3,900	6	27	21	62	0
BT68 4	400	65	77	60	330	4
BT69 6	1,030	65	54	37	290	3
BT70 1	3,200	59	53	36	440	2
BT70 2	2,700	270	83	50	960	21
BT70 3	2,200	77	51	39	190	0
BT71 4	4,300	37	42	30	150	0
BT71 5	2,400	52	66	33	1,500	1
BT71 6	4,900	56	38	29	180	0
BT71 7	3,800	66	49	36	250	2
BT74 4	1,600	17	47	37	110	0
BT74 5	980	29	66	42	710	1
BT74 6	2,700	34	32	26	86	0
BT74 7	1,800	29	47	32	260	1
BT74 8	350	19	75	49	400	2
BT74 9	300	37	27	20	120	0
BT75 0	1,600	55	41	29	160	0
BT76 0	770	35	54	35	300	1
BT77 0	520	19	55	41	140	0
BT78 1	2,700	32	38	30	190	0
BT78 2	1,700	67	52	38	200	1
BT78 3	2,300	73	33	25	130	0

Table 5 Summary data by postcode sector (minimum 5 results)

Postcode Sector	Homes		Results Bq m ⁻³			At or above Action Level
	Totals	Measured	Arithmetic Average	Geometric Average	Highest	
BT78 4	2,500	270	60	43	430	11
BT78 5	3,200	93	50	40	190	0
BT79 0	3,200	200	70	49	490	12
BT79 7	4,300	220	60	46	600	8
BT79 8	1,100	100	61	37	960	3
BT79 9	2,000	220	73	50	660	17
BT80 0	1,700	19	29	25	65	0
BT80 8	5,100	71	52	40	250	2
BT80 9	2,500	270	66	48	970	9
BT81 7	3,300	620	81	56	1,600	42
BT82 0	2,600	910	116	71	1,500	130
BT82 8	2,600	480	81	57	710	33
BT82 9	5,700	580	55	36	1,300	16
BT92 0	2,000	46	50	38	230	1
BT92 1	310	40	62	40	470	3
BT92 2	630	15	32	26	120	0
BT92 3	340	19	44	29	280	1
BT92 4	500	42	26	20	150	0
BT92 5	430	20	78	29	830	2
BT92 6	530	63	65	37	540	4
BT92 7	930	52	43	33	200	1
BT92 8	840	56	44	32	310	1
BT92 9	1,200	86	36	25	260	1
BT93 0	620	50	91	61	610	4
BT93 1	1,100	64	55	32	470	4
BT93 2	180	18	39	30	110	0
BT93 3	880	76	65	42	500	4
BT93 4	560	53	99	26	1,500	4
BT93 5	530	85	117	42	3,900	6
BT93 6	650	44	45	29	290	2
BT93 7	360	32	145	96	660	9
BT93 8	220	17	38	30	94	0
BT94 1	1,900	51	47	36	180	0
BT94 2	1,400	32	33	28	100	0
BT94 3	1,000	35	32	24	210	1
BT94 4	1,400	47	33	26	130	0
BT94 5	1,100	40	42	29	290	1

Table 6 Summary data by NHS Health and Social Care Trust

Trust Name	Homes		Results Bq m⁻³			At or above Action Level
	Totals	Measured	Arithmetic Average	Geometric Average	Highest	
Belfast	164,000	190	45	31	1,300	1
Northern	202,000	1,700	42	26	2,000	29
Southern	147,000	9,100	82	56	2,500	630
South Eastern	154,000	5,800	56	39	1,600	160
