



Island Strategy Argyll and Bute HSCP

Public Health Information Pack for Argyll and Bute Islands

The Public Health Intelligence team are part of the Directorate of Public Health of NHS Highland and provide an expert resource on epidemiology, demography and population health evidence.



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Version	Issued	Next review	Prepared by	Authorised by
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2				
3				

Distribution	Method
Through Argyll and Bute Island Strategy	Publicly available pdf

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Introduction

This report summarises information on public health indicators for a selection of the inhabited islands of the Argyll and Bute HSCP. It aims to inform the work of the Argyll and Bute Island Strategy. The twelve islands discussed are Bute, Coll, Colonsay, Iona, Islay, Isle of Gigha, Isle of Mull, Jura, Lismore, Luing, Seil and Tiree. This document highlights the island demography and the life circumstances for island inhabitants.

Geographies

This report uses three levels of geography: Health and Social Care (HSC) locality area, 2011 intermediate zone and 2011 data zone. Intermediate zones and data zones are nationally agreed geographical areas with defined boundaries. HSC locality areas are locally defined geographies created without reference to national geographies. Therefore, locality areas and national geographies may not neatly align.

The intermediate zone is the smallest spatial unit most commonly used for releasing and presenting potentially sensitive statistical data and reporting measures of population health. Most measures and figures are aggregations from data zones to higher geographical levels. The number of events in the intermediate geographies that best align with a partnership area may not sum to the exact total.

The size of data zones and intermediate zones is defined by the number of residents, with data zones consisting approximately of 500-1,000 household residents and intermediate zones of approximately 2,500-6,000 household residents at the time of the census 2011. This definition explains that not every island neatly aligns with one data or intermediate zone. Depending on the population size of an island it may be covered by several data and intermediate zones or share a data or intermediate zone with other islands or parts of the mainland. For examples see Annex A.

Data sources

Each data source is stated under the table or graph. Many of the indicators presented in this report are published by the Scottish Public Health Observatory (ScotPHO). Full details of the indicator definitions used by ScotPHO are available within the ScotPHO online profiles tool¹.

¹ Scottish Public Health Observatory. Online Profiles Tool.
https://scotland.shinyapps.io/ScotPHO_profiles_tool/

Statistical significance and confidence intervals

Statistical significance is used in this report to indicate whether a difference between two measures reflects a difference in the true or 'underlying' value rather than being attributable to random variation or chance. Statistical significance is determined using 95% confidence intervals.

A confidence interval is a range of values that is used to describe the uncertainty around a point estimate of a quantity, for example a rate or proportion. The 95% confidence interval indicates the degree of uncertainty in an estimate; 95 times out of 100, the interval will include the true or 'underlying' value. The wider the confidence interval, the greater the uncertainty in the measure. The width of the confidence interval depends on the size of the population and the underlying variability in the data. Estimates from larger populations (such as council area) will have smaller confidence intervals and therefore provide more accurate estimates, than from smaller populations (such as locality areas or intermediate zones) with larger confidence intervals.

The confidence intervals are used to interpret whether the difference in an indicator between two areas is statistically significant. If the confidence intervals of the two estimates do not overlap then there is a statistically significant difference between the two estimates. A comparison is made between the intermediate zone, locality area and council area. A more detailed explanation is available in a technical briefing². Please note that throughout the report 'significance' refers to statistical significance.

² Association of Public Health Observatories (APHO). Technical Briefing 3: Commonly used public health statistics and their confidence intervals. APHO; 2008. Available at [https://fingertips.phe.org.uk/documents/APHO Tech Briefing 3 Common PH Stats and CIs.pdf](https://fingertips.phe.org.uk/documents/APHO_Tech_Briefing_3_Common_PH_Stats_and_CIs.pdf)

Population estimates

Population estimates for each island from the 2022 census are presented in Table 1. To explore the effect of the Covid-19 pandemic on the population change by age group, a best fit estimation for population by island was used by NHS Highland Public Health Intelligence (Fig.1). It used a spatial joint of the Community Health Index (CHI) general practice registered population to the island boundaries as provided by National Records Scotland (NRS) 2022. A limitation of the data for the method is that some smaller islands may share a postcode with the mainland with that population being ascribed to the mainland.

It is important to note that the CHI-based population estimates and census 2022 population estimates differ due to the method applied. Due to the small population size of some islands, even small differences in population estimates can translate to significant differences in magnitude of the percental population change between years (Tab. 1). Table 1 presents both the population change according to the CHI-based population estimates from 2012-2023 and the percentage change between census 2011 and census 2022. The percental change differs most notably in Iona (24% vs. 1%), Coll (-24% vs -10%) and Islay (1% vs. -1%) and differs for the total population (1% vs. -1%).

In 2023 the total chi-based population estimate of the twelve islands included in this report was 15,476. It represented 17% of Argyll and Bute's total population of 90,019 according to the general practice list sizes at that time. According to the 2022 census the total population of the twelve islands included in this report was 14,854, which equally equated to 17% of Argyll and Bute's estimated census population of 85,970.

Figure 1 presents the percental distribution of the population over age groups between April 2012, April 2020 and April 2023. Most, but not all, islands saw a decrease in the percentage of population under 16 years of age and 16-64 years of age decreased over time and an increase in the population 65 and above. No clear trend can be noted in connection with the Covid-19 pandemic.

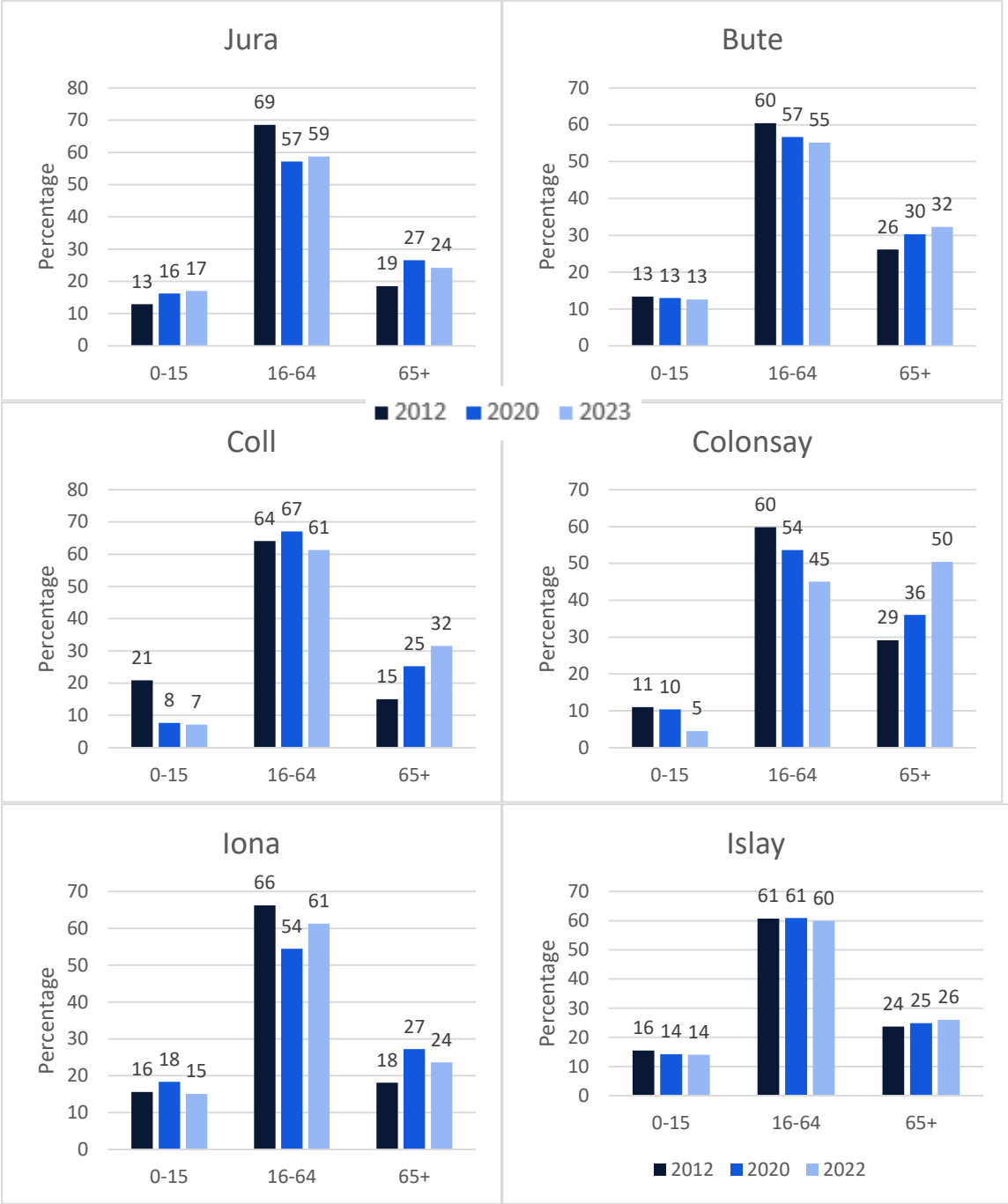
Table 1 Population estimates per island including percentage change by CHI mapping and census

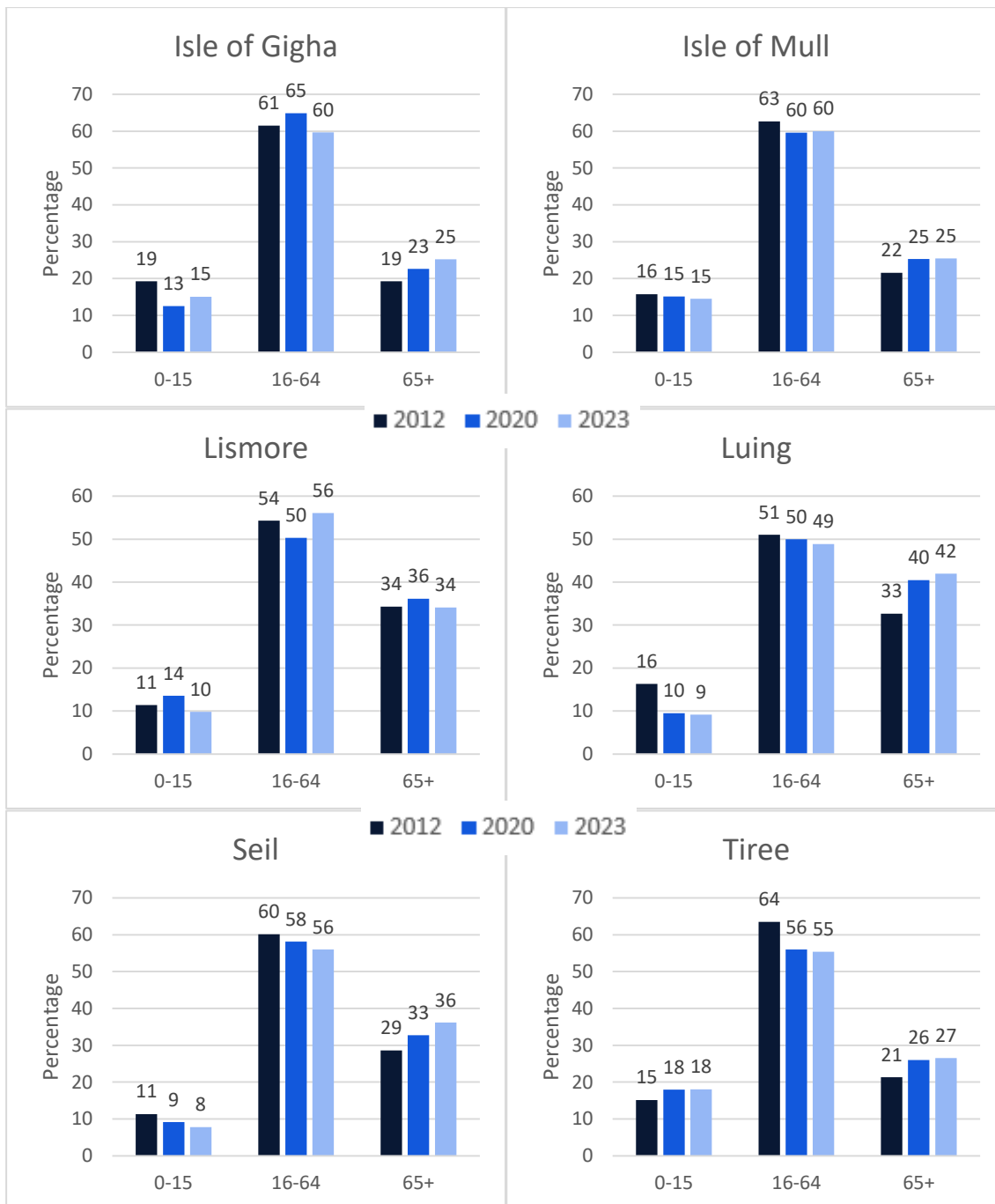
Island	Chi-based population estimates			Census-based population estimates		
	2023	2012	% change 2012-2023	2022	2011	% change 2011-2022
Bute	6,318	6,591	-4	6,047	6,498	-7
Coll	168	220	-24	176	195	-10
Colonsay	111	127	-13	117	124	-6
Iona	199	160	24	178	177	1
Islay*	3,290	3,262	1	3,180	3,228	-1
Isle of Gigha	186	161	16	187	163	15
Isle of Mull	3,288	2,976	10	3,063	2,800	9
Jura	252	194	30	258	196	32
Lismore	173	175	-1	190	192	-1
Luing	174	196	-11	178	195	-9
Seil	575	539	7	580	551	5
Tiree	742	713	4	700	653	7
Total	15,476	15,314	1	14,854	14,972	-1

Source: Estimated using Community Health Index general practice registered populations at April 2012 and April 2023. These were cross referenced with the National Records of Scotland Islands boundaries shapefile for 2022. The island populations reported at Census 2011 – NRS Census Supporting Information – Geography Background Information, Islands and Census 2022 – NRS Census Supporting Information - Islands.

*CHI-based population estimate from April 2022.

Figure 1 Percentage of island population by age group over time





Source: Estimated using Community Health Index general practice registered populations at April 2012, April 2020 and April 2023. For Islay estimates for April 2022 instead of April 2023 were used. These were cross referenced with the National Records of Scotland Islands boundaries shapefile for 2022.

Population projections

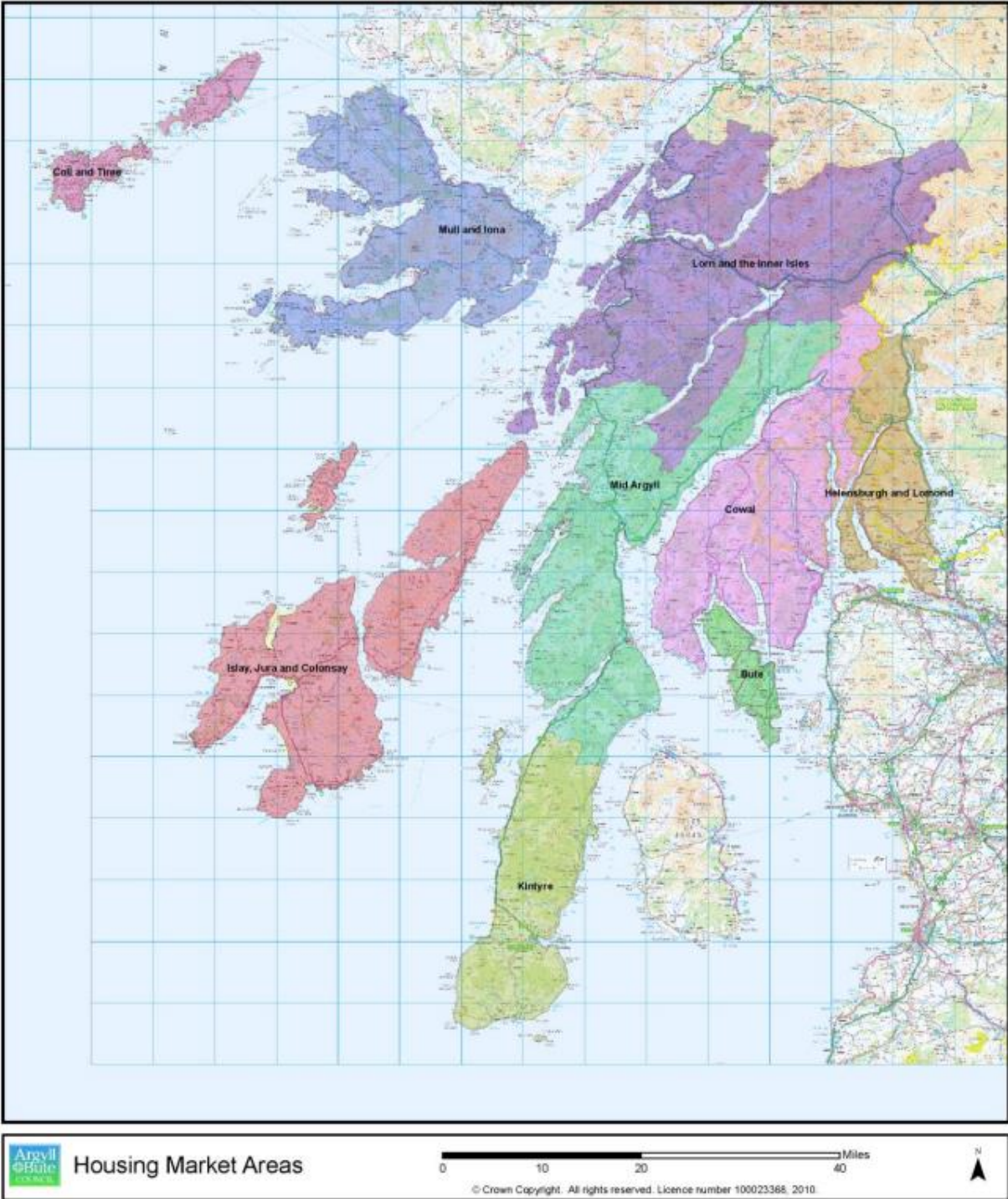
The Improvement Service provides population projections for 2018-2030 covering the nine housing market areas of Argyll and Bute³. The projections are based on the 2018 population estimates. The housing market areas are illustrated in Figure 2. Population projections for the areas that are covering mostly the mainland are not shown in this report. The projections have certain limitations:

- The population estimates they project forward from are based on changes since the previous census, in 2011. It is likely that the 2022 census results will be used to adjust current population estimates.
- It is not usually recommended to carry out population projections for a population on a granular level due to higher variation and increased uncertainty for smaller populations.
- These projections were made prior to the COVID-19 pandemic and prior to Brexit, both of which mean that assumptions made based on earlier trends are less likely to still apply.
- The projections make assumptions about fertility, mortality and migration trends in each local area based on a five-year reference period preceding the projections. The projections do not take any policy or development aims for the area into account.

For the island areas of Bute, Tiree and Coll and Islay, Jura and Colonsay the projections show a decline in the total population over the next decade. For Mull and Iona an overall slight increase of the population is projected from 2018 to 2030.

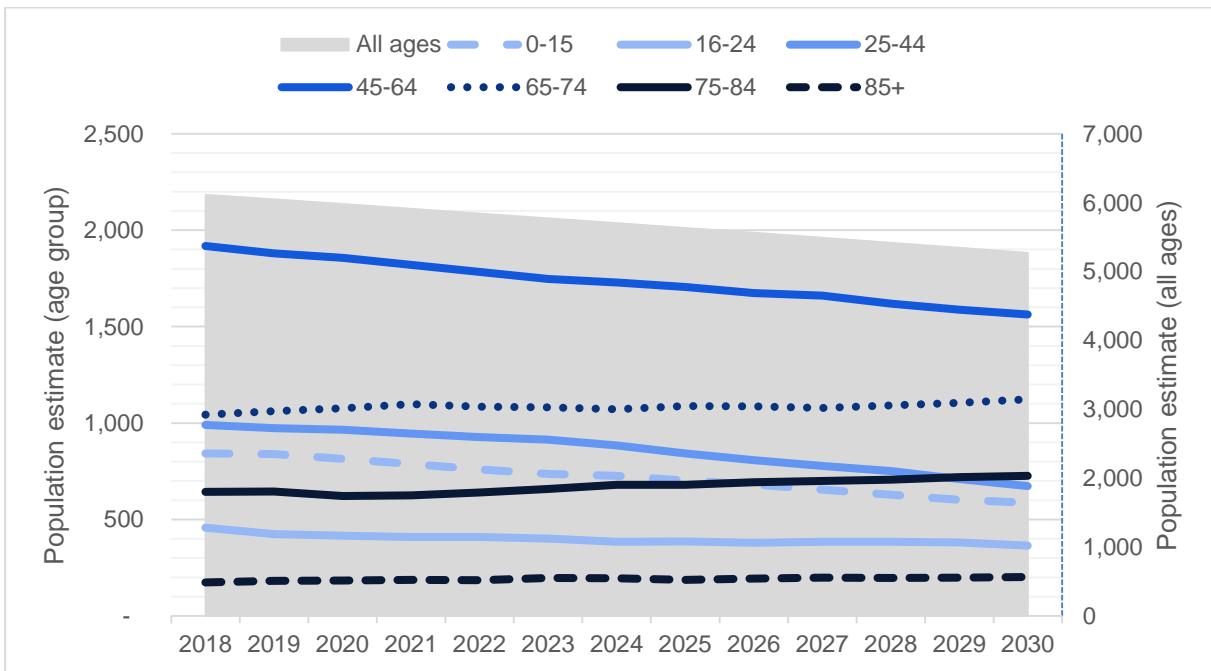
³ Improvement Service, 2018 based sub-national population projections. Available from [Sub-Council Area Population Projections | Improvement Service](#) (last access 01.04.2024)

Figure 2 Housing Market Areas Argyll and Bute



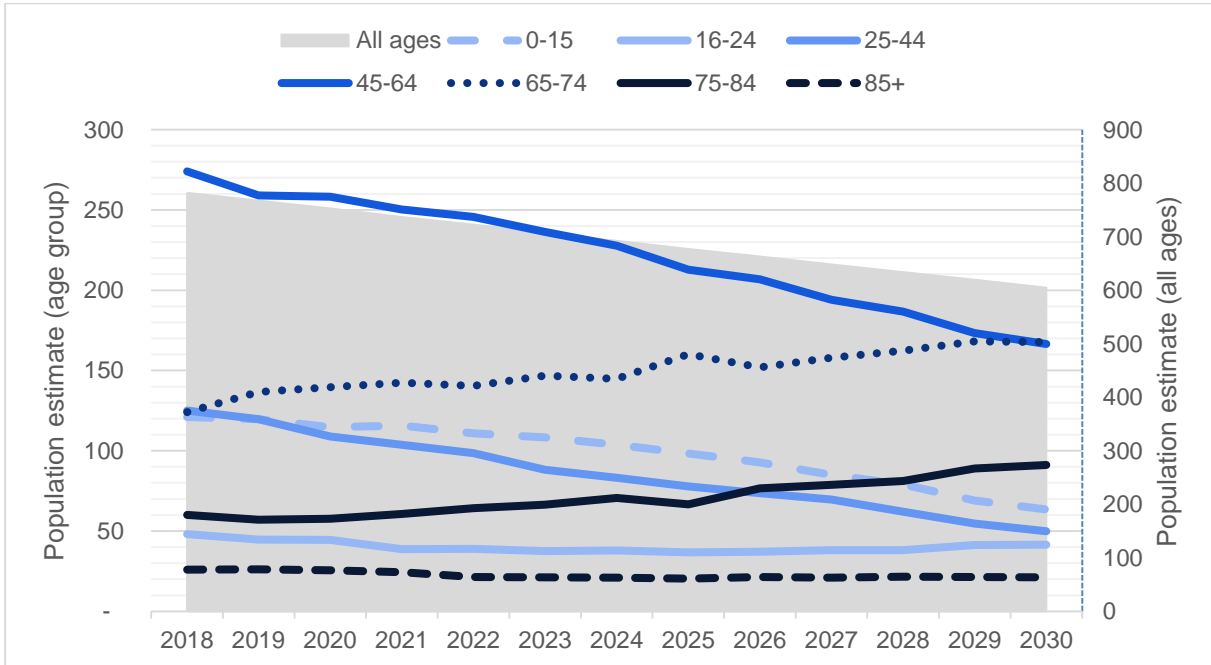
Source: Argyll and Bute, Strategic Housing Investment Plan 2024/25 – 2028/29

Figure 3 2018-based population projection for housing market area Bute by age band, 2018-2030



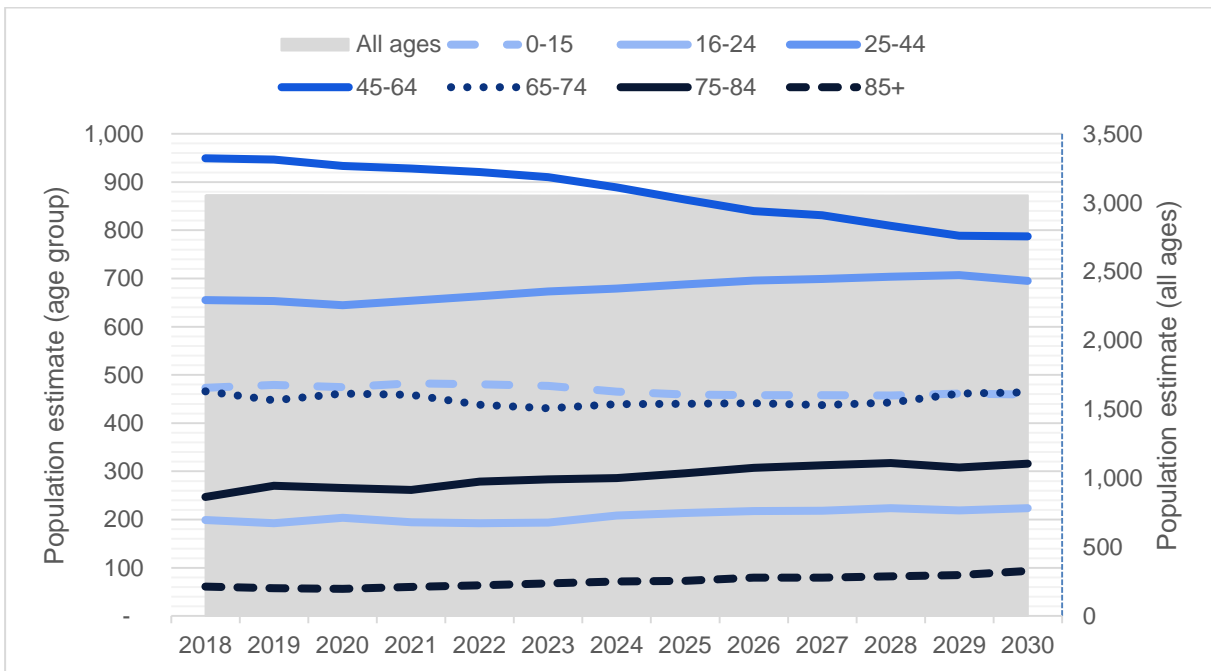
Source: Improvement Service 2018-based population projection for sub-council areas
 There is a very high level of uncertainty within the population projection.
 The right and left axis use different scales. The grey area represents values for all ages, blue lines represent values by age group.

Figure 4 2018-based population projection for housing market area Coll & Tiree by age band, 2018-2030



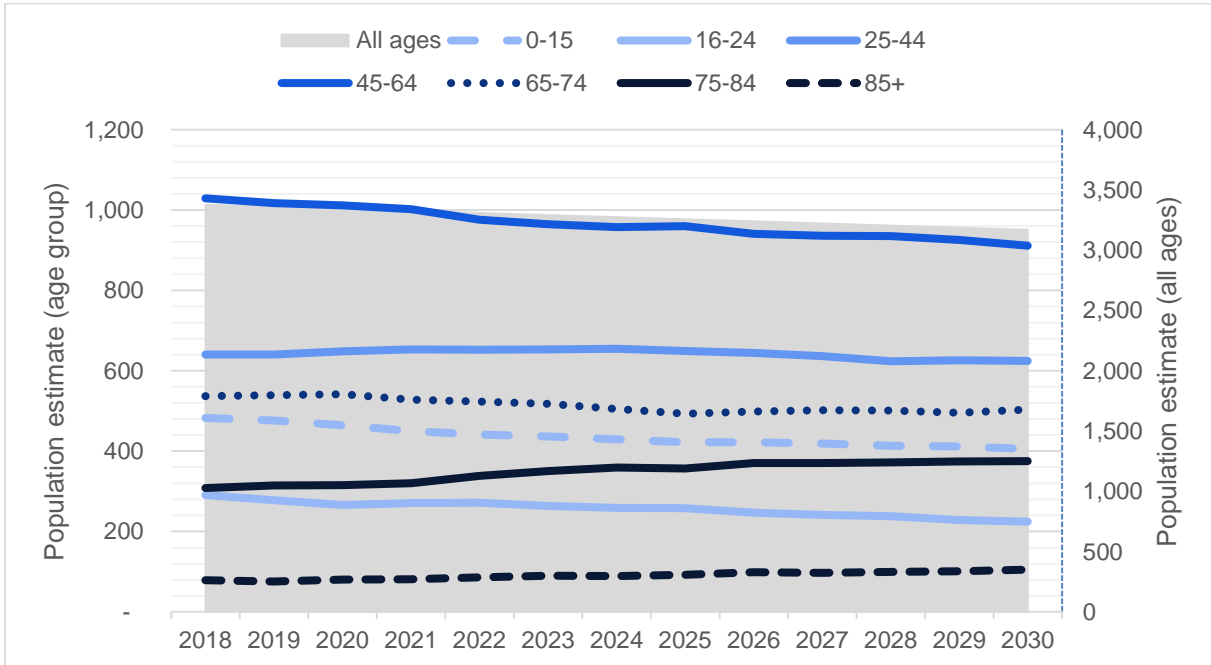
Source: Improvement Service 2018-based population projection for sub-council areas
 There is a very high level of uncertainty within the population projection.
 The right and left axis use different scales. The grey area represents values for all ages, blue lines represent values by age group.

Figure 5 2018-based population projection for housing market area Mull & Iona by age band, 2018-2030



Source: Improvement Service 2018-based population projection for sub-council areas
 There is a very high level of uncertainty within the population projection.
 The right and left axis use different scales. The grey area represents values for all ages, blue lines represent values by age group.

Figure 6 2018-based population projection for housing market area Islay, Jura & Colonsay by age band, 2018-2030



Source: Improvement Service 2018-based population projection for sub-council areas
 There is a very high level of uncertainty within the population projection.
 The right and left axis use different scales. The grey area represents values for all ages, blue lines represent values by age group.

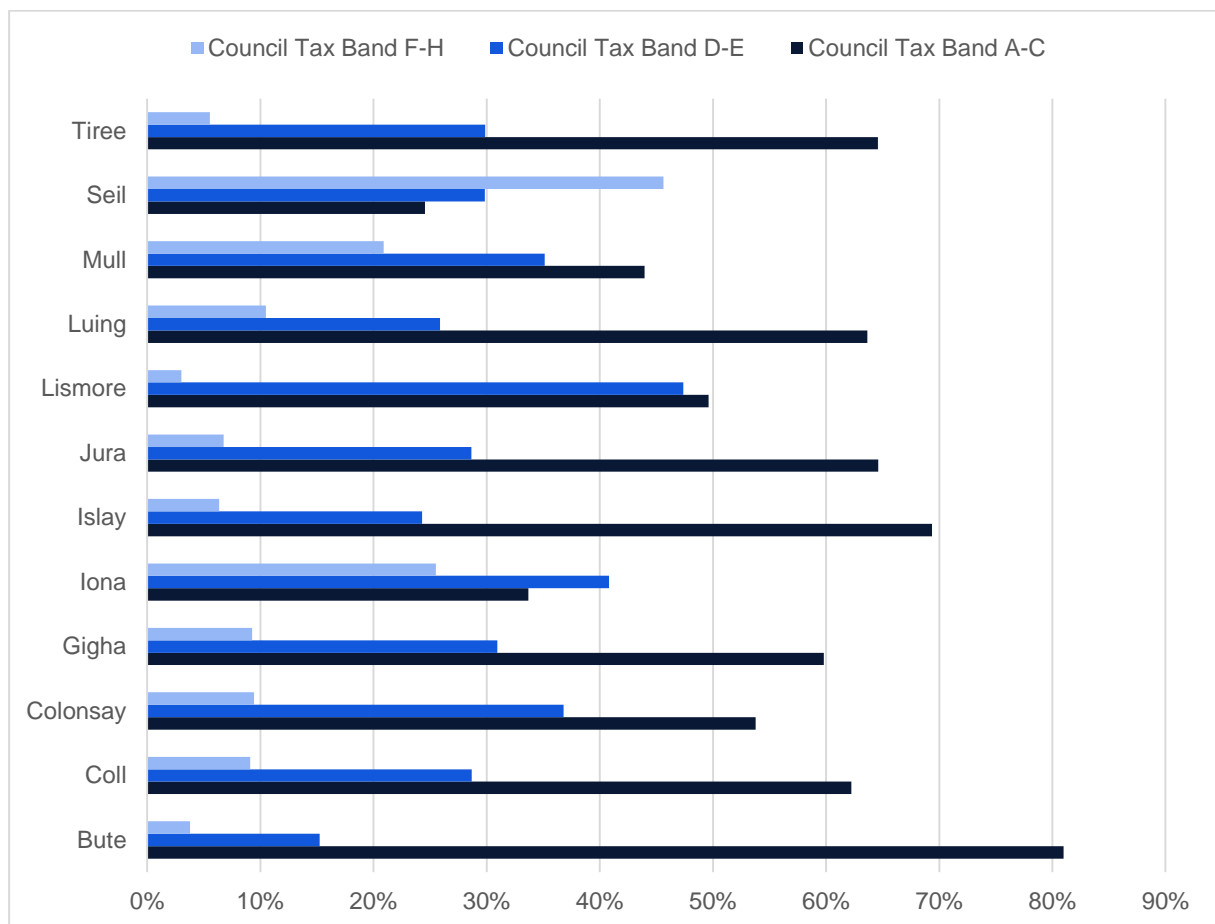
Deprivation

Information available for islands

Dwellings by council tax band

Council Tax is a property based tax payable by the resident, owners or tenants of each property. Council Tax valuations are based on the value of properties that aren't used for business purposes. Council Tax bands go from least (A) to most expensive (H)⁴. The percentage of dwellings for each council tax band can give an indication of the level of wealth of the area. In November of 2023 Bute had the highest percentage of dwellings in council tax band A-C and the lowest in F-H, while Seil showed the opposite trend, with nearly half of all dwellings in the council tax bands F-H.

Figure 7 Percentage of dwellings by council tax banding for each island for November 2023



Source: National Records Scotland, Dwelling estimates and characteristics of dwellings, by 2011 Data Zone, December 2023

⁴ [Council tax leaflet | Argyll and Bute Council \(argyll-bute.gov.uk\)](https://www.argyll-bute.gov.uk/council-tax-leaflet)

Scottish Index of Multiple Deprivation

The Scottish Index of Multiple Deprivation (SIMD)⁵ is an area-based measure of relative deprivation rather than household or individual deprivation. It ranks all Scottish data zones according to indicators under seven different domains: income, employment, education, health, access to services, crime and housing, and is weighted most heavily by the income and employment domains. Data zones are divided into 10 groups (called deciles) with equal numbers of data zones in each group for Scotland overall from decile 1 = most deprived to decile 10 = least deprived.

The SIMD can help to understand the life circumstances and health outcomes of people living in areas identified as experiencing high levels of deprivation.

Health inequalities have been defined as the “unjust and avoidable differences in people’s health across the population and between specific population groups”⁶. Inequalities are not caused by a single issue, and can occur by age, sex, gender identity, ethnic group, disability, income, deprivation, geography and other factors.

The SIMD represents deprivation less accurately in rural areas⁷. The statistical indicators used in the index do not capture the nature of rural disadvantage, and poor households in rural areas are unlikely to be spatially concentrated. Rural areas tend to be less socially homogeneous than urban ones in terms of deprivation, and deprived households in rural areas are unlikely to make much statistical impact on a small area (data zone) basis. A consequence is that rural disadvantage is less visible and ‘less easily tractable’ than in urban areas.

The rankings for the data zones covering the islands are listed in table 2. Some islands are covered by multiple data zones. Some data zones cover multiple islands. If a data zone covers parts of the mainland in addition to an island this is indicated.

Coll and Tiree combined form one data zone which is in decile 5 overall in SIMD 2020, among the middle ranking data zones in Scotland.

The Isle of Mull is split between four data zones, one shared with Iona, which are in the deciles 6 and 7 overall. All but one data zone covering the two islands fall into decile 1, most

⁵ Scottish Government. Scottish Index of Multiple Deprivation 2020.

<https://www.gov.scot/collections/scottish-index-of-multiple-deprivation-2020/>

⁶ NHS Health Scotland. [Health inequalities: What are they? How do we reduce them?](https://www.healthscotland.scot/health-inequalities-what-are-they-how-do-we-reduce-them/) (healthscotland.scot)

⁷ Thomson J. Rural Deprivation Evidence Summary. Scottish Government. 2016. [rural+deprivation+evidence+review.pdf](https://www.gov.scot/rural+deprivation+evidence+review.pdf) (www.gov.scot)

deprived, with regard to access. The data zone with an access rank of 6 covers Tobermory, a population centre on the isle.

The data zone covering the isle of Lismore is covered large parts of the mainland as well. The overall rank of 5 does therefore not refer to the island alone.

The islands Luing and Seil are covered together with several smaller islands by the same data zone, that falls into decile 5 overall. While the deprivation in access is high (rank 1), regarding employment (9), health (9) and crime (10) the area is among the least deprived in Scotland.

The islands Jura, Colonsay and Oronsay are covered together with Scarba by the same data zone that has an overall rank of deprivation of 6. Similar to Luing and Seil, the deprivation in access is high (rank 1), while regarding employment (8), health (8) and crime (10) the area is among the least deprived in Scotland.

Islay is covered by four data zones that fall in the overall deciles of 4 and 6. The two zones covering the more populated areas of the island are among the least Access deprived (9), but have higher levels of deprivation in all other categories than the two data zones on the islands that cover the less densely populated areas of Islay.

Bute is the most populated island in Argyll and Bute and is covered by 11 data zones, seven of which covering the area of Rothesay town. The data zones mostly fall into the more deprived deciles overall as well as in regard to income, employment, education, health and housing in comparison to the four data zones covering the less densely populated areas of Bute.

Table 3 illustrates the percentage of people who are income deprived and who are employment deprived by island. For islands that are covered by multiple data zones the numbers were aggregated to the best fit.

The percentage of people that are income deprived is based on the number of people classified as income deprived compared to the total population of the area. The percentage of people that are employment deprived is calculated based on the number of people classified as employment deprived compared to the total number of working age people in the area. The population numbers are based on the 2017 NRS small area population estimates.

Table 3 shows that Bute has the highest percentage of both income deprived and employment deprived inhabitants among all islands and to Argyll and Bute overall.

Table 2 SIMD2020v2 deciles by domain for data zones covering the islands

Data zone name	Islands	Overall rank	Income rank	Employment rank	Educational rank	Health rank	Access rank	Crime rank	Housing rank
Mull, Iona, Coll and Tiree - 01	Coll & Tiree	5	7	6	6	7	1	7	4
Mull, Iona, Coll and Tiree - 02	Isle of Mull	6	7	8	8	7	1	9	5
Mull, Iona, Coll and Tiree - 03	Isle of Mull	7	6	7	8	6	6	6	6
Mull, Iona, Coll and Tiree - 04	Iona & Isle of Mull	6	7	7	6	9	1	9	2
Mull, Iona, Coll and Tiree - 05	Isle of Mull	6	8	8	8	8	1	8	2
Benderloch Trail - 04	Lismore (+Mainland)	5	7	8	5	8	1	10	4
Loch Awe - 03	Luining, Insh, Slate Island, Seil, Esadale, Isle of Shuna	5	6	8	7	8	1	10	3
Whisky Isles - 01	Jura, Colonsay, Oronsay, Scarba	6	8	9	3	9	1	10	5
Whisky Isles - 02	Islay	6	7	7	8	6	1	9	5
Whisky Isles - 03	Islay	6	8	7	7	7	1	9	5
Whisky Isles - 04	Islay	4	5	4	5	3	9	6	4
Whisky Isles - 05	Islay	6	5	6	6	5	9	7	3
Kintyre Trail - 01	Isle of Gigha (+Mainland)	5	6	7	6	8	1	7	5
Bute - 01	Bute	3	3	2	5	5	2	8	6
Bute - 02	Bute	7	6	6	8	7	3	6	8
Bute - 03	Bute	9	10	10	8	9	2	7	9
Bute - 04	Bute	5	7	6	7	7	1	5	5
Rothesay Town - 01	Bute	5	3	4	7	5	8	6	6
Rothesay Town - 02	Bute	1	1	1	3	2	8	6	4
Rothesay Town - 03	Bute	1	2	1	2	2	10	1	2

Rothesay Town - 04	Bute	2	2	1	3	3	8	3	5
Rothesay Town - 05	Bute	3	3	2	5	3	9	7	4
Rothesay Town - 06	Bute	3	2	2	3	5	9	6	8
Rothesay Town - 07	Bute	2	1	2	3	3	9	2	3

Source: SIMD 2020v2 data zone lookup [Scottish Index of Multiple Deprivation 2020v2 data zones - gov.scot \(www.gov.scot\)](https://www.gov.scot/resources/consultations-petitions/information/Scottish-Index-of-Multiple-Deprivation-2020v2-data-zones)

Table 3 Percentage of income and employment deprived people by area, SIMD2020

Area	Percentage income deprived	Percentage employment deprived
Scotland	12%	9%
Argyll & Bute	10%	8%
Bute	17%	14%
Isle of Gigha (+Mainland)	8%	5%
Islay	8%	7%
Jura, Colonsay, Oronsay, Scarba	5%	3%
Coll & Tiree	7%	6%
Iona & Isle of Mull	6%	5%
Lismore (+Mainland)	6%	4%
Luing, Insh, Slate Island, Seil, Esadale, Isle of Shuna	8%	4%

Source: SIMD 2020v2, Indicators, [Scottish Index of Multiple Deprivation 2020v2 - indicators - gov.scot \(www.gov.scot\)](https://www.gov.scot/resources/consultations-petitions/information/Scottish-Index-of-Multiple-Deprivation-2020v2-indicators)

Health and Wellbeing status

Information available for islands

Life expectancy

Life expectancy provides a high-level measurement of the health of a population. Life expectancy at birth measures the average number of years a newborn is expected to live if they experienced the period's age and sex-specific mortality rates. Areas in which the population experience more significant ill health and where people die at a younger age have a lower life expectancy.

The life expectancy for women is higher than for men in all of Argyll and Bute's island areas, which follows the same trend as in Argyll and Bute and Scotland overall.

Compared to the Argyll and Bute average the life expectancy at birth for women is significantly higher in the areas of Mull, Iona, Coll and Tiree, the less densely populated areas of Bute, the Isle of Gigha and the island cluster including Luing and Seil (Figure 8). It has to be noted that the intermediate zone for the isle of Gigha and the island cluster including Luing and Seil both cover parts of the mainland and the observed trends do not describe the islands alone.

In the male population none of the island areas show a significantly higher life expectancy at birth than the Argyll and Bute average (Figure 9). However, Rothesay Town, the more densely populated area of Bute, had a significantly lower life expectancy at birth in 2017-2021 than Argyll and Bute overall.

Table 4 Life expectancy at birth in years by sex, 5-year period 2017-2021 for island areas, 3-year period 2018-2020 for Argyll and Bute and Scotland

Area		Female		Male	
Area name	Corresponding Island	Life expectancy	95%-CI	Life expectancy	95%-CI
Benderloch Trail	Lismore + Mainland	81.3	79.5-83.2	78.8	76.8-80.9
Bute	Bute	85.2	83.6-86.8	81.5	77.3-85.6
Rothesay Town	Bute	79.8	77.6-82.1	73.3	70.1-76.6
Kintyre Trail	Isle of Gigha + Mainland	85.5	82.7-88.4	79.9	76.8-83.0
Loch Awe	Luing, Insh, Slate Island, Seil, Esadale, Isle of Shuna + Mainland	89.6	87.4-91.8	82.0	80.1-84.0
Mull, Iona, Coll & Tiree	Isle of Mull, Iona, Coll & Tiree	85.1	83.5-86.6	76.5	73.6-79.7
Whisky Isles	Islay, Jura, Colonsay, Oronsay, Scarba	82.6	80.5-84.7	78.0	74.9-81.0
Argyll and Bute		81.6	80.9-82.3	78.0	77.3-78.6
Scotland		81.0	80.9-81.1	76.8	76.7-76.9

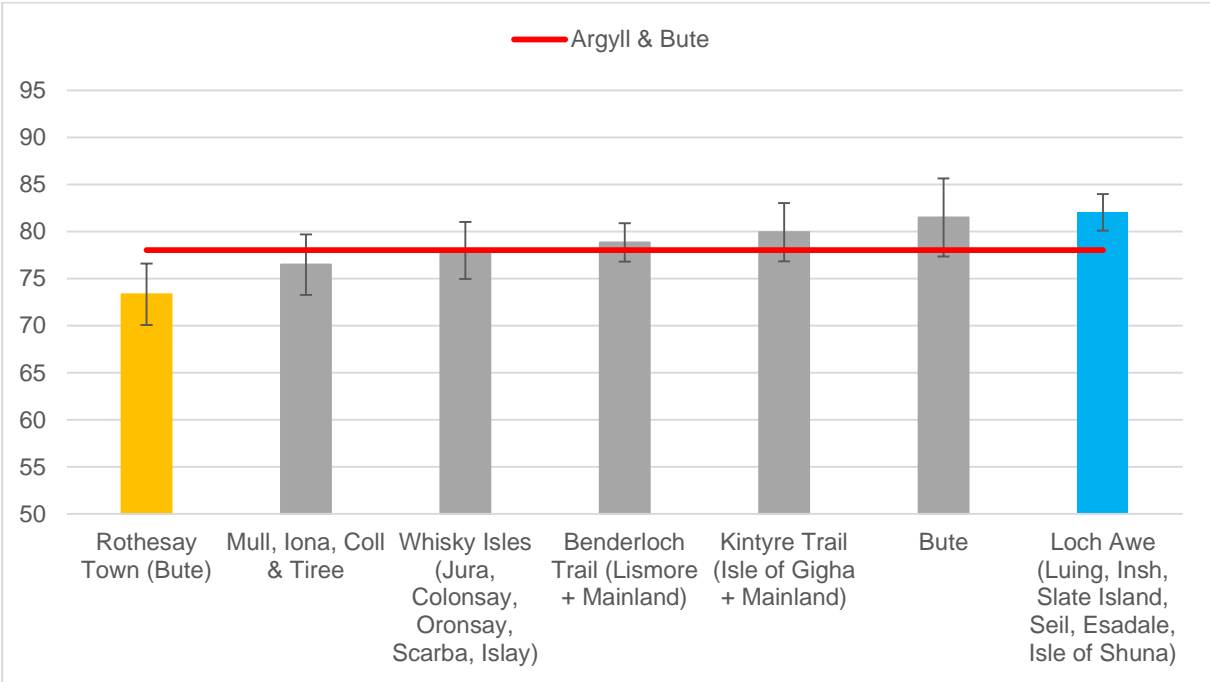
Source: National Records of Scotland, Life Expectancy at birth, 2018-2020 (3 year aggregate for Local Authority/Scotland) and 2017-2021 (5 year aggregate for Intermediate zones)

Figure 8 Life expectancy at birth, females, by intermediate zone average of 2017-2021, compared to Argyll and Bute average



Source: ScotPHO Online Profiles: Life expectancy at birth for females, 5-year average for intermediate zones
 Error bars (vertical lines at column series ends) show a 95% confidence interval range.
 The vertical-axis does not start at zero.

Figure 9 Life expectancy at birth, males, by intermediate zones, average of 2017-2021, compared to Argyll and Bute average



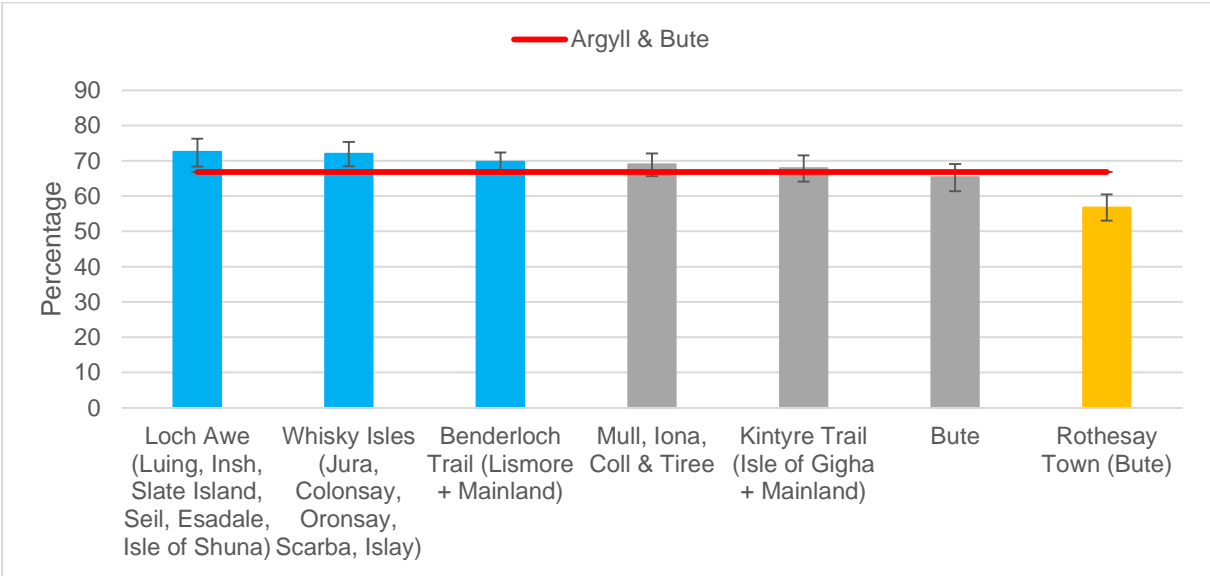
Source: ScotPHO Online Profiles: Life expectancy at birth for males, 5-year average for intermediate zones
 Error bars (vertical lines at column series ends) show a 95% confidence interval range.
 The vertical-axis does not start at zero.

Bowel screening uptake

The Scottish Bowel Screening Programme invites those aged 50 to 74 to be screened every two years. Participants are sent a test kit to their home and return a sample from a bowel motion to the Bowel Screening Laboratory. Those with a positive test result are referred to their health board of residence for follow-up, with the majority receiving a colonoscopy. The programme was paused in March 2020 due to the Covid-19 pandemic and resumed in October 2020.

Bowel screening uptake in three of island areas is significantly higher than in Argyll and Bute overall. The only island area with a significantly lower screening uptake is Rothesay Town on Bute.

Figure 10 Percentage of bowel screening uptake in the population aged 50-74 by intermediate geography 2019-2021, compared to Argyll and Bute average



Source: Scottish Bowel Screening Database (Public Health Scotland), 2019-2021, reported on intermediate zone level

Early deaths from cancer

Due to the relatively small total numbers of deaths in those under 75 years of age that were primarily due to cancer in intermediate geographies, the rates on this geographical level have large confidence intervals. None of the intermediate geographies covering the Argyll and Bute islands differ significantly from the council area average.

Figure 11 Early deaths from cancer, aged <75 years, by intermediate geography, 2019-2021, compared to Argyll and Bute average



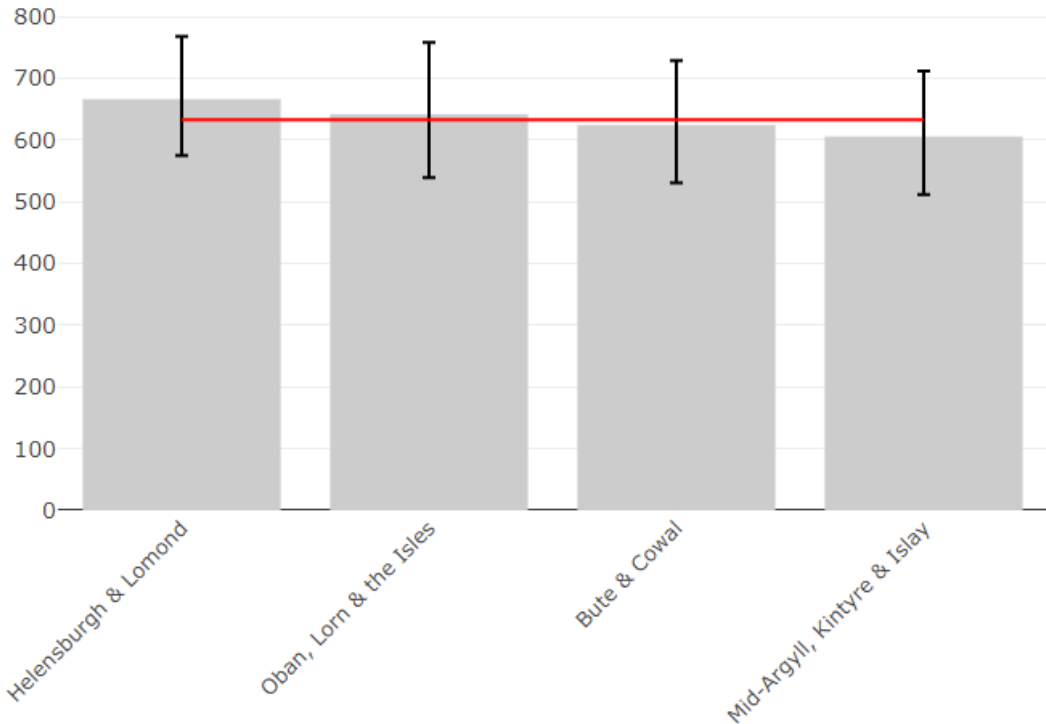
Source: National Records of Scotland (NRS), Deaths from cancer (<75 years), 3 year rolling average number and directly age sex standardised rate per 100,000 population. All rates have been standardised against the European standard population (ESP2013).

Information available at HSC locality level

Cancer registrations

The age- and sex standardised rate of cancer registrations is available at the level of the HSC localities as 3-year averages. In the period 2019-2021 none of the HSC localities showed a significant difference to the Argyll and Bute average. From the information on locality level trends on the islands can not be directly inferred.

Figure 12 Age-sex standardised rate per 100,000 of cancer registrations per by HSC locality compared against Argyll and Bute, 2019-2021



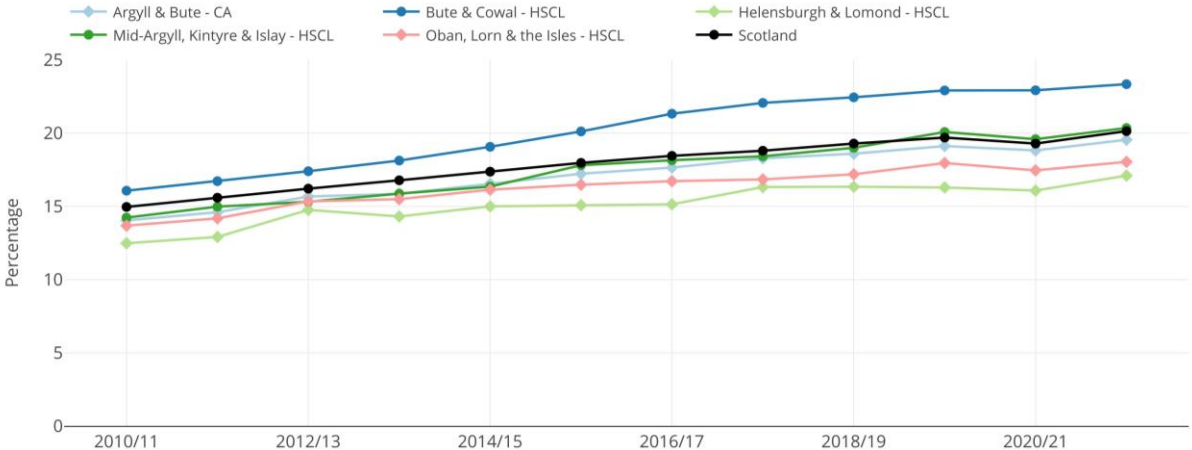
Source: ScotPHO, Public Health Scotland (SMR06), 3 years rolling average 2002-2020. Age-sex standardised rate per 100,000 population. All rates have been standardised against the European standard population(ESP2013) and 2011-base population estimates

Prescribed drugs for anxiety, depression or psychosis

The yearly percentage of the population that are prescribed drugs for anxiety, depression or psychosis is available at HSC locality level. The prescribing levels increased in all four localities between 2010/11 and 2021/22, which is mirroring the trend in Scotland overall (Figure 13). For the financial year 2021-2022 the percentage was significantly higher in the localities Bute and Cowal and Mid-Argyll, Kintyre and Islay than for the Argyll and Bute average (Figure 14). For Oban, Lorn and the Isles and Helensburgh and Lomond the percentage was significantly lower than for the Argyll and Bute average (Figure 14).

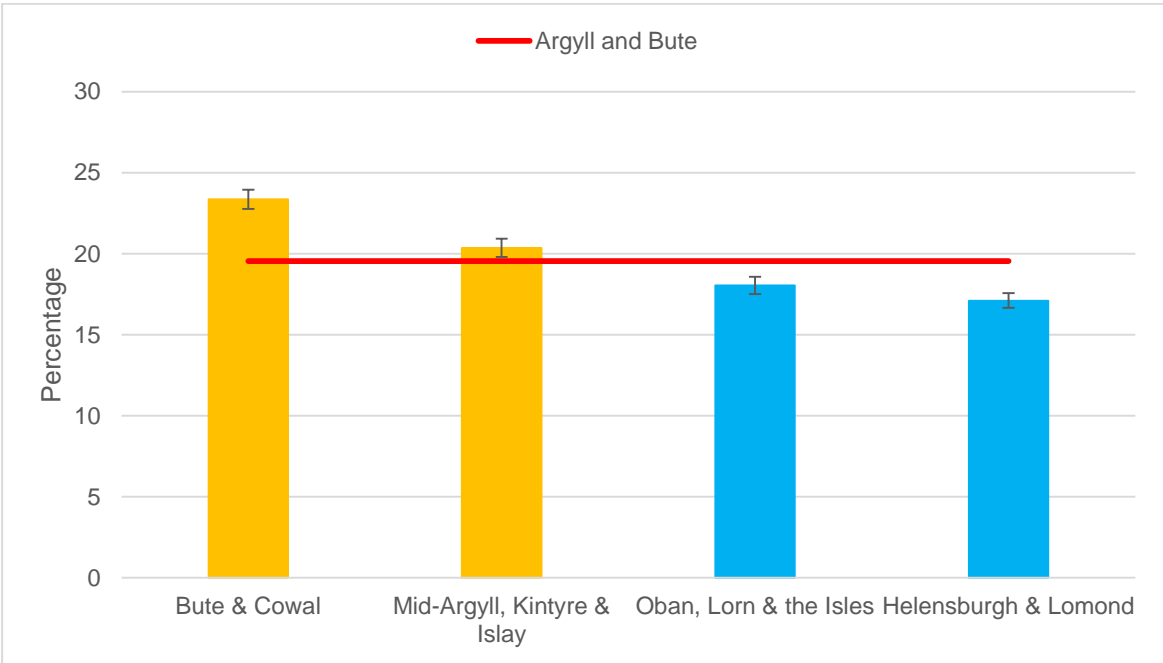
An increase in prescribing over time does not necessarily suggest an increased prevalence of mental health conditions but could be due to an improvement in access. From the information on locality level trends on the islands can not be directly inferred.

Figure 13 Time trend on estimated percentage of population prescribed drugs for anxiety, depression or psychosis over time



Source: ScotPho, Public Health Scotland (Prescribing Information System), 2010/11-2021/22

Figure 14 Estimated percentage of population prescribed drugs for anxiety, depression or psychosis by HSC locality compared against Argyll and Bute, 2021/22



Source: ScotPho, Public Health Scotland (Prescribing Information System), 2021/22

Alcohol and drug related data

Reducing the use of and harm from alcohol, drugs and other substances is a national public health priority⁸. There is no safe level of drinking alcohol and no completely safe level of drug use. People's use of alcohol and drugs may incur harm from many issues. Alcohol and drug use can have a significant impact on physical and mental health, as well as long-term social impacts, including family break-ups, domestic abuse, unemployment, homelessness and financial problems. There are increased risks of accidents, injuries, violence and antisocial behaviour. Substance use by parents and carers can also have a huge adverse effect on children and young people's health and wellbeing.

Information available for islands

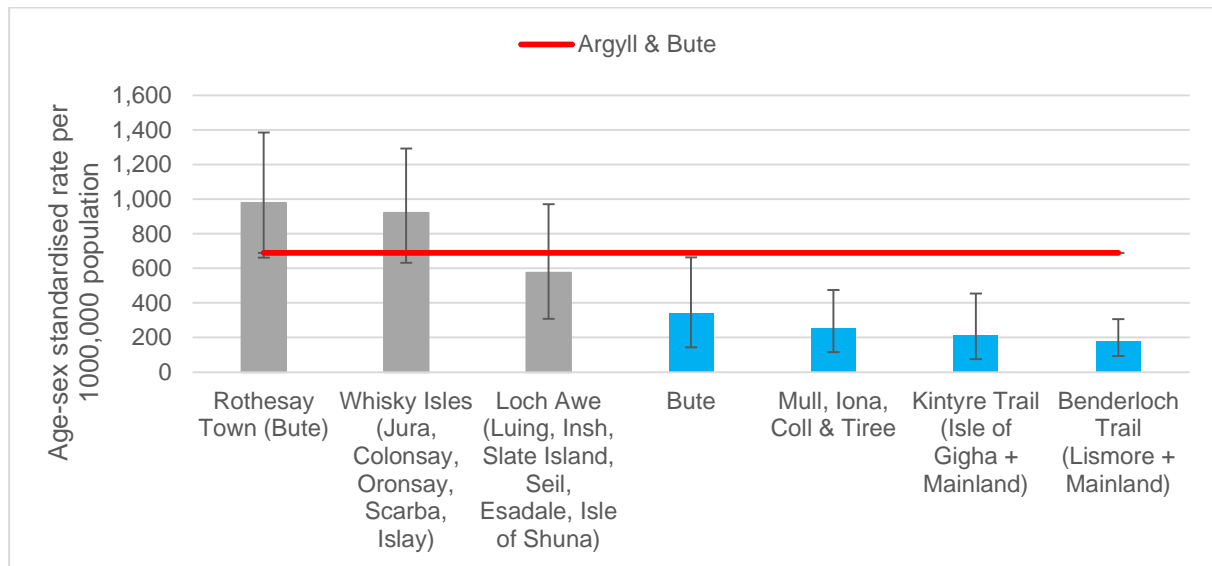
Alcohol-related hospital admissions

None of the intermediate geographies covering the islands show a significantly higher rate of alcohol-related hospital admissions than Argyll and Bute overall (Figure 15). The alcohol-related hospital admissions are based on counts of general acute inpatient and day case stays where alcohol-related conditions are diagnosed. The difference in rates between the intermediate geographies might be connected to accessibility to hospitals.

The count and rates presented in this indicator do not include activity resulting in A&E attendance only. Each individual patient may have more than one stay and hence the number of people discharged within a year will be less than the total number of stays. Note that some caution is necessary when using these data, as alcohol misuse may only be suspected and may not always be recorded by the hospital. The figures presented here are based on all alcohol-related diagnoses throughout the hospital stay and will reflect prevalence in the catchment area as well as local policy with regard to hospital admission and discharge.

⁸ Scottish Government. Public Health Priorities for Scotland. 2018. URL: <https://www.gov.scot/publications/scotlands-public-health-priorities/>

Figure 15 Alcohol-related hospital admission by intermediate geography compared to Argyll & Bute average 2021/22



Source: Public Health Scotland (SMR01), General acute inpatient and day case stays with diagnosis of alcohol misuse in any position.

Age-sex standardised rate per 100,000 population. All rates have been standardised against the European standard population(ESP2013) and 2011-base population estimates.

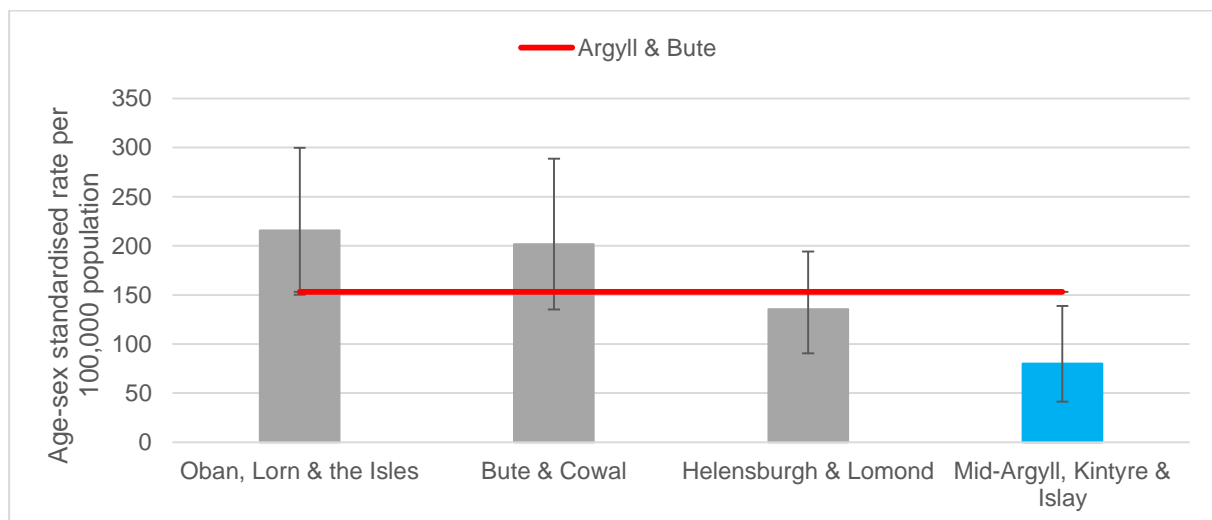
Error bars (vertical lines at column series ends) show a 95% confidence interval range.

Information available at HSC locality level

Drug-related hospital admissions

The locality of Mid-Argyll, Kintyre and Islay had a significantly lower rate of drug-related hospital admissions than the average of Argyll and Bute for the three-year average of 2019/2020 to 2021/2022 (Figure 16). The information on drug-related hospital admissions are not available on a level lower than HSC locality.

Figure 16 Drug-related hospital admissions by locality compared to Argyll and Bute average, 2019/20-2021/22



Source: Public Health Scotland (SMR01), General acute inpatient and day case stays with diagnosis of drug misuse in any position, 3-year rolling average number and directly age-sex standardised rate per 100,000 population. All rates have been standardised against the European standard population(ESP2013) and 2011-base population estimates. Error bars (vertical lines at column series ends) show a 95% confidence interval range.

Tourism and seasonality of population

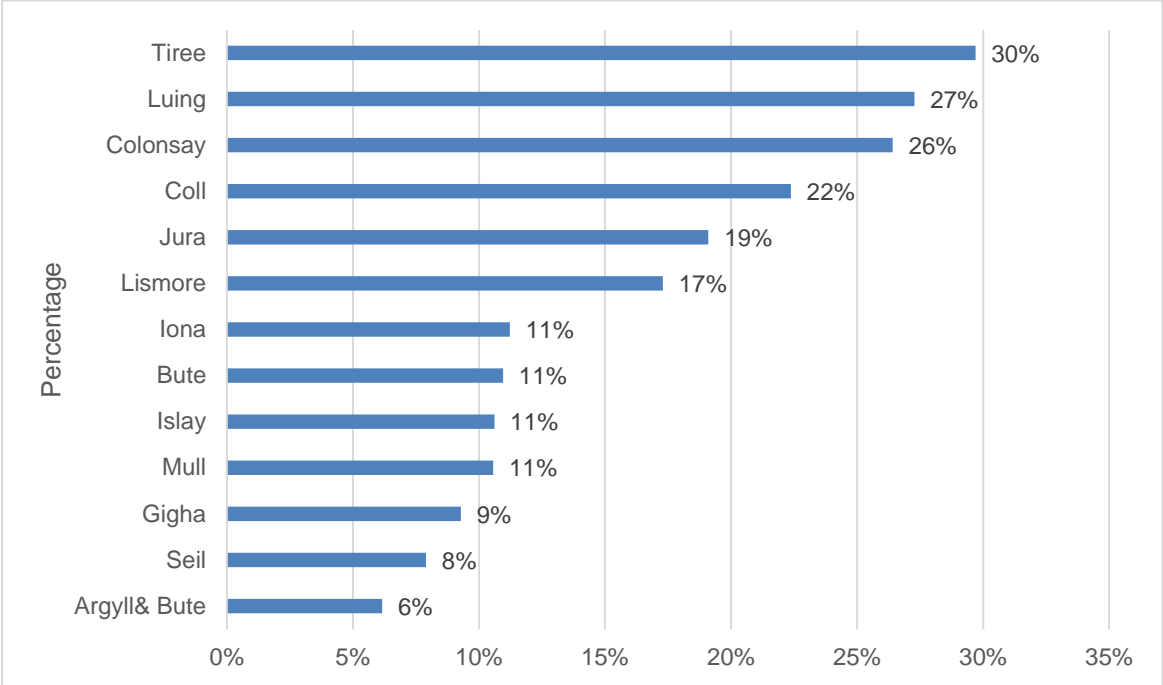
Information available for islands

Second homes

Second homes are likely to be seasonally occupied indicating a higher number of inhabitants on the island in some months. This could translate to a higher demand on transportation and services during the most common visitation times.

All islands have a higher percentage of second homes than Argyll and Bute overall (Figure 17). With 30%, Tiree has the highest percentage of second homes of the islands listed in the overview.

Figure 17 Percentage of second homes on all dwellings by area November 2023

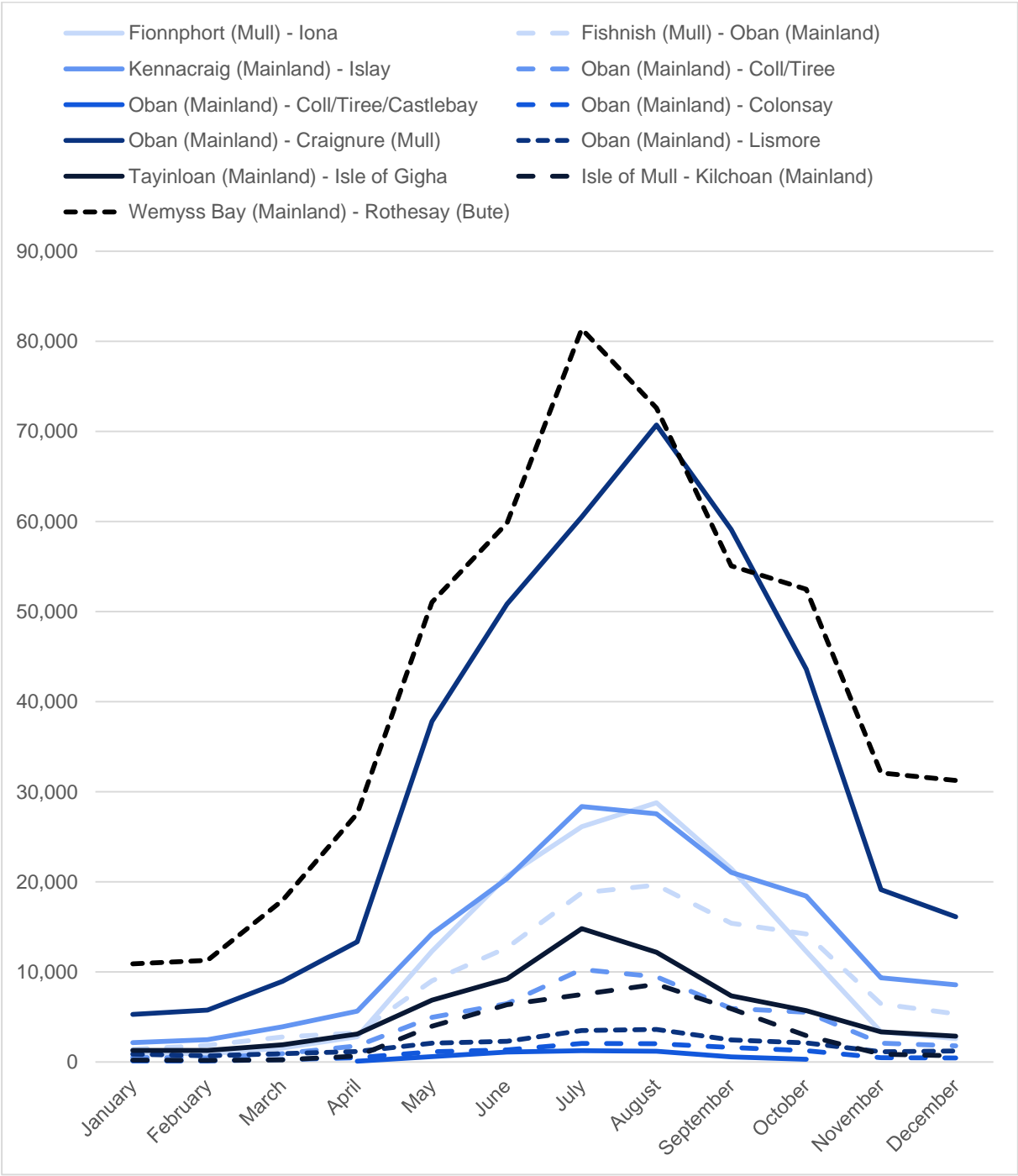


Source: Council Tax Register, November 2023

Passenger numbers of ferries

CalMac Ferries Ltd is a provider for many ferry lines servicing the islands of Argyll and Bute. Their passenger numbers per month for 2022 show an increase for most lines in the summer months (Figure 18). An increase of visitors to the island can lead to an increased demand on services during this time. The highest passenger numbers and the clearest seasonal peak were reported for the lines from Wemyss Bay to Rothesay on Bute and Oban to Craignure on the Isle of Mull.

Figure 18 Passenger numbers for Caledonian MacBrayne (CalMac) ferries by route and month, 2022



Source: Carrying statistics - Custom reporting, Caledonian MacBrayne 2022

Visitor numbers for island attractions

According to the Visitor Attraction Monitor of the Moffat Centre at the Glasgow Caledonian University nearly 30,000 people visited the island of Iona, nearly 64,000 the attractions on Iona and Mull and close to 43,000 Mount Stuart on Bute in 2019 (Table 5). Information on the visitor numbers are not available by month. Considering the seasonality of ferry passenger numbers it is reasonable to assume that visitor numbers are not equally distributed throughout the year. An increased number of visitors can lead to an increase of demand of services.

Table 5 Visitor numbers for island attractions, 2019

Attraction	Island	2019
Iona	Iona	29,808
Iona Abbey & St Columba Centre	Iona, Mull	63,884
Mount Stuart	Bute	42,809

Source: Visitor Attraction Monitor, Moffat Centre, Glasgow Caledonian University, 2019

Temporary registrations with island GPs

The Scottish Government⁹ and NHS National Services Scotland (Practitioner Services)¹⁰ advise that people can only register with a GP practice if staying in an area for more than three months. People may however still be treated, but as a temporary resident.

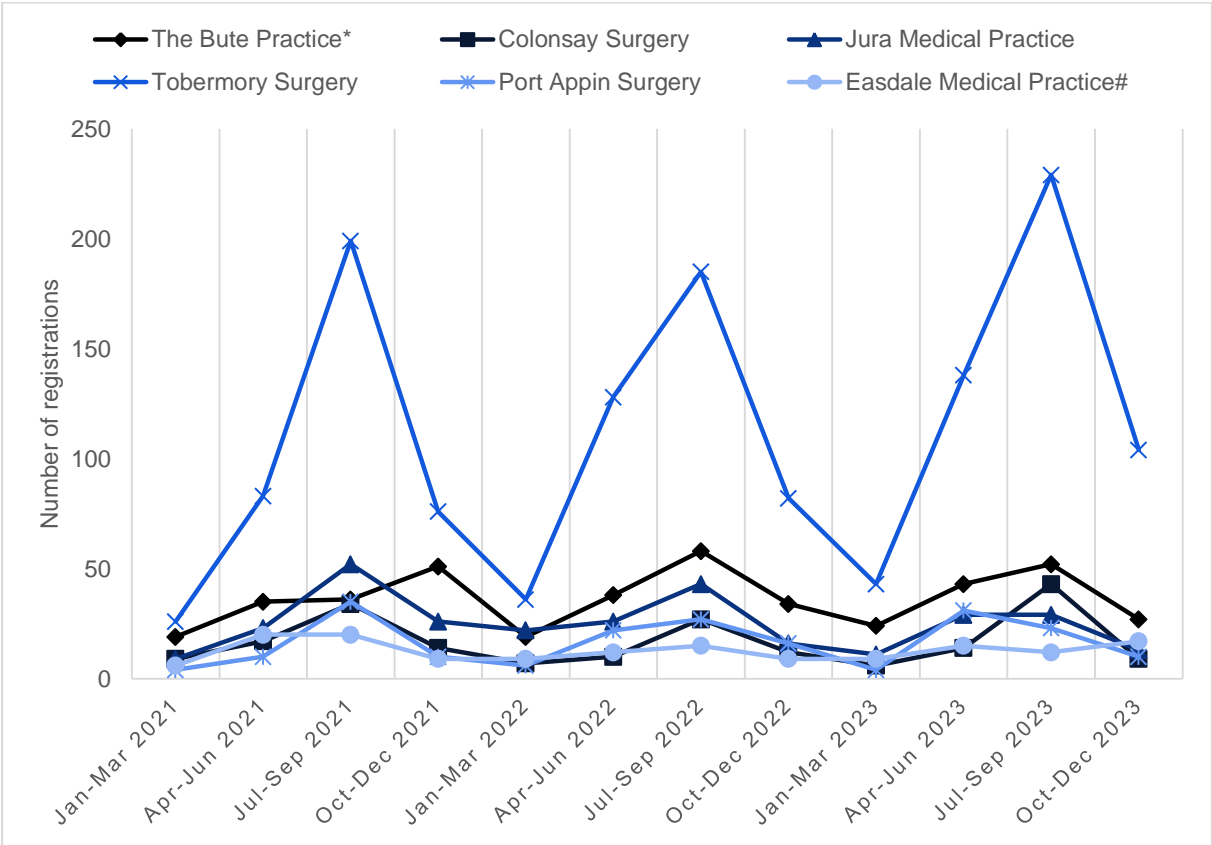
Numbers of temporary registrations by quarter and, where available, numbers of consultations for temporary registrations were provided by the practice managers of the general practices on the islands. The data was obtained before the end of December 2023, leaving the count for that month incomplete. The count of consultations and resulting clinical and non-medical staff administration time generated by temporary residents are not currently readily available for each practice.

In the last three years the number of temporary registrations for some but not all island GP practices peaked over the summer months, July to September, suggesting an increase of demand on GP services during that time (Figure 19). Due to high workload some practices reuse temporary registration for multiple patients, which leads to an underestimation of numbers. Figure 21 shows higher consultation numbers for temporary registrations in April to June and July to September, illustrating a similar trend.

⁹ Scottish Government. mygov.scot - Health, social care and wellbeing - Register with a doctor. 2017. Available from: [Register with a doctor - mygov.scot](https://mygov.scot/register-with-a-doctor) [Accessed March 2024].

¹⁰ NHS National Services Scotland (Practitioner Services). NHS Inform - Registering with a GP Practice. 2018. Available from: [Registering with a GP practice | NHS inform](https://nhs.uk/inform/registering-with-a-gp-practice) [Accessed March 2024].

Figure 19 Numbers of temporary patient registrations (<3 months) at GP practices on Argyll and Bute islands



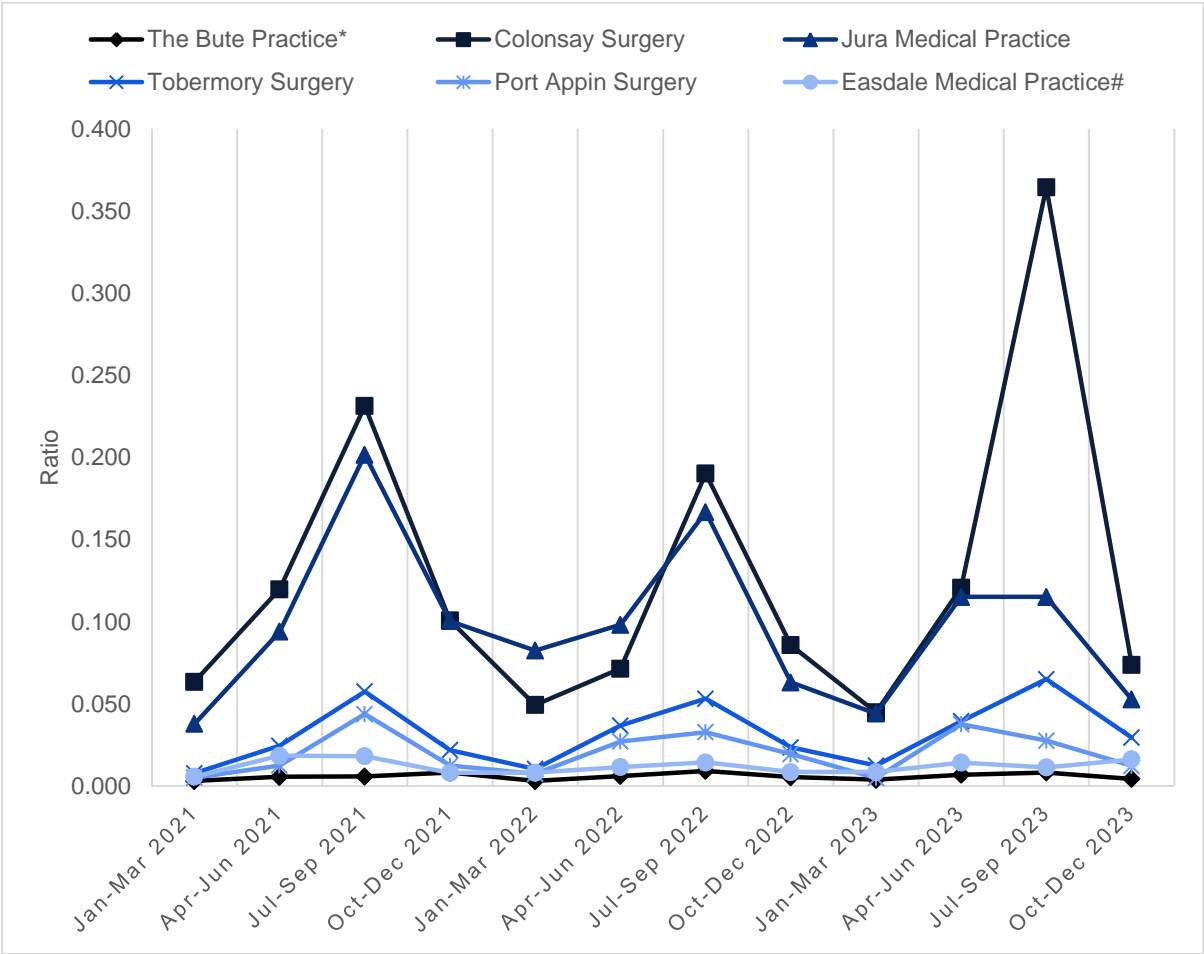
Source: Data source: GP practice data extracts provided by Practice Managers in December 2023. Numbers for December 2023 incomplete.

Temporary registrations for patients staying <3 months

* Most temporary registrations only have one consultation

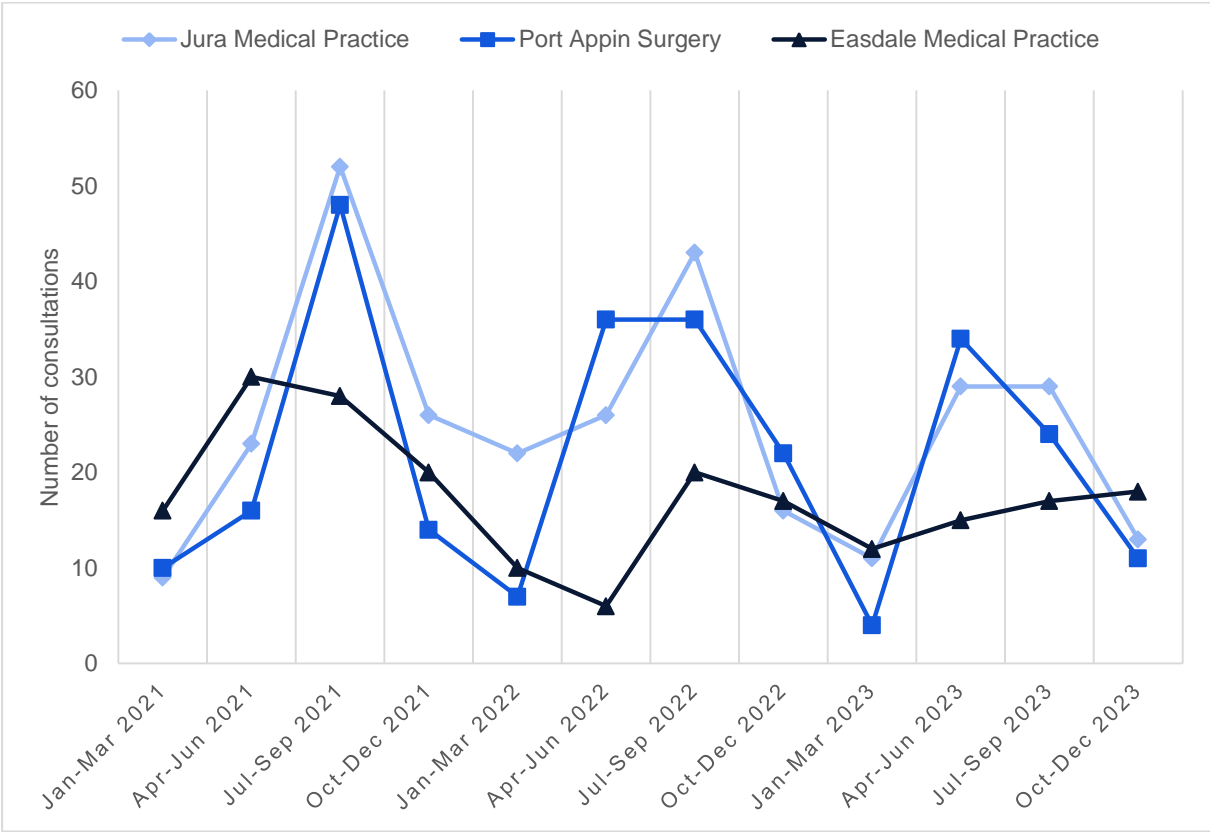
Temporary Registrations are sometimes used for multiple people and might underestimate the number of patients

Figure 20 Ratio of temporary patient registrations (<3 months) at GP practices to total GP list size on Argyll and Bute islands



Source: Data source: GP practice data extracts provided by Practice Managers in December 2023. Numbers for December 2023 incomplete.
 Temporary registrations for patients staying <3 months. The y-axis depicts the ratio of temporary registrations to the total GP list size.
 * Most temporary registrations only have one consultation
 # Temporary Registrations are sometimes used for multiple people and might underestimate the number of patients

Figure 21 Number of Consultations for temporary registrations (<3 months) by GP practice and quarter, 2021-2023



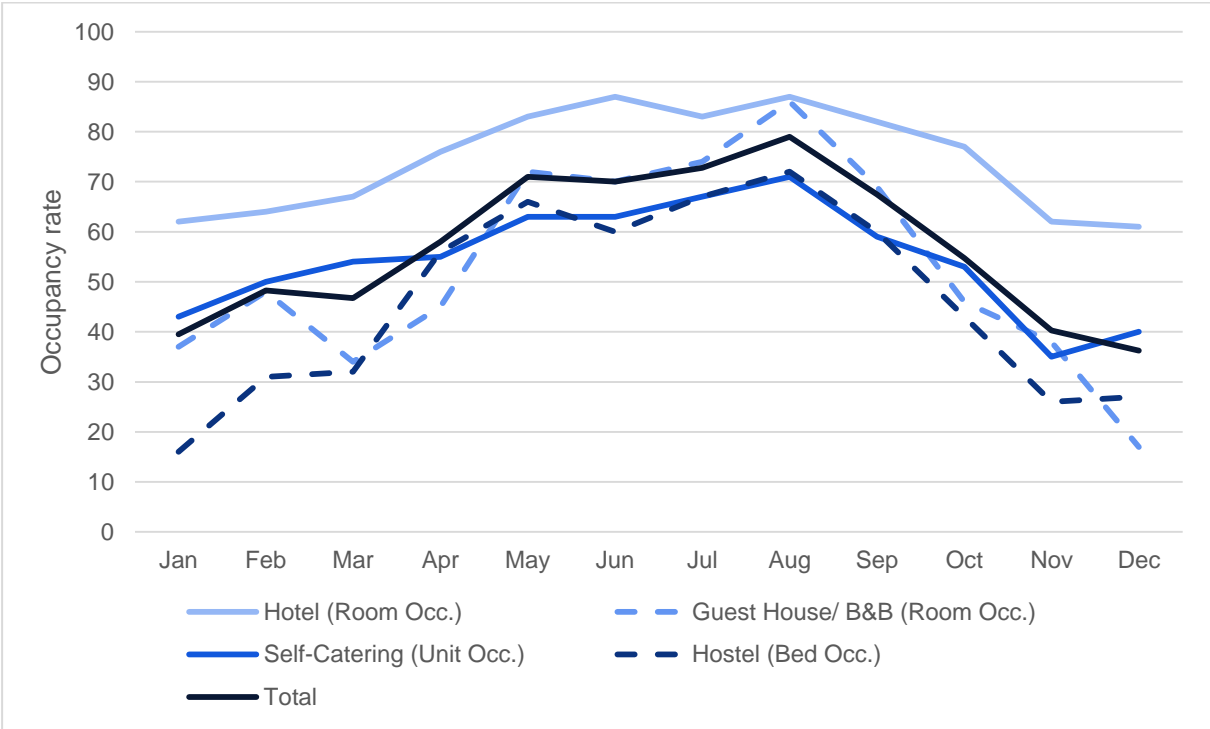
Source: Data source: GP practice data extracts provided by Practice Managers in December 2023. Numbers for December 2023 incomplete.
 Temporary registrations for patients staying <3 months

Information available at a higher level than islands

Occupied guest accommodations

The occupancy rate by guest accommodation type and month is documented by the Scottish Accommodation Occupancy Service. The percentages refer to the annual occupation numbers and are only available as a summary for Argyll & The Isles and Forth Valley. The data for 2019 show an increase of the occupancy rate of all types of accommodation over the summer months (Figure 22). This would point to the summers being the main tourism season in these areas. It has to be noted that an increase in the wider region does not necessarily translate to an increase for each island.

Figure 22 Percentage of accommodations occupied by type and month for Argyll & The Isles and Forth Valley 2019



Source: Scottish Accommodation Occupancy Survey, Moffat Centre, Glasgow Caledonian University, 2019

Annex A – Explanation of geographies

Explanation of geographies

In this document data on island level is in most cases presented by aggregating information on data zone or intermediate zone level. Data and Intermediate zones do not describe every island precisely. Data zones/ intermediate zones can cover multiple islands or segments of the mainland. The data for each island can therefore present a best estimate for this region.

Output area 2011

Information in this report are not presented on the level of output areas. The explanation of output areas serves only the understanding of the used geographical units, which are data zones and intermediate zones. Output areas are created by grouping together postcodes. In 2011, a single output area contained at least 50 people and 20 households. There were 46,351 output areas across Scotland. Different population densities mean the size and shape of output areas can vary greatly across Scotland. Output areas form the building blocks for all other census geographies.

Data zone 2011

Data zones divide Scotland up into 6,976 zones with a population of between 500 and 1,000. While every data zone has about the same population, they can vary greatly in size of area.

SNS data zones are made up of 2011 output areas. They were developed to help monitor and develop policy at a small area level. They nest within local authorities, council areas. Due to their tight constraint on population thresholds, some islands share a data zone with each other or parts of the mainland.

A good interactive map of data zones is provided by the [SIMD \(Scottish Index of Multiple Deprivation\)](#)

Intermediate zones 2011

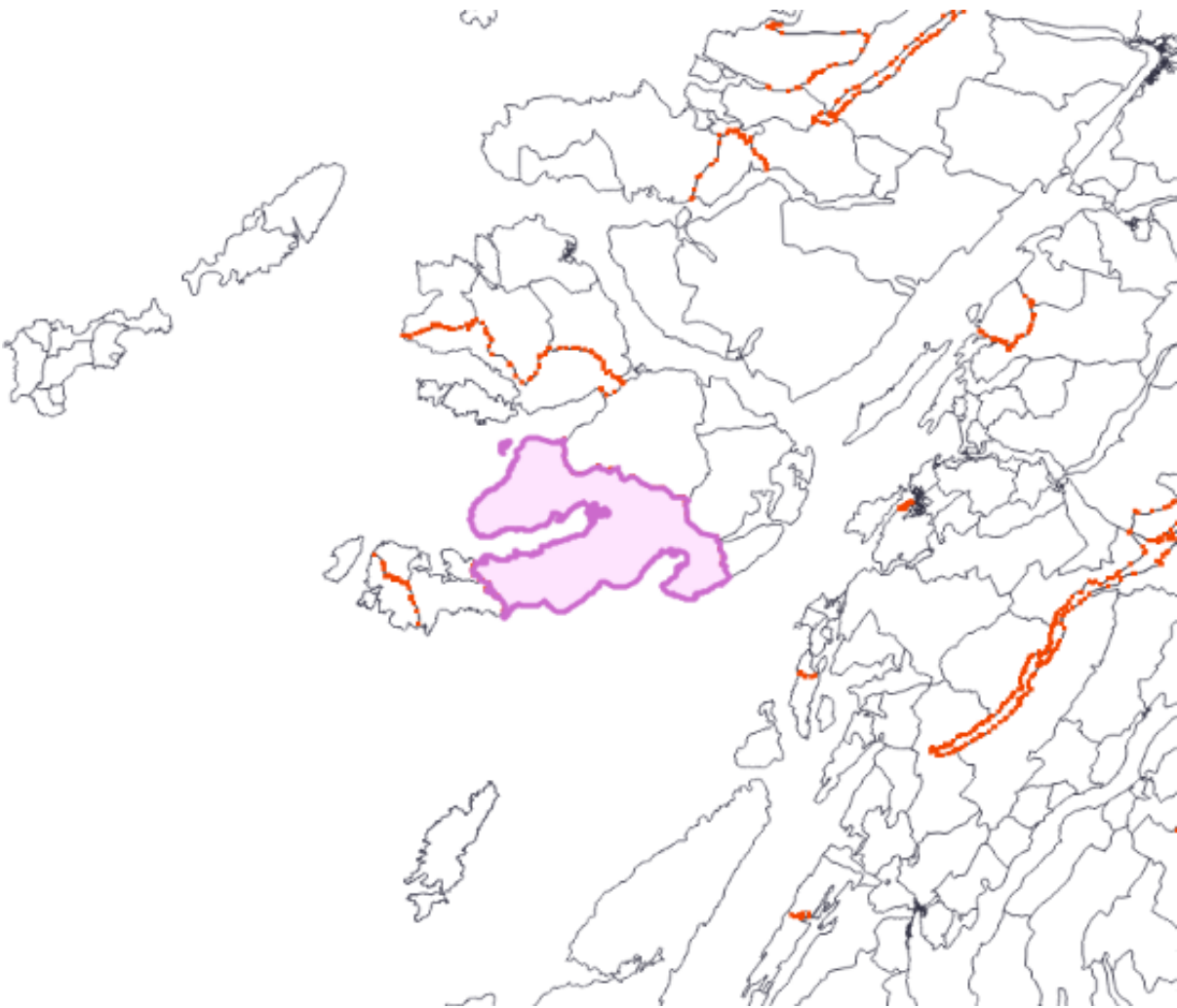
The Intermediate zones are aggregations of data zones within local authorities and are designed to contain between 2,500 and 6,000 people. The intermediate zone is the smallest spatial unit most commonly used for releasing and presenting potentially sensitive statistical data and reporting measures of population health. The number of events in the intermediate geographies that best align with a partnership area may not sum to the exact total. Intermediate zones can contain one island precisely, several islands or islands and the mainland.

Examples for construction of geographies using 2001 census geographies

To facilitate the understanding of the construction of data zones and intermediate zones this is an example from the 2001 census. The construction of the 2011 geographies functioned the same way.

2001 census output area

The black lines are the borders of the output areas.

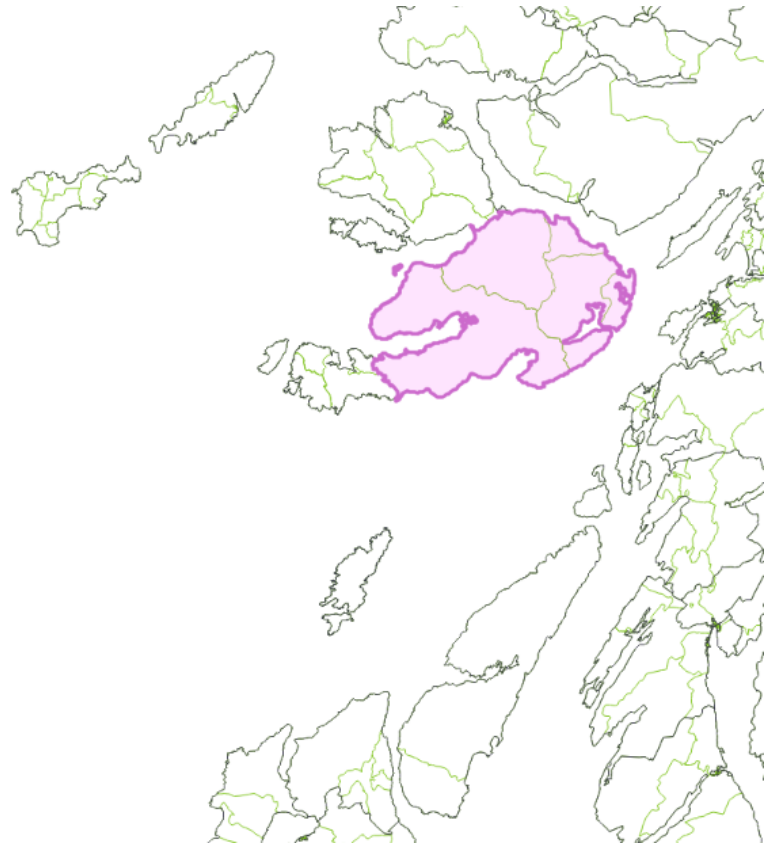


2001 census data zones

The green lines represent the borders of output areas.

The black lines represent the borders of data zones.

DZ_CODE	S01000820
DZ_NAME	
DZ_GAELIC	
STDAREA_HA	52974.151731
Shape_Leng	215228.181731
Shape_Area	529733472.011

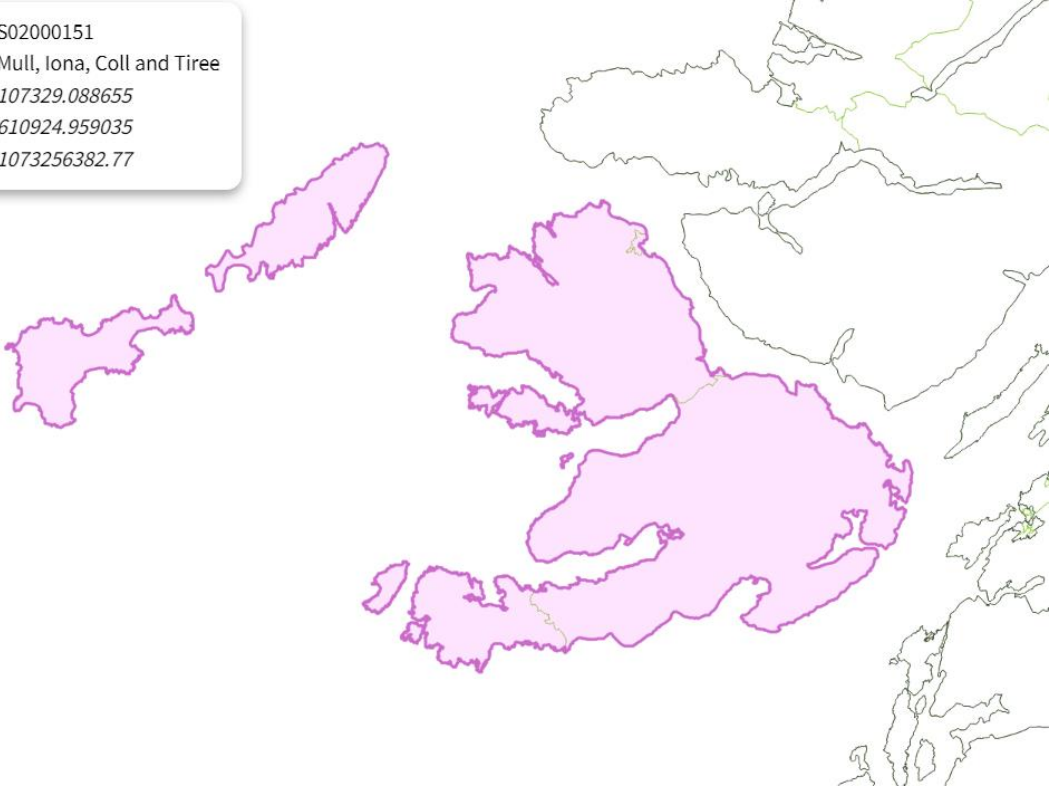


2001 census intermediate zone

The green lines represent the borders of data zones.

The black lines represent the borders of intermediate zones.

IZ_CODE	S02000151
IZ_NAME	Mull, Iona, Coll and Tiree
STDAREA_HA	107329.088655
Shape_Leng	610924.959035
Shape_Area	1073256382.77

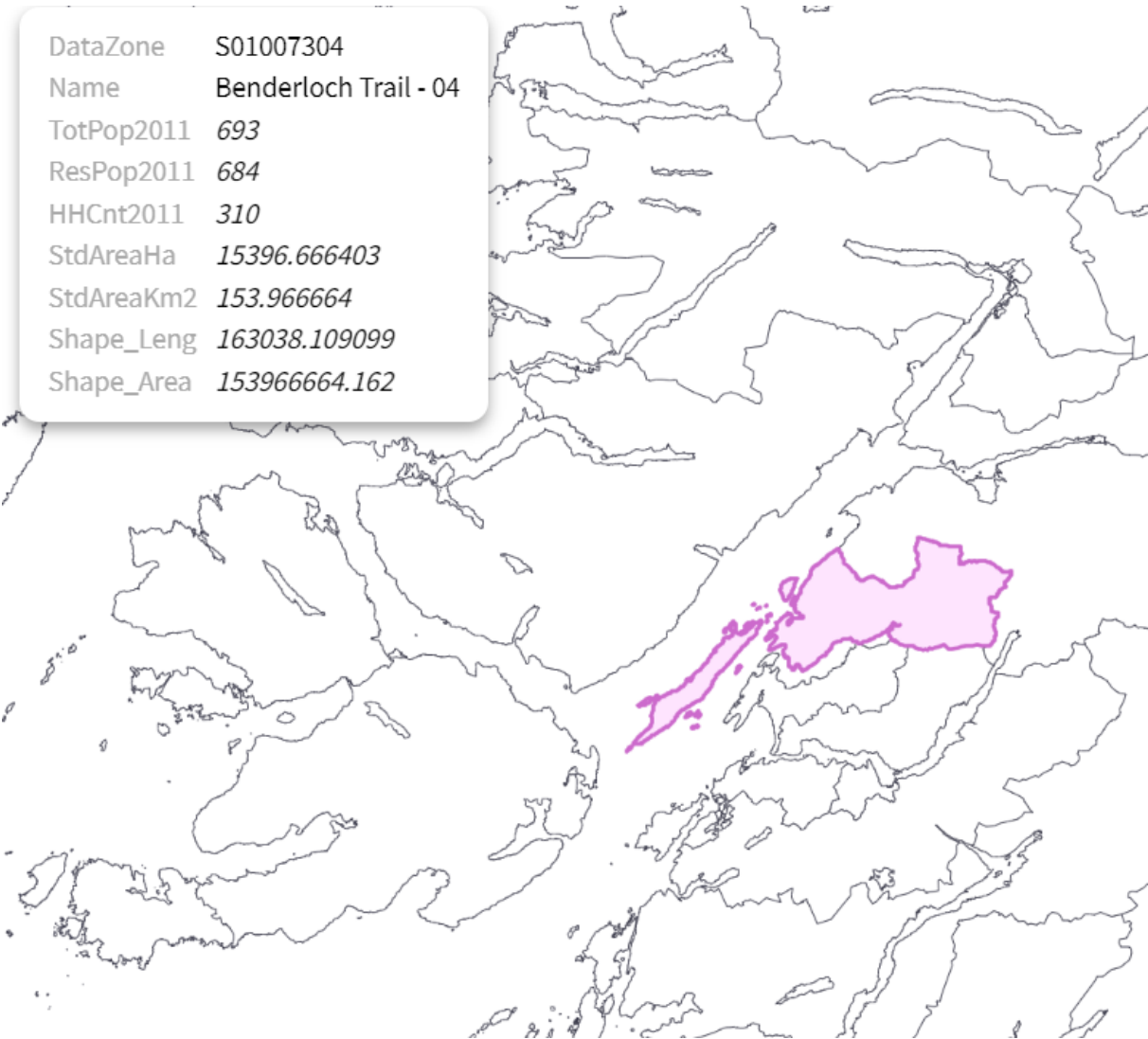


Examples for land coverage using 2011 data zones

To facilitate the understanding of the coverage of data zones and intermediate zones these are examples from the 2011 census. The 2001 census geographies functioned the same way. The size of a data/ intermediate zone is dictated by population size, not by territory covered.

Data zones can contain islands and mainland

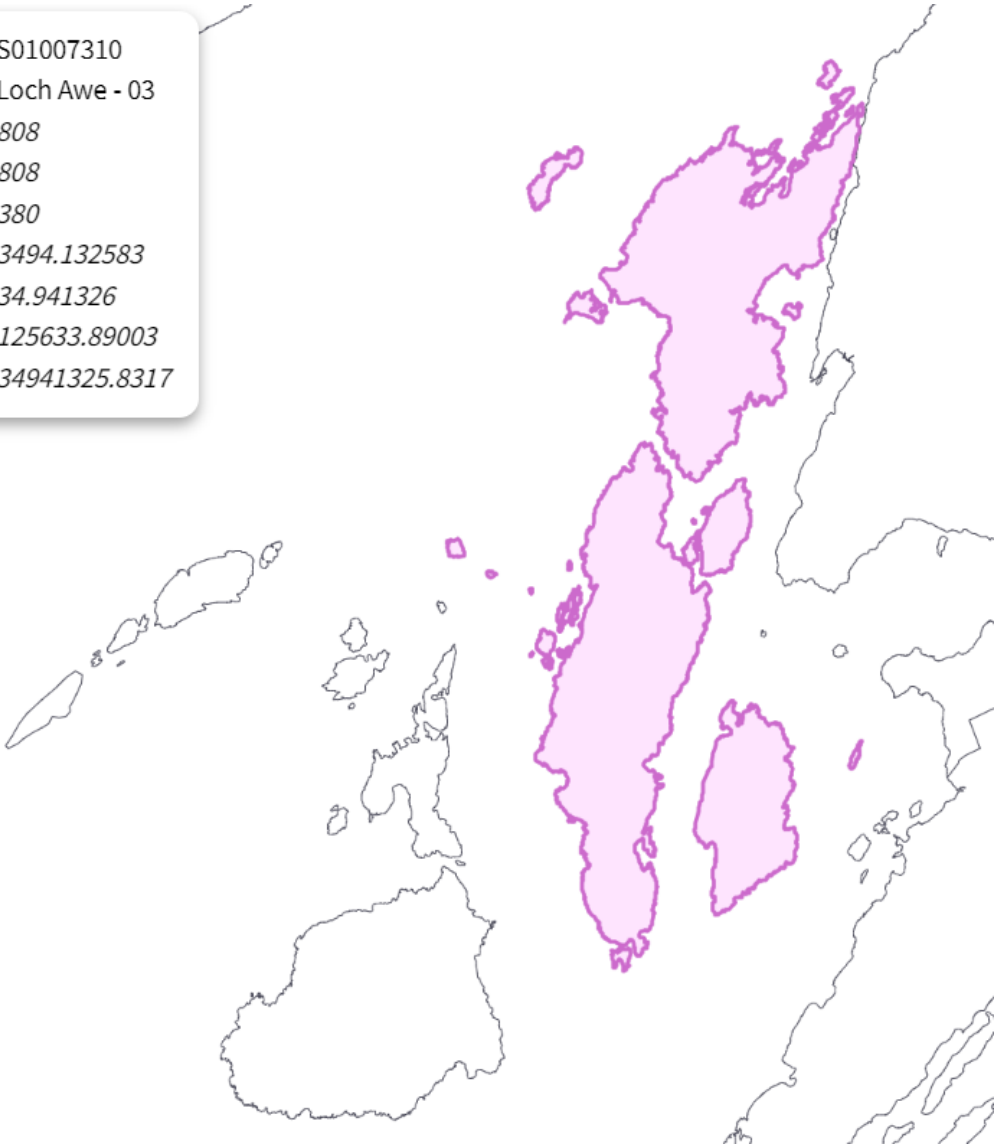
Data zone S01007304 covers Lismore and the mainland



One data zone can cover multiple islands

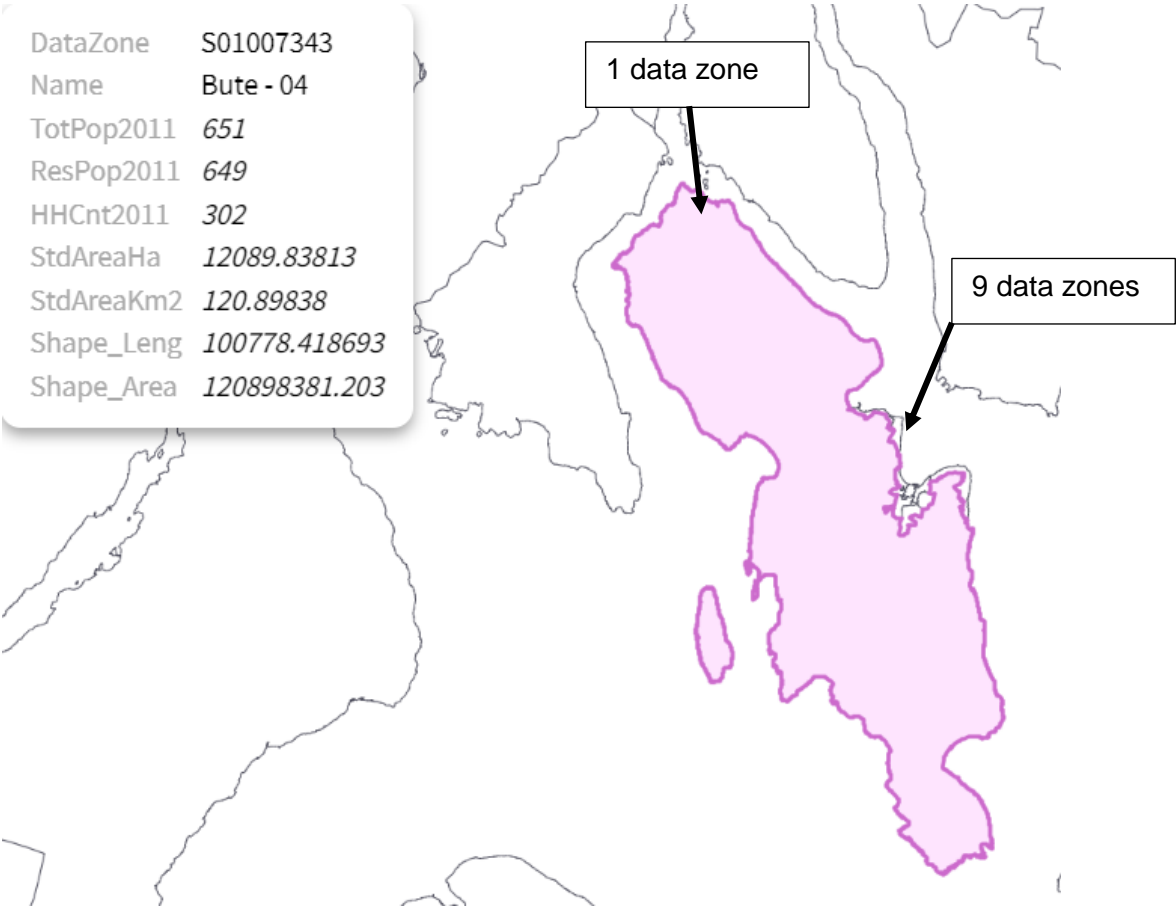
Data zone S01007310 covers Insh, Slate Island, Shuna Island (Lismore), Seil, Easdale

DataZone	S01007310
Name	Loch Awe - 03
TotPop2011	808
ResPop2011	808
HHCnt2011	380
StdAreaHa	3494.132583
StdAreaKm2	34.941326
Shape_Leng	125633.89003
Shape_Area	34941325.8317



One island can be covered by multiple data zones

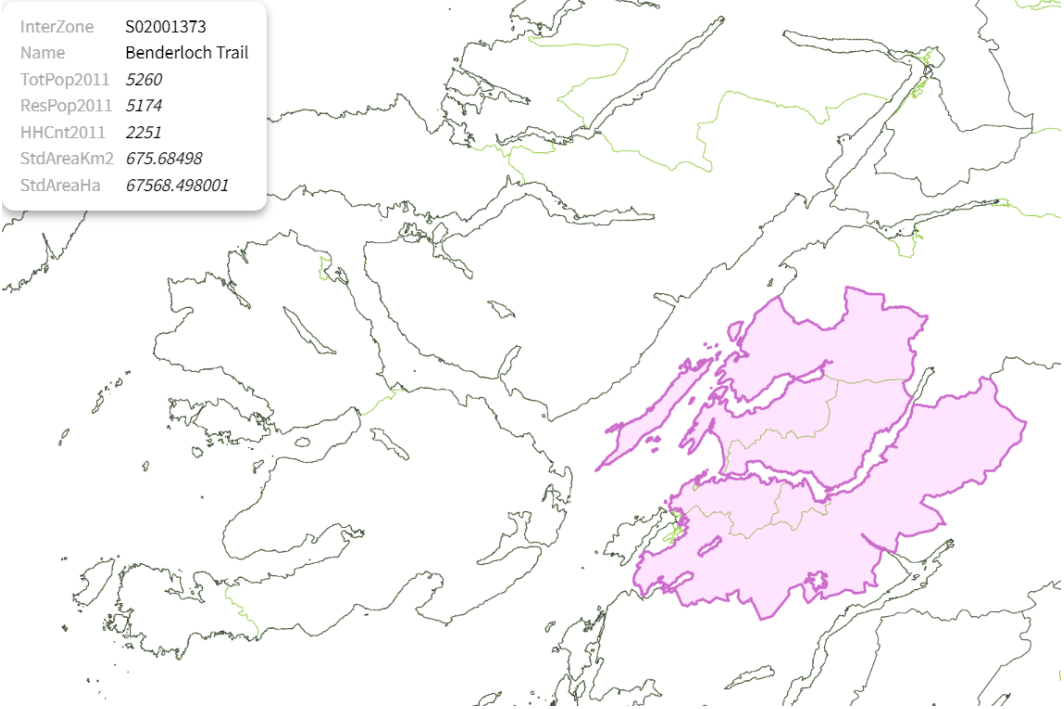
Bute is covered by 10 data zones



Examples for land coverage using 2011 intermediate zones

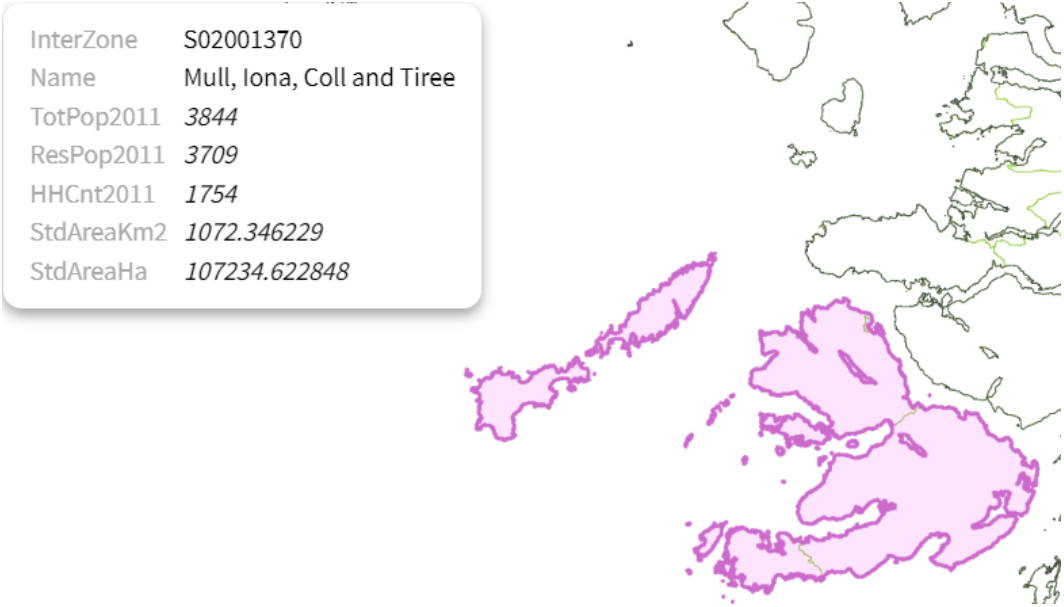
An intermediate zone can cover an island and the mainland

Intermediate zone S02001373 covers Lismore and large part of the mainland



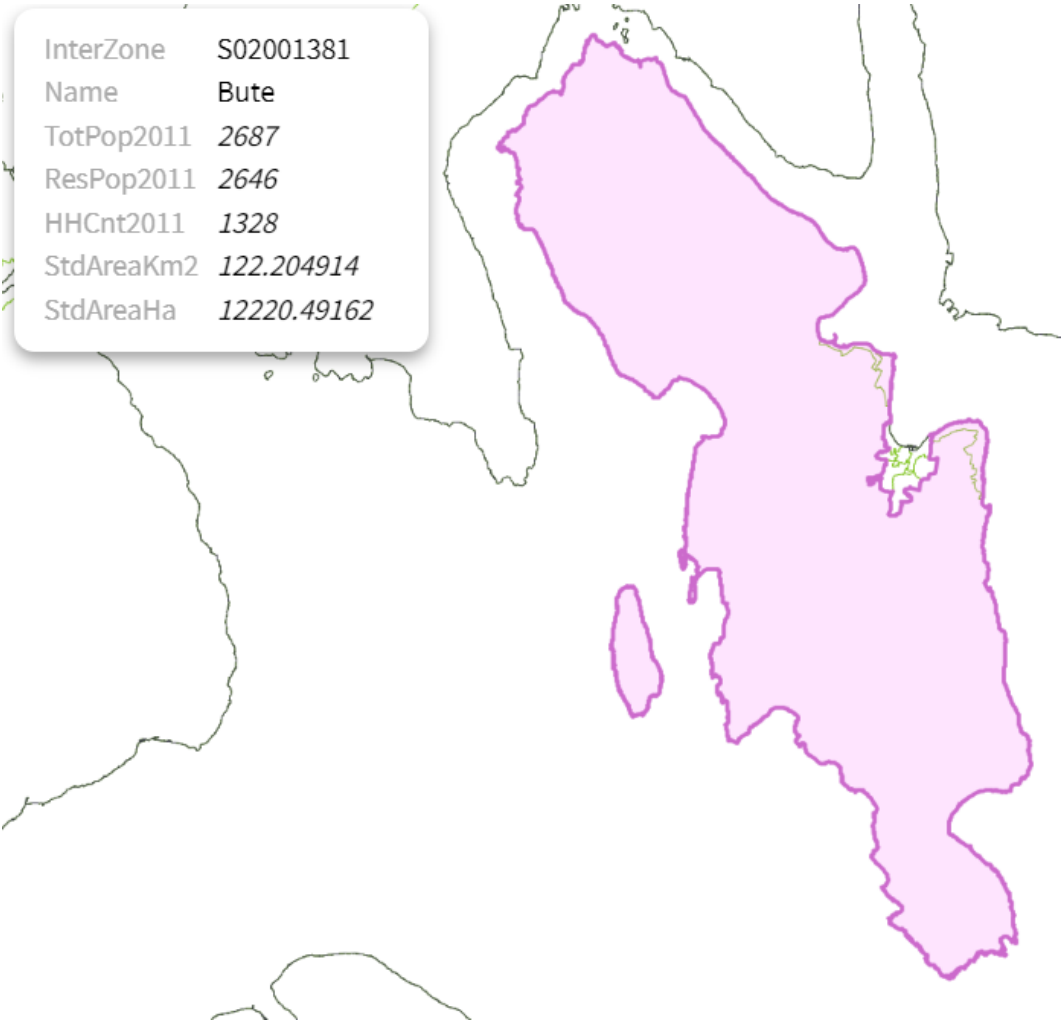
One intermediate zone can cover multiple islands

Intermediate zone S02001370 covers Mull, Iona, Coll and Tiree



An island can be covered by multiple intermediate zones

Bute is covered by 2 intermediate zones



Annex B

Table 6 Look up data zone, intermediate zone, island names and codes

Data zone	Island names - data zone	Island codes	Intermediate zone code	Intermediate zone name	Island names - intermediate zone	Island codes
S01007340	Bute	019	S02001381	Bute	Bute	019
S01007341	Bute	019	S02001381	Bute	Bute	019
S01007342	Bute	019	S02001381	Bute	Bute	019
S01007343	Bute	019	S02001381	Bute	Bute	019
S01007344	Bute	019	S02001382	Rothesay Town	Bute	019
S01007345	Bute	019	S02001382	Rothesay Town	Bute	019
S01007346	Bute	019	S02001382	Rothesay Town	Bute	019
S01007347	Bute	019	S02001382	Rothesay Town	Bute	019
S01007348	Bute	019	S02001382	Rothesay Town	Bute	019
S01007349	Bute	019	S02001382	Rothesay Town	Bute	019
S01007350	Bute	019	S02001382	Rothesay Town	Bute	019
S01007329	Isle of Gigha (+Mainland)	052	S02001379	Kintyre Trail	Isle of Gigha (+Mainland)	052
S01007325	Islay	074	S02001378	Whisky Isles	Islay	074
S01007326	Islay	074	S02001378	Whisky Isles	Islay	074
S01007327	Islay	074	S02001378	Whisky Isles	Islay	074
S01007328	Islay	074	S02001378	Whisky Isles	Islay	074
S01007324	Jura, Colonsay, Oronsay, Scarba	076, 025	S02001378	Whisky Isles	Jura, Colonsay, Oronsay, Scarba	076, 025
S01007284	Coll & Tiree	024, 133	S02001370	Mull, Iona, Coll & Tiree	Isle of Mull, Iona, Coll & Tiree	024, 073, 092, 133
S01007287	Iona & Isle of Mull	073, 092	S02001370	Mull, Iona, Coll & Tiree	Isle of Mull, Iona, Coll & Tiree	024, 073, 092, 133
S01007304	Lismore (+Mainland)	81	S02001373	Benderloch Trail	Lismore (+Mainland)	81
S01007310	Luing, Insh, Slate	083, 117	S02001374	Loch Awe	Luing, Insh, Slate	083, 117

	Island, Seil, Esadale, Isle of Shuna				Island, Seil, Esadale, Isle of Shuna	
S01007285	Isle of Mull	092	S02001370	Mull, Iona, Coll & Tiree	Isle of Mull, Iona, Coll & Tiree	024, 073, 092, 133
S01007286	Isle of Mull	092	S02001370	Mull, Iona, Coll & Tiree	Isle of Mull, Iona, Coll & Tiree	024, 073, 092, 133