Rural and Agricultural Development – Maximising the Potential in the Islands of Orkney, Shetland & Outer Hebrides

Wider Socio–Economic Profile

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10 Wider socio–economic profile

315. This section of the report presents socio-economic information relating to the three local authorities covering the study area in the Shetland Islands, Orkney Islands, and Outer Hebrides (Outer Hebrides). By way of comparison, and where appropriate, data is presented for Scotland. The data for these socio-economic profiles comes from various sources, including the Office of National Statistics (ONS), Scottish Government (Businesses in Scotland), National Records of Scotland, and the Shetland Islands, Orkney Islands, and Outer Hebrides local authorities.

316. Limitations in some of the data used are highlighted as a footnote with additional information where appropriate. For instance, there are a number of challenges with the Scottish Government Businesses in Scotland data, which may result in an underestimation of business counts. This data, collected through the ONS Inter-Departmental Business Register (IDBR), includes businesses that are registered for Value Added Tax (VAT) and/or Pay-As-You-Earn (PAYE). This means the data does not include micro-businesses, start-ups, or other small enterprises (such as newly established businesses, small-scale operations, part-time businesses or sole proprietorships) that are not registered for VAT or PAYE (Thomson et al., 2023).

317. Before presenting this data and analysis it is important to acknowledge the extent to which islands have been increasingly recognised in national policy-making in Scotland in recent years. In the run-up to the 2014 Scottish independence referendum, the Orkney, Shetland and Outer Hebrides worked together to examine the potential for devolution to the islands (through the Our Islands, Our Future campaign). The Scottish Government published the Empowering Scotland's Island Communities prospectus in June 2014 and then later that year the UK Government and the three Scottish Island Councils adopted a Framework for the Islands which included island proofing as a principle, though this was not on a statutory footing. The Scottish Government consulted on provisions for an Islands Bill in 2015, including island proofing, and there was an announcement in the 2016-7 Programme for Government that an Islands Bill would be brought before Parliament.

318. In 2018 the Islands (Scotland) Act was passed to ensure a sustained focus across Government and the public sector to meet the needs of island communities, now and in the future. At the time of the legislation being passed it was described as *"unique"* and as *"one of the world's first and only place-based laws"'* by Humza Yousaf the then Minister for Transport and the Islands at the time.

319. Most of the provisions of the Act came into force on 4th October 2018, including the development of a National Islands Plan (which was published in 2019) with 13

wide ranging Strategic Objectives covering a variety of issues that will improve the quality of life for island communities, including population decline (the issue that was the top priority identified by respondents during the consultation on the Plan), promoting sustainable economic development, environmental wellbeing, health and wellbeing, community empowerment; improving transport services and digital connectivity; reducing fuel poverty; and enhancing biosecurity. The National Islands Plan is subject to annual reporting[162] and a five-year review.

320. In addition, the legislation introduced a duty for relevant public authorities to undertake Islands Community Impact Assessments (i.e. island proofing) in relation to new policies, strategies and interventions, to explore whether they are likely to have different impacts in different island communities and between island and mainland communities. Further policy and practice developments relating specifically to Scotland's islands include the creation of the Young Islanders Network by Scottish Government and Youth Scotland

321. Just under one year after the publication of the first National Islands Plan, in Autumn 2020, a National Islands Plan Survey was sent to 20,000 residents across Scotland's (permanently inhabited) islands (Scottish Government 2021). The objective of the Survey was to improve understanding about living on Scotland's islands and to gather baseline data against which to measure the success of the Plan. Over 4,300 people responded to the survey from 59 islands (a response rate of 22%) and a range of issues were raised including a lack of support for young people to remain in, move or return to the islands; a lack of employment, training, higher education and appropriate childcare; a lack of affordable housing and a poor variety of housing types, sizes and tenure to meet peoples' needs; mixed experiences with accessing healthcare services; the poor speed and reliability of internet connections; inadequate infrastructure provision to meet tourism demand; only one in five respondents were reliant on more than one job; and most respondents planned to stay on their island for at least the next five years. The results of the second National Islands Plan Survey will be available later in 2024.

10.1 Demographic Change

10.1.1 Population density

322. Whilst Scotland is significantly rural in nature the vast majority of the population live in an urban setting. Whilst populated with an average of 70 people per square kilometre (km^2) at a national level in 2021, significant variations exist, where urban and accessible areas have higher population densities of c. 1,482 and c.50 people per square kilometre in 2021 but only an average of 10 people per km^2 in Island

[162] Annual reports on the National Islands Plan have been completed for 2020-21 and 2021-22 and 2022-23.

areas (Thomson et al., 2023[163]). The nature of largely sparse island populations and associated population dynamics has important implications for sustainable economic growth and the provision of needed services and infrastructure, and therefore must be considered when devising national policy – recognised in the Islands (Scotland) Act 2018[164].

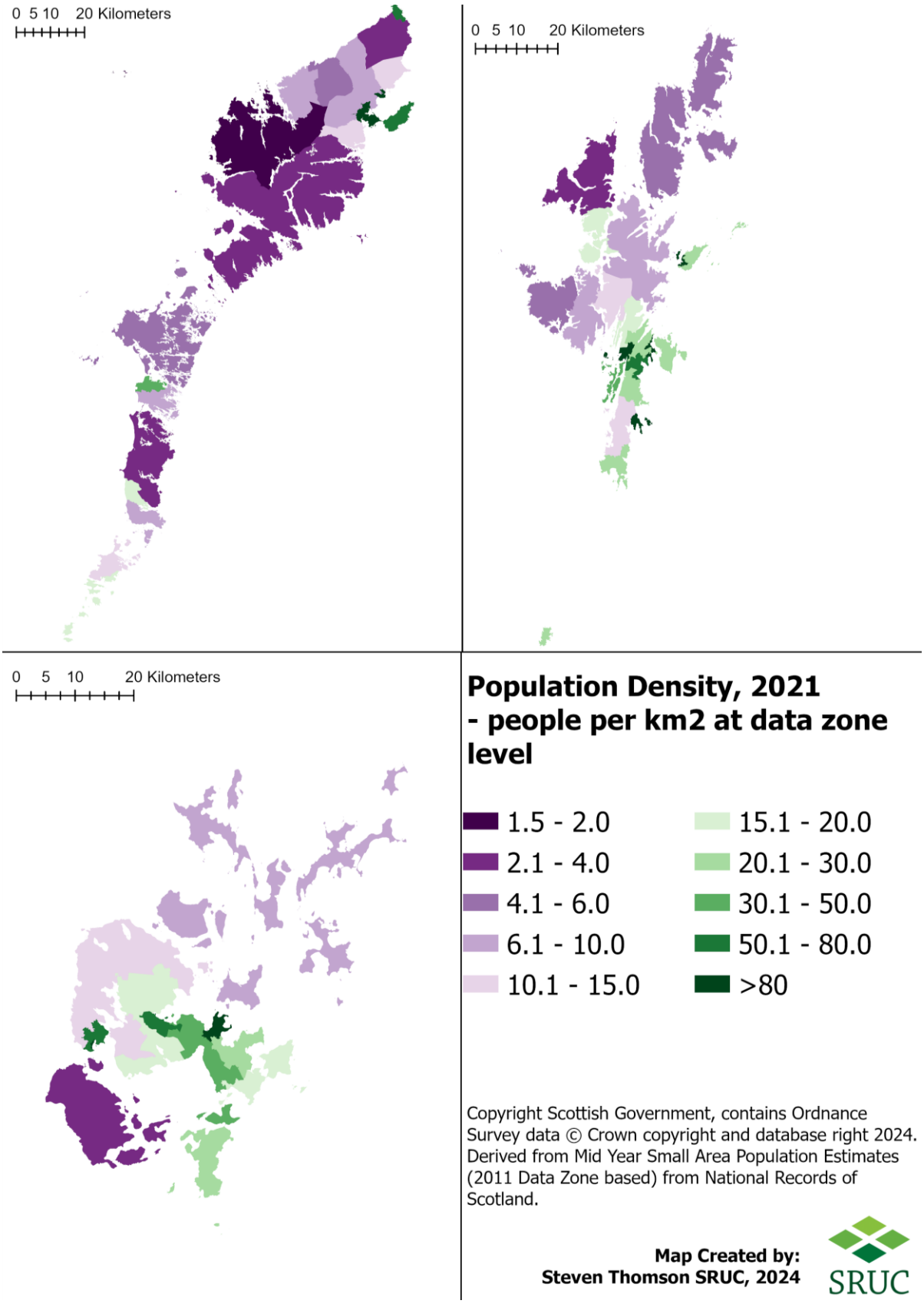
323. Figure 39 shows that within each of the island groupings there is significant variation in the population density – shown here at data zone level. For example major towns such as Lerwick, Stornoway and Kirkwall all have population densities of over 80 people per km_2, compared to much more sparsely populated area, that are often heavily reliant on agriculture and crofting, such as: Uig and Great Bernera (1.5 people per km^2) and Lochs (2 per km^2) on Lewis; Pollachar and Eriskay on South Uist (1.5 per km^2); North Harris (3.6 per km^2); Northmavine (3.6 per km^2), Fetlar and Unst in Shetland (4 people per km^2), Hoy, Walls and Flotta in Orkney (3.2 per km^2). It is important in all policy decisions, but particularly relating to agriculture and land management that the impacts on these sparsely populated, often fragile, areas is fully assessed.

Berneray crofter Willie Fraser

[163] Thomson et al. (2023). Rural and Islands Report: 2023 - An Insights Report. https://doi.org/10.58073/SRUC.23807703.v1

[164] Empowering our island communities - Community empowerment - gov.scot (www.gov.scot)

Figure 39 Population density (people per km^2) by data zone 2021

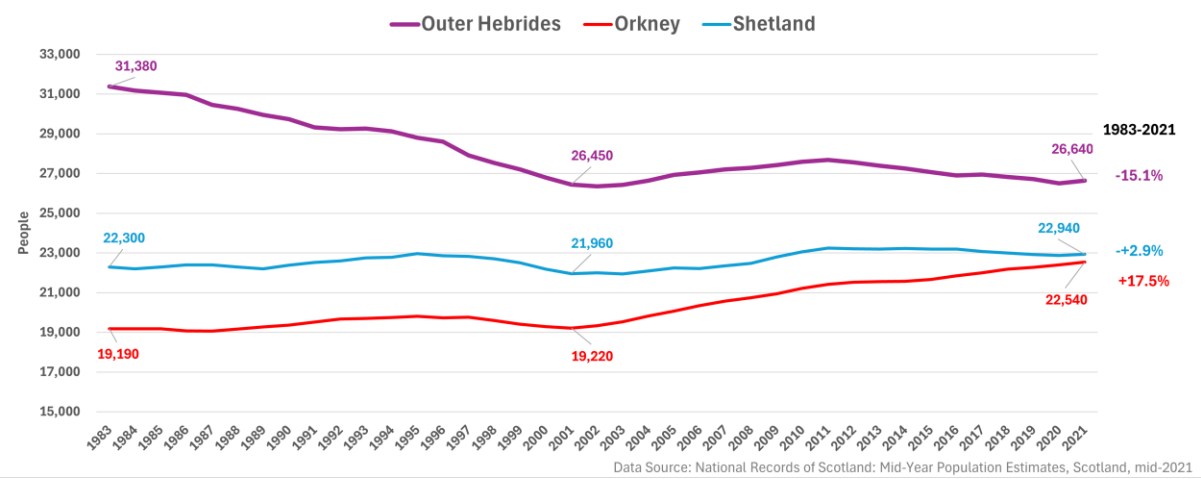


10.1.2 Population dynamics

324. From 2001 to 2021, the population of Scotland increased by 8.2%, rising from 5.06 million people to 5.48 million. At the same time, a 3.8% population increase was also estimated for island areas of Scotland (Thomson et al., 2023[165]). However, variations exist between island areas, attributable to their unique socio-economic, institutional, and infrastructural structure.

325. Figure 40 shows the long-term population change in each of the three island groupings, each showing unique patterns. In the Outer Hebrides the total population fell rapidly from c.31k in 1983 to c.26k in 2001 before a period of marginal growth in the 2000's followed by slow decline in the 2010s – with a overall decline of 15% from 1983. In Orkney the population was relatively stable during the timeframe (with some small dip around the turn of the century – a fall of 1.5% by 2001) finishing 2% higher in 2021 than 1983 (but 4.5% increase from 2001). After a period of relative stability between 1983 and 2001 Shetland's population has risen steadily since 2001 (an increase of over 3k) with the population in 2001 17% higher than in 1983.

Figure 40 Population change by island grouping 1983-2021



326. It is worth noting however that recent research has highlighted significant local level variations in population change within the island groups. The Islands Revival project for example brought together quantitative and qualitative evidence of population growth in some localities – including from the observations of local residents in relation to nursery and school enrolments for example – which ran counter to the 'official' demographic statistics for island groups. This limitation of statistics at island group level has also been noted in work by CoDEL in Uist for

[165] Thomson et al. (2023). Rural and Islands Report: 2023 - An Insights Report. https://doi.org/10.58073/SRUC.23807703.v1

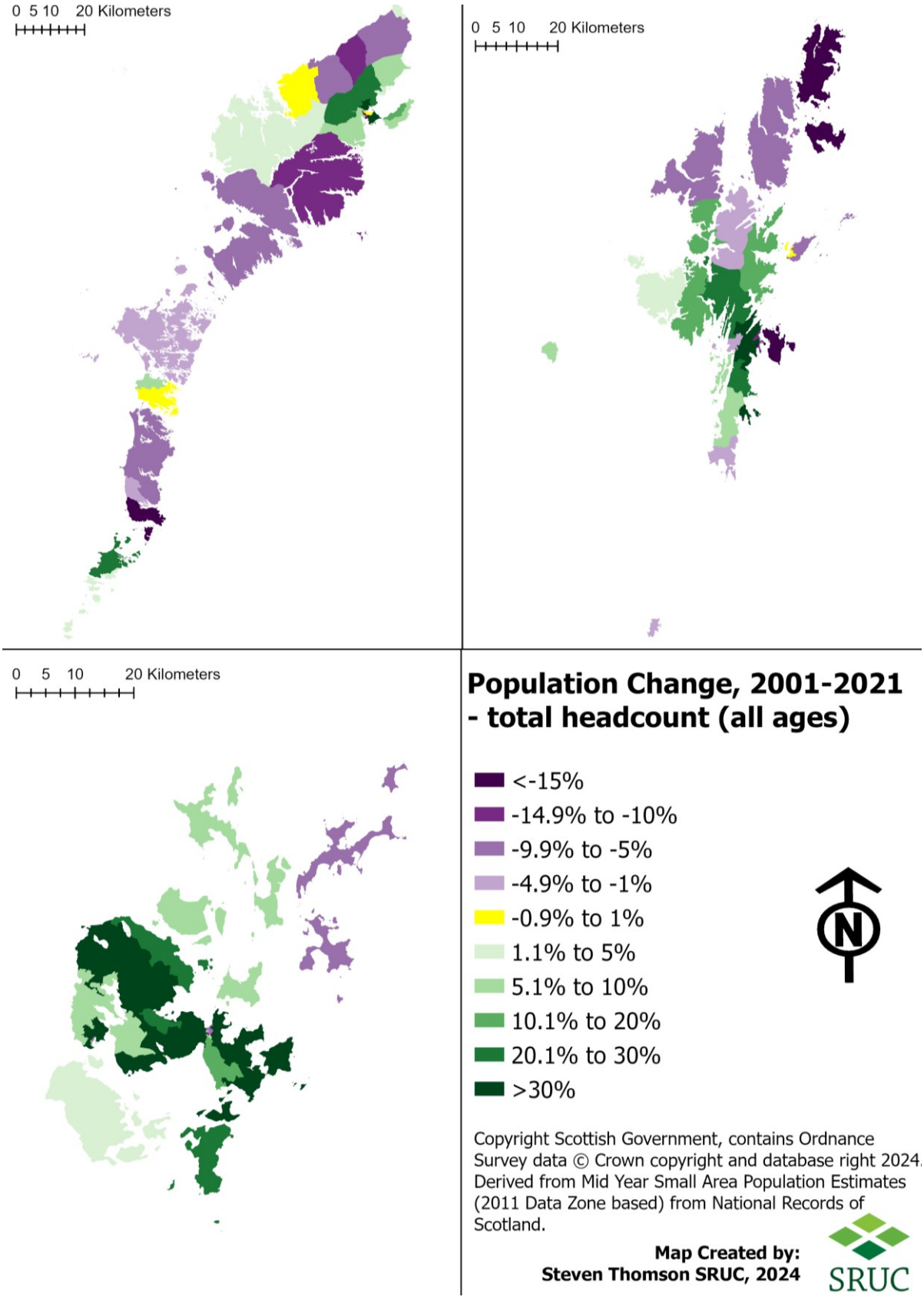
example, which also emphasised the importance of local observations as a key source of up-to-date, accurate and locally specific information and intelligence[166].

327. Figure 41 reveals just how variable population changes within each of the island groupings are, where multiple local factors influence trends. In Figure 41 the purple areas represent areas of population decline, the green areas population increases and the yellow areas population stability between 2001 and 2021. For example:

- In Orkney most areas saw population increases over the period except for areas in Kirkwall and the Outer Northern Isles (8.1% fall).
- In Shetland significant population decreases occurred in Unst and Fetlar (18.8% decrease), Bressay and Noss (18.5% decrease) as well as in the town of Lerwick. In contrast areas in Central Mainland and South Mainland saw populations increase by 60% to 75%.
- In the Outer Hebrides population change from 2000 – 2021 was highly variable depending upon location. For example, parts of Barra (excluding Castlebay) saw population rise by 23% compared to 16% decline in Pollachar and Eriskay on South Uist. The population of Benbecula grew slightly, whilst South Uist and North Uist had small population decreases. The population of Lochs in South Lewis fell by 10% whilst the population of Uig in South Lewis grew by 4%. The population of Stornoway fell in most areas of the town, with growth in areas surrounding the town (e.g. Point). In Harris there was population decline of c.10%.

[166] See also work carried out by SRUC in 2019 to explore the key data needs for Scotland's island communities, and make recommendations for how the gaps may be filled: Looking at the gaps in island data – The Scottish Islands Federation (scottish-islands-federation.co.uk)

Figure 41 Population changes in the island groupings at data zone level, 2000-2021



328. Long term population dynamics are shown for different age groups by island groups between 1983 and 2021. This provides a reminder of the evolving Local Authority service needs, and indeed private sector business opportunities, of the population as the number of young people fall and the older population increases. Table 54 summarises these changes, with graphical detail provided in Figure 79 in Annex 6 Socio Economic Data.

- In the Outer Hebrides there were c.1k fewer under five year olds in 2021 compared to 1983 (a drop of 49%) with c.3.5k fewer 5-19 year olds (47% decline). In contrast there were c.1.9k more 45 to 70 year olds (+22%) and c.1.3k 70 year olds and over (+20%).
- In Orkney there were 279 fewer under five year olds in 2021 compared to 1983 (a drop of 22%) with c.939 fewer 5-19 year olds (22% decline). In contrast there were c.3k more 45 to 70 year olds (+61%) and c.1.9k 70 year olds and over (+85%).
- In Shetland there were 747 fewer under five year olds in 2021 compared to 1983 (a drop of 41%) with c.1.5k fewer 5-19 year olds (27% decline) alongside a 30% decline in 20-44 year olds. There were c.2.5k more 45 to 70 year olds (+48%) and c.1.3k 70 year olds and over (+56%).

Table 54 Change in population of age groups, 1983-2021, by Island groups

Age Group	Outer Hebrides		Orkney		Shetland	
	Change in No.	% Change	Change in No.	% Change	Change in No.	% Change
0-4	-999	-48.9%	-279	-22.1%	-747	-41.2%
5-19	-3,535	-46.8%	-939	-21.5%	-1,466	-26.8%
20-44	-2,813	-31.0%	-288	-4.6%	-2,753	-29.8%
45-70	+1,878	+22.3%	+3,087	+60.9%	+2,544	+47.7%
70 and over	+1,293	+19.8%	+1,859	+85.0%	+1,262	+56.0%

10.1.3 Population structure

329. These changes in the population structure are shown in more detail in Figure 42 where the proportion of the population of each island group is given by age categories for 1991 and 2021 (top set of figures) and for 2001 and 2021 (bottom set of figures). These show visually the ageing of the population of the islands (similarly to many parts of Scotland).

330. These population dynamics have significant implications locally, such as a higher dependency on elderly care services and increased pressure on adult social care. Moreover, the potential decrease in the working-age population could result in future labour market shortages in various sectors of the local economies of Shetland Islands, Orkney Islands, and the Outer Hebrides.

Figure 42 Population distributions by age groups for (i) 1991 and 2021 (ii) 2001 and 2021 for island groups

331. The distribution of different age groups within island groupings is not uniform, with areas in and around main urban centres likely to have higher proportions of school aged children and more outlying areas higher proportions of older people. For example, Figure 43 shows that there are much higher proportions of over 65 year olds (30-36%) in many more remote areas, such as: Hoy, Walls and Flotta and in Orkney; Harris, Uig, Pollchar & Eriskay, Ness in the Outer Hebrides. In contrast areas more accessible to the main towns (Stornoway, Lerwick and Kirkwall) have less than 20% of the population over 65 years old. Figure 44 also demonstrates the low level of under 5 year olds (2-3% of the population, depicted in yellow) in many of these areas such as: Hoy, Walls and Flotta in Orkney, Harris in the Outer Hebrides and Yell in Shetland.

Figure 43 Proportion of the population 65 years and over, 2021

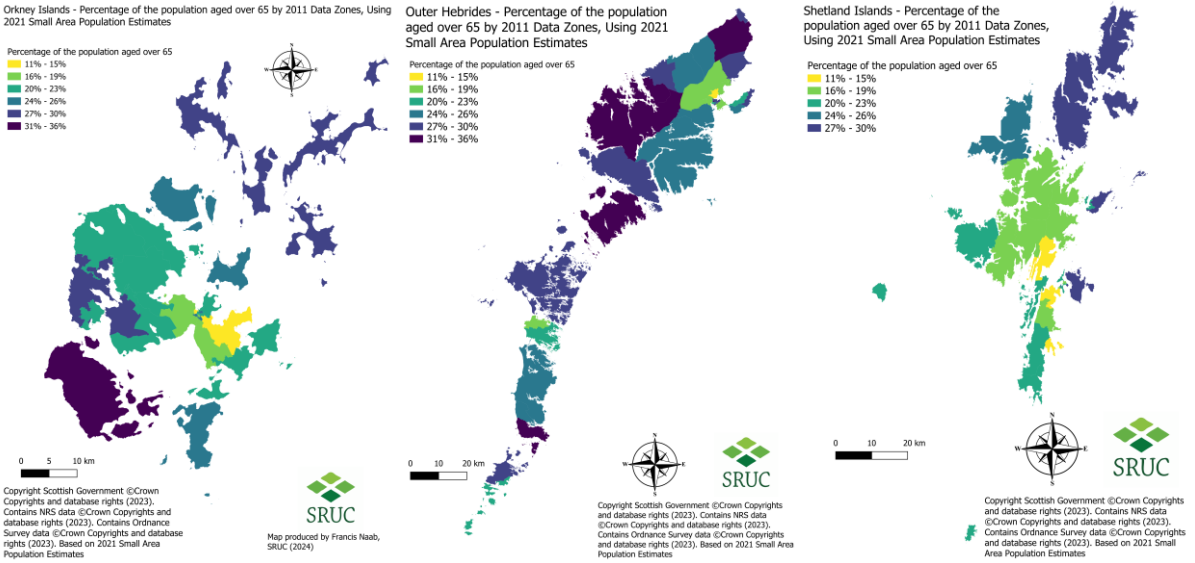
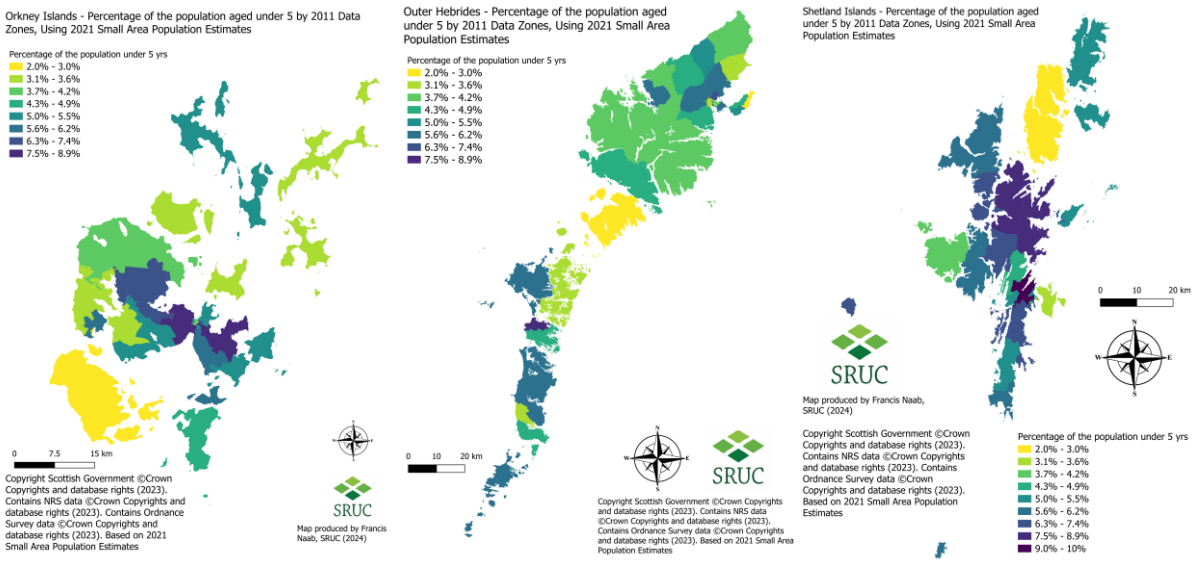


Figure 44 Proportion of the population under 5 years old, 2021

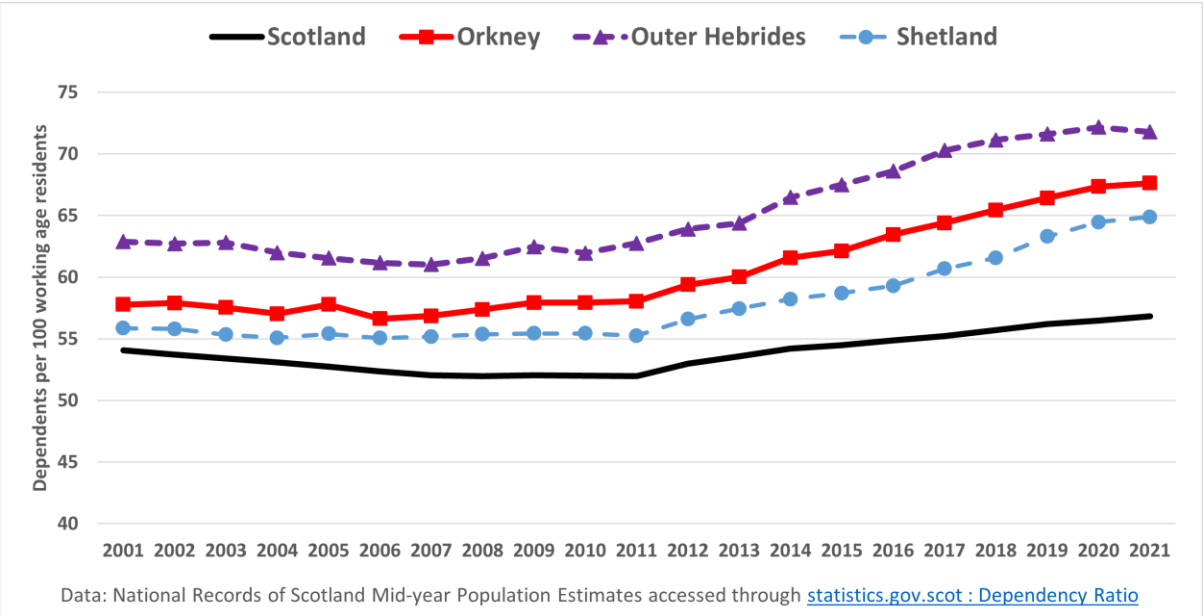


10.1.4 Dependency ratio

332. The dependency ratio, and changes therein, are a useful indicator of the proportion of dependents (e.g. school children, over 65 year olds) to each working age (16-64) resident. It helps to assess potential population structural issues, and design service provision. A dependency ratio of 100 would mean that for every 100 working age resident there was 100 dependents, whilst a ratio of 52 would indicate only 52 dependents per 100 working age residents. Given the significant contribution of agricultural households in many of the island areas this indicator also picks up on potential age structure issues within the sector.

333. Figure 45 shows that the overall dependency ratios for each of the islands rose between 2001 and 2021. In 2001, the Shetland, Orkney and Outer Hebrides had dependency ratios of 56, 58 and 63, respectively, increasing to 65, 68 and 72 in 2021. In comparison to Scotland as a whole (54 in 2001 and 57 in 2021) the islands have high levels of under 16 and over 65 year olds (the later dominates in the islands) relative to the working-age population. It should be noted that this is a metric and, as the agricultural data reveals, many over 65 year olds remain active and are not 'dependents' even though they may be drawing pension as well as engaging in agricultural activities.

Figure 45 Dependency ratios (under 16 and over 65 year olds), for Island groups, 2001 and 2021



Data: National Records of Scotland Mid-year Population Estimates accessed through statistics.gov.scot : Dependency Ratio

Child and aged dependency ratios

334. Figure 46 shows the aged dependency ratio for each of the islands in 2021, where the dark blue areas reveal that for every 100 working age residents there are 53 people over 65 years old. This shows areas that may have vulnerable economies

in the longer term without population renewal. This includes areas such as: the North Isles and South Isles in Orkney; Harris, Ness, west coast of North Uist in the Outer Hebrides; Unst and Fetlar in Shetland. Figure 47, in contrast, highlights areas of low (yellow) and high (dark blue) child dependency ratios – with higher values showing a greater proportion of under 16 year olds per 16-64 year resident.

Figure 46 Map of aged dependency ratio by data zone, for island groups, 2021

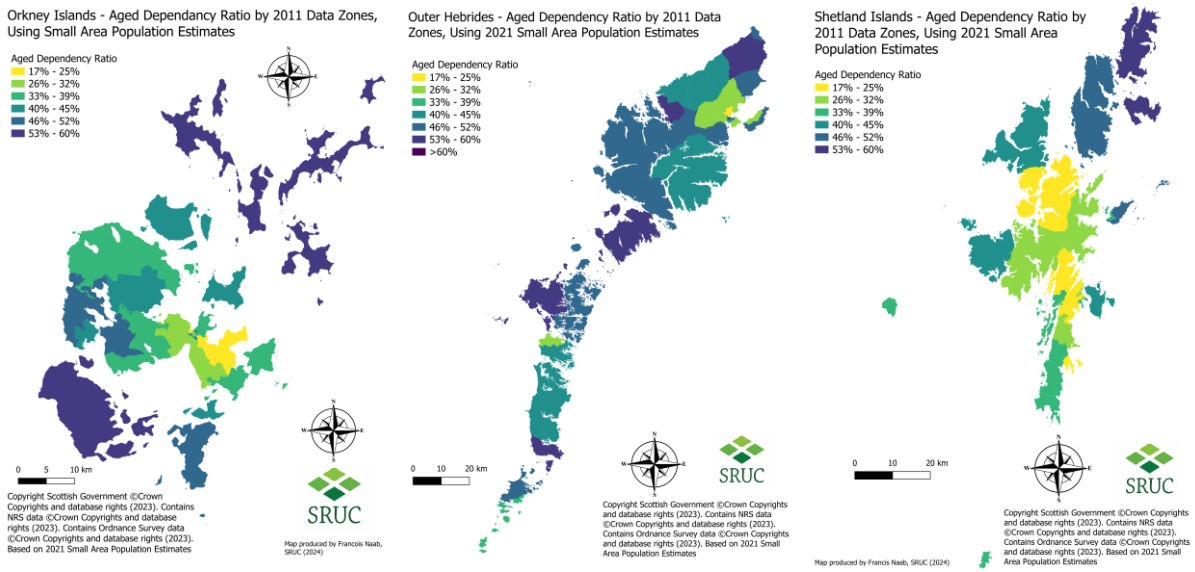
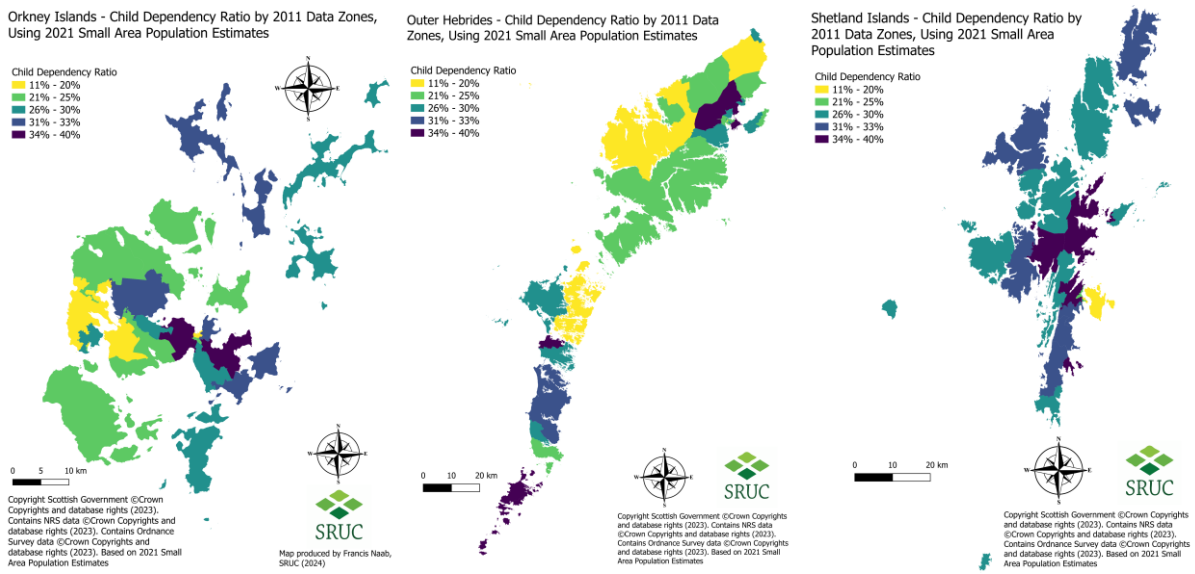


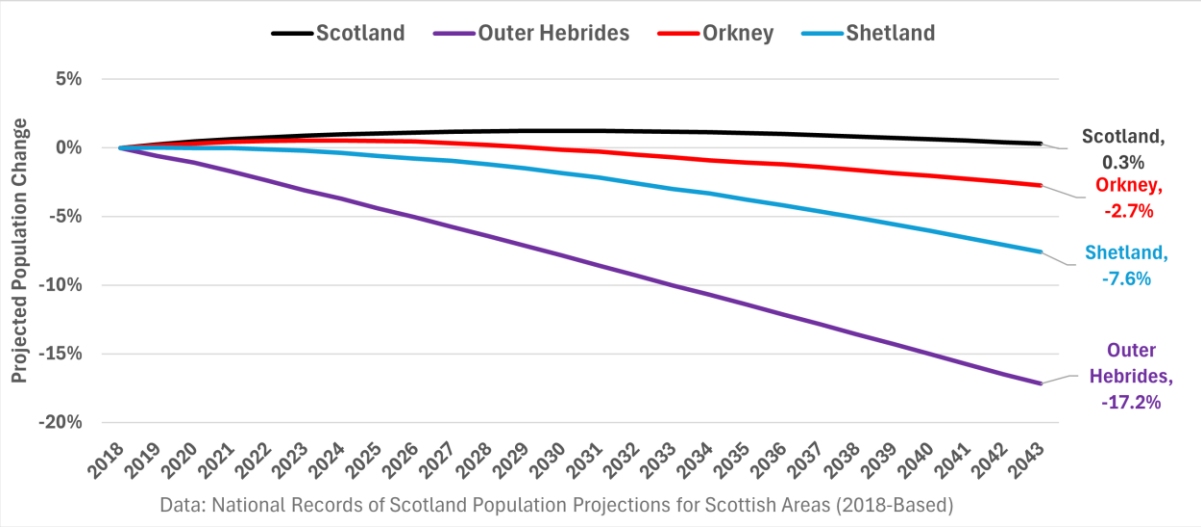
Figure 47 Map of aged dependency ratio by data zone, for island groups, 2021



10.1.5 Population projection

335. National Records of Scotland 2018 population projections[167] to 2043, estimate that with low levels of migration (zero migration and high migration projections are also available) Scotland's population will be 00.3% higher in 2043 (after a period of small growth in the next decade). However, the estimates show that (see Figure 48) that Orkney's total population is predicted to shrink by 2.7%, whilst Shetland's population is expected to fall by 7.6% and the Outer Hebrides by 17.2%. These projections demonstrate the need for long term strategies to attract people to come and live and work in the areas.

Figure 48 Population projections (2018 based) by island group, 2018 - 2043



336. Whilst population projections are useful it is also important to consider how the age profile of the island groups are expected to continue to change (noting the aging that has been going on for a long period). National Records for Scotland estimates (see Table 55) that the over 75 year old population is going to increase by 44% in the Outer Hebrides, 88% in Orkney and 72% in Shetland by 2043 (with modest migration assumptions). In contrast to Shetland (+2%) and Orkney (-1%), the Outer Hebrides is projected to see 17% decline in 65-74 year olds by 2043 Moreover, the Outer Hebrides is projected to have a much reduced working age population (-26% or c.-4.1k people), with Shetland (-13%, c.-1.9k people) and Orkney (-13%, c.-1.7k people) also predicted to have reduced working age population by 2043.

[167] Subnational population projections of Scotland - National Records of Scotland (shinyapps.io)

Table 55 Population projection by age group for island groupings, 2018 and 2043

Region	Age group	2018-2043	2018 Population	2043 Population
Outer Hebrides	0 to 15	-22%	4,328	3,397
	16 to 24	-25%	2,157	1,625
	25 to 44	-20%	5,413	4,332
	45 to 64	-31%	8,107	5,585
	65 to 74	-17%	3,665	3,047
	75 and over	44%	3,160	4,556
Orkney Islands	0 to 15	-20%	3,544	2,836
	16 to 24	-17%	1,897	1,572
	25 to 44	-9%	4,847	4,392
	45 to 64	-13%	6,668	5,792
	65 to 74	-1%	2,889	2,870
	75 and over	86%	2,345	4,366
Shetland Islands	0 to 15	-23%	4,205	3,252
	16 to 24	-19%	2,183	1,776
	25 to 44	-14%	5,456	4,684
	45 to 64	-11%	6,591	5,853
	65 to 74	2%	2,589	2,629
	75 and over	72%	1,966	3,385

10.1.6 Importance of agricultural population

337. Whilst agricultural parishes and other administrative geographies do not often align well it was possible to merge data for agricultural headcount (occupiers, spouses plus regular and casual employees of BRNs[168]) with the population of 16 to 75-year olds for selected areas. This provides an insight as to how influential crofting and agricultural businesses is to the wider population, including its age profile. The data demonstrates

- 12% in Lewis – North (including the town of Stornoway)
- 18% in North Uist
- 20% of the South Isles in Orkney (Hoy, Walls and Flotta)
- 27% in Harris
- 29% in the Northern Isles in Orkney (all Northern Islands)
- 35% in Northmavine & Yell
- 38% in North East Isles Shetland (Unst and Fetlar)
- 41% in South Uist & Barra
- 47% in Lewis – South

[168] If holdings not in receipt of support payments were included the proportions would be higher.

338. At an island level the mixing of JAC agricultural workforce data with population estimates reveals (see Table 56) that an estimated 10% of Orkney's 16-75 year old population has a direct relationship with agricultural activity on businesses claiming agricultural support payments. In Shetland it is estimated that 11% of that age group directly work on farms or crofts for at least part of their time, whilst in the Outer Hebrides 21% of all 16-75 year olds are estimated to work at least part time on a croft or farm that claims agricultural support.[169]

Table 56 Total 16-75 year old population, and headcount of occupiers, spouses and regular and casual employees in agriculture 2021

Region	16-75yrs Population	Agricultural Workforce on BRNS	
		Headcount	% 16-75yrs
Orkney	16,642	1,595	10%
Outer Hebrides	19,587	7,623	21%
Shetland	16,845	1,892	11%

339. The agricultural and fishing sector workforce in many of these areas play pivotal volunteering roles in communities. For example in volunteering as: retained fireman, first responders, coastguards, community councillors and supporting third sector organisations, sports clubs, snow clearing and gritting, etc. Moreover, some farmers and crofters have secondary employment that is critical to retaining lifeline services such as ferry and air, on many small islands. These are vital, often unseen, contributions made from farmers and crofters (and other rural businesses).

10.2 Economic Profiles

10.2.1 Business counts

340. Business density and growth in the number of businesses in an economy can often depict entrepreneurialism. However, in rural and island areas it can also reflect the reliance on self-employment, part-time employment coupled with self-employment, and dominance of relatively small-scale primary sector farms and crofts.

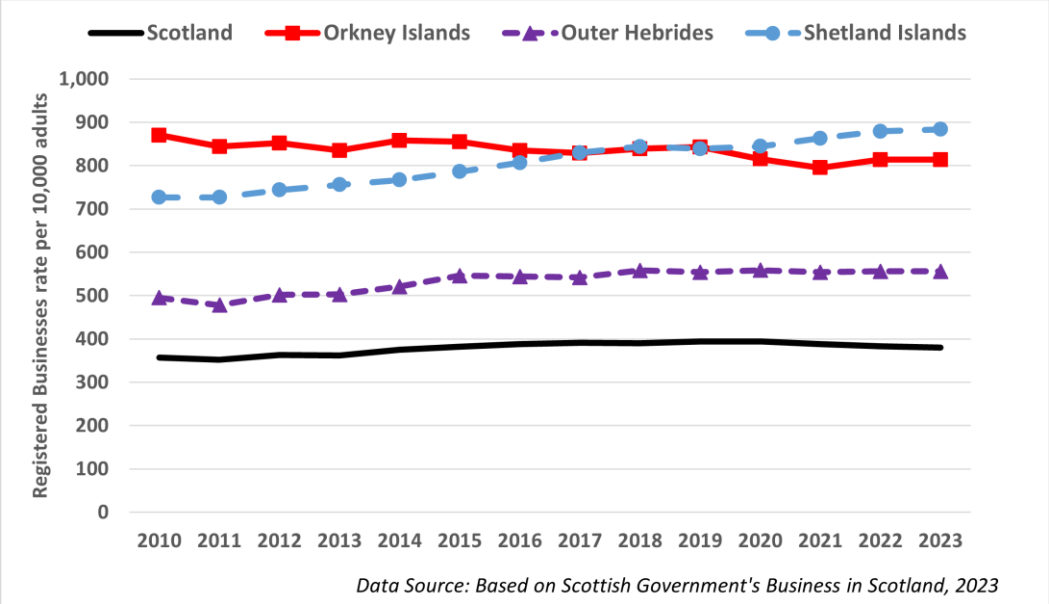
341. Between 2010 and 2023, the number of VAT and PAYE private sector registered businesses in Scotland increased by 12% and the number of businesses per 10,000 adult population increased by 6.4% to 380 businesses per 10,000 resident adult population (see Figure 49). The evolution of the business base was not consistent across all local authority areas, and indeed there are differences in the businesses base of the three island groups. At Scottish level, during the COVID pandemic, there was a 2.4% contraction in the number of businesses between 2020 and

[169] It is acknowledged that a proportion of occupiers and spouses may be over 75 years of age

2022, but in the Outer Hebrides (+0.4%) and Orkney (+0.7%) the business base remained stable, whereas in Shetland there was growth of 4.7%. Acknowledging the under representation of unregistered (for VAT or PAYE) private sector businesses, between 2010 and 2023:

- The number of businesses in Shetland increased by 23% to 1,665, whilst the number of businesses per 10,000 resident adult population increased by 21.6% between to 813. This business growth is likely to be related to construction sector developments around renewable energy developments and servicing that extended workforce. This means that Shetland had 2.14 more businesses per 10,000 adults than across Scotland.
- In the Outer Hebrides business numbers grew by 10.6% to 1,255 businesses with a 12% increase in the business density to 556 per 10,000 resident adult population. This represents 1.46 times more businesses per 10,000 adult population than across Scotland as a whole.
- Orkney recorded a slow growth in the number of businesses – with only 1% increase to 1,545. The number of businesses per 10,000 resident adult population in the Orkney Islands decreased by 6.4% to 814 businesses per 10,000 resident adult population in 2023 – the same registered business density per adult population as Shetland – 2.14 times higher than across the whole country. It is worth noting that whilst the number of businesses was static over the period the adult population (over 16 years of age) increased by 1,407 (8%) over the period thereby diluting business density.

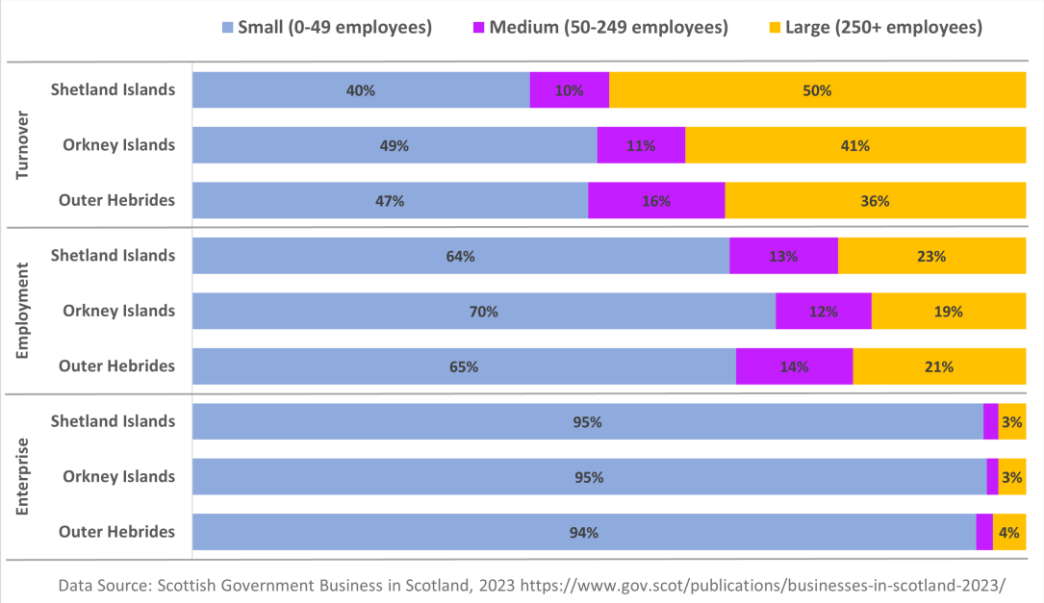
Figure 49 Private sector businesses per 10,000 adult population, 2010-2022



10.2.2 Business size, employment and turnover

342. Scotland's business sector is dominated by small and micro businesses, and in 2023 small and medium-sized enterprises (SMEs) accounted for 98.6% of private sector businesses in Scotland, 51% of total employment and 41% of turnover. Figure 50 shows, small businesses (0-49 employees) represent the majority (95%) of registered firms across each of the island. Moreover, these small businesses also accounted for the majority of private sector employment (64% in Shetland, 65% in the Outer Hebrides and 70% in Orkney). Further, with the exception of Shetland (40%), small businesses accounted for the majority of private sector turnover generated on the islands (Orkney, 49%; Outer Hebrides 47%).

Figure 50 Private sector businesses according to business size, employment, and turnover, 2023



343. Figure 51 summarises data extracts from NOMIS[170] where it reveals that micro enterprises dominated across the islands with businesses of 0-4 employees accounting for 76% of Outer Hebrides, 78% of Orkney and 79% of Shetland's private sector businesses. Businesses with 5-9 employees accounted for a further 12%, 11% and 11% of total businesses respectively. Sectors such as agriculture, forestry and fishing are dominated by registered businesses with under 9 employees accounting for over 98% of businesses across the islands. It is worth noting that in Orkney and Shetland where there are some larger fishing businesses that there are higher business counts in the 10-50 employee categories.

[170] https://www.nomisweb.co.uk/

Figure 51 Proportion of private registered businesses that are micro businesses by sector, 2023

344. The high proportion of micro businesses in each island underlines their critical role in the local economy. Small and micro businesses are often the backbone of communities, contributing to employment, local economic development, and fostering entrepreneurship, as well as delivering vital services. Despite this, the importance of larger SME businesses in the island economies cannot be dismissed – noting the large amount of private sector employment and turnover generated from a small number of businesses.

345. Table 57 reiterates the importance of primary sector firms (SIC code sectors A,B,D,E[171]) to the economies of the island groups. Whilst the majority of these businesses are likely to be micro farms and crofts, NOMIS data does confirm c.35 registered Mining, quarrying & utilities (B, D & E) firms in Orkney in 2023, with c.15 in each of Shetland and the Outer Hebrides. Moreover, within agriculture, forestry and fishing (A) there are important fishing and aquaculture sector businesses.

346. The data demonstrates how reliant the economies of each of the island groups are on primary sector businesses for total employment and turnover (noting underestimation due to missing non-VAT and non-PAYE registered businesses). It is worth noting that the construction sector businesses in each of the islands generate more employment and turnover per business on average, reflecting a higher proportion of larger businesses in that sector. Wholesale, retail & repair and Accommodation & food service activities sectors are also important.

[171] Unfortunately, this data is not disaggregated further. This means that agriculture data is included with forestry and fishing (A); mining and quarrying (B); electricity, gas, steam and air conditioning supply (D); and water supply; sewerage, waste management and remediation activities (E). See https://resources.companieshouse.gov.uk/sic/

Table 57 Proportion of private sector businesses by industrial sector in Outer Hebrides, Orkney Islands and Shetland Islands.

Sector (% are proportion of total)	Number of Businesses			Total Employment			Total Turnover (£m)		
	Outer Hebrides	Orkney	Shetland	Outer Hebrides	Orkney	Shetland	Outer Hebrides	Orkney	Shetland
Total Local Authority	**1,255**	**1,545**	**1,665**	**7,620**	**8,300**	**9,210**	**£817m**	**£869m**	**£1,588m**
A, B, D, E Primary Industries	27.9%	43.4%	43.2%	12.5%	22.9%	23.0%	21.7%	35.9%	49.6%
C Manufacturing	5.2%	4.5%	5.4%	8.1%	6.3%	7.5%	11.8%	6.4%	6.9%
F Construction	9.6%	9.4%	10.5%	11.0%	10.1%	9.4%	10.8%	8.5%	7.2%
G Wholesale, retail and repairs	13.1%	10.7%	9.6%	18.6%	16.6%	16.1%	26.3%	23.5%	15.7%
H Transport and storage	4.0%	3.6%	3.3%	8.3%	8.8%	7.9%	6.9%	6.2%	6.9%
I Accommodation and food service activities	9.6%	4.9%	5.4%	14.3%	9.6%	10.0%	4.0%	2.6%	2.0%
J Information and communication	3.2%	1.6%	1.5%	2.0%	2.3%	2.1%	2.6%	1.8%	0.6%
K Financial and insurance activities	0.8%	0.6%	0.6%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
L Real estate activities	1.6%	1.3%	1.5%	2.0%	1.1%	1.1%	1.7%	0.9%	0.6%
M Professional, scientific and technical activities	8.8%	6.8%	8.1%	4.6%	6.7%	5.1%	4.5%	4.9%	2.4%
N Administrative and support service activities	6.0%	4.9%	4.5%	4.3%	4.0%	8.3%	3.5%	4.7%	6.4%
P, Q Education, human health and social work activities	5.6%	3.2%	2.7%	10.2%	5.4%	3.4%	4.7%	2.3%	0.9%
R Arts, entertainment and recreation	2.0%	2.3%	1.2%	1.3%	3.3%	3.8%	0.4%	1.2%	0.3%
S Other service activities	3.2%	2.6%	2.4%	2.1%	0.0%	0.0%	1.2%	0.9%	0.4%

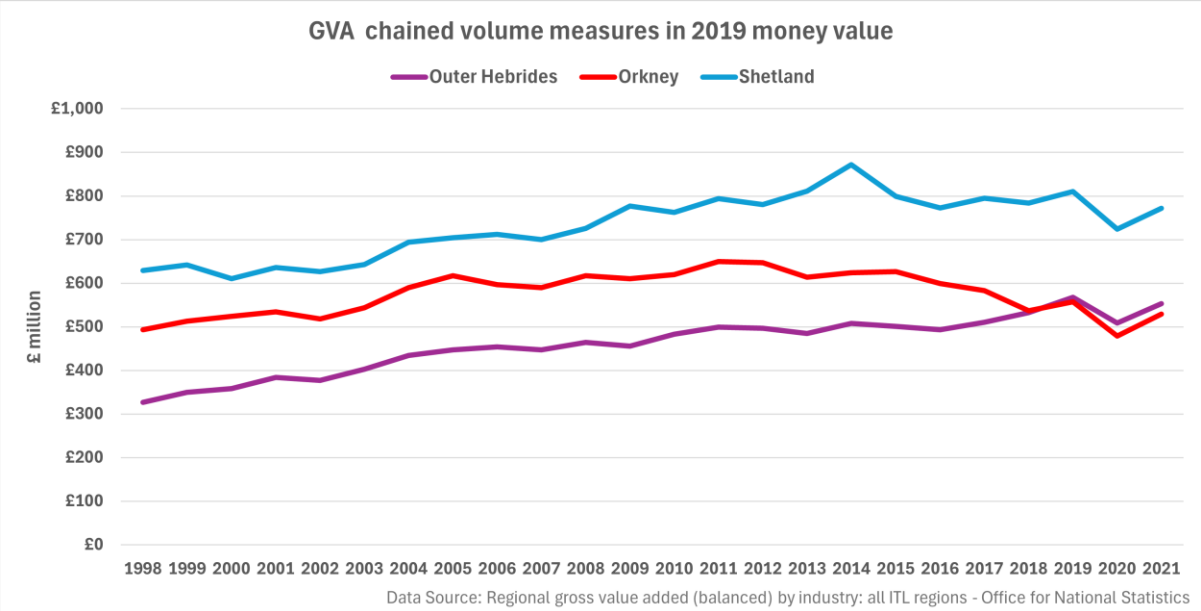
Data Source: (Businesses in Scotland: 2023 - gov.scot (www.gov.scot))

347. Given data gaps, particularly for non-VAT registered, non-PAYE firms, the aggregate total of businesses is likely to be higher than reported: 1,545 for Orkney, 1,255 for Outer Hebrides and 1,665 for Shetland. Moreover, given the prevalence of crofting, small agricultural businesses are likely to represent an even higher share. For example, RPID data (5 Agriculture Support Payments) suggest at least 672 agricultural business across Orkney, 1,433 across the Outer Hebrides and 787 across Shetland.

10.2.3 Gross Value Added

348. Figure 52 shows total GVA over time for each of the three island groupings, with Shetland at £772m, the Outer Hebrides at £553 and Orkney at £529m in 2021 expressed in 'real' (deflated) 2019 prices. Real GVA (2019 prices) rose in all islands until 2012 when the GVA in Orkney flattened in current prices, and started falling in real (inflation adjusted) terms. In Shetland, GVA also started to fall in real terms from 2015 (declines in current- unadjusted terms in 2016 and 2017) before stabilizing prior, before the impacts of the Covid pandemic were felt. Real GVA in the Outer Hebrides, in contrast did not experience any obvious downturns prior to the Covid pandemic, overtaking Orkney having been £166m lower in real terms in 1998. During the 1998 to 2021 period these ONS estimates indicated that Orkney's GVA only grew by 7% in real terms (despite 98% 'current price' GVA growth), compared to Shetland where it grew by 23% (105% increase in current prices) and the Outer Hebrides where real GVA growth was 69% (136% increase in current prices).

Figure 52 Total GVA (£m) of the Outer Hebrides, Orkney and Shetland, 1998-2021



349. Disaggregating agricultural GVA from island totals is hampered by its routine reporting in official statistics alongside other primary industries, notably fishing and aquaculture. ONS estimates suggest for Agriculture, forestry and fishing; mining and quarrying in 2021 (expressed in current prices) GVA was £34m in the Outer Hebrides, £86m in Orkney and £83m in Shetland. For each of the Island groups aquaculture, sea fish and shellfish industries will have a significant bearing on primary production GVA. ONS also estimate that in 2021 the Manufacture of food, beverages generated £18m in the Outer Hebrides, £11m in Orkney and £39m in Shetland.

350. The long-term trend in the contribution to island GVA (deflated and expressed in 2019 values) that comes from both the Agriculture, forestry and fishing; mining and quarrying sector, and the Manufacture of food, beverages and tobacco. There is no mining and tobacco manufacturing in these island groupings, albeit there will be some limited quarrying and forestry (but at small scales). Therefore, the data likely reflects food and drink production and manufacturing well for the islands. The most striking feature in Figure 53 is the rapid growth in the contribution of the primary production sector in Orkney between 2012 (3.7% of Island GVA) and 2021 (18.1%). This rapid increase in the relative contribution reflects the downturn in total real term GVA in Orkney (discussed above) as well as a rapid increase in GVA from £24m in 2012 to £96m in 2021 (expressed in 2019 prices) – a real term increase of 300%. Similar, but less spectacular growth in real GVA (see Table 67 in Annex 6 Socio Economic Data) from primary production was witnessed during this period in the Outer Hebrides (+86%) and Shetland (+52%). During this period the contribution of food and drink manufacturing also increased in real terms (despite the 2021 Covid downturn) across all island groups, with +91% in the Outer Hebrides, +33% in Orkney and +63% in Shetland.

351. Prior work on the regional economic contribution of the red meat sector[172] suggests that the current agricultural GVA for Orkney will be c.£25m, c.£15m for Shetland and c.£8.5m for the Outer Hebrides. These figures are subject to some uncertainty but are broadly consistent with earlier published estimates.[173] Using published marine sector[174] estimates would permit some reverse engineering of ONS data, but the process would likely be fraught with inaccuracies.

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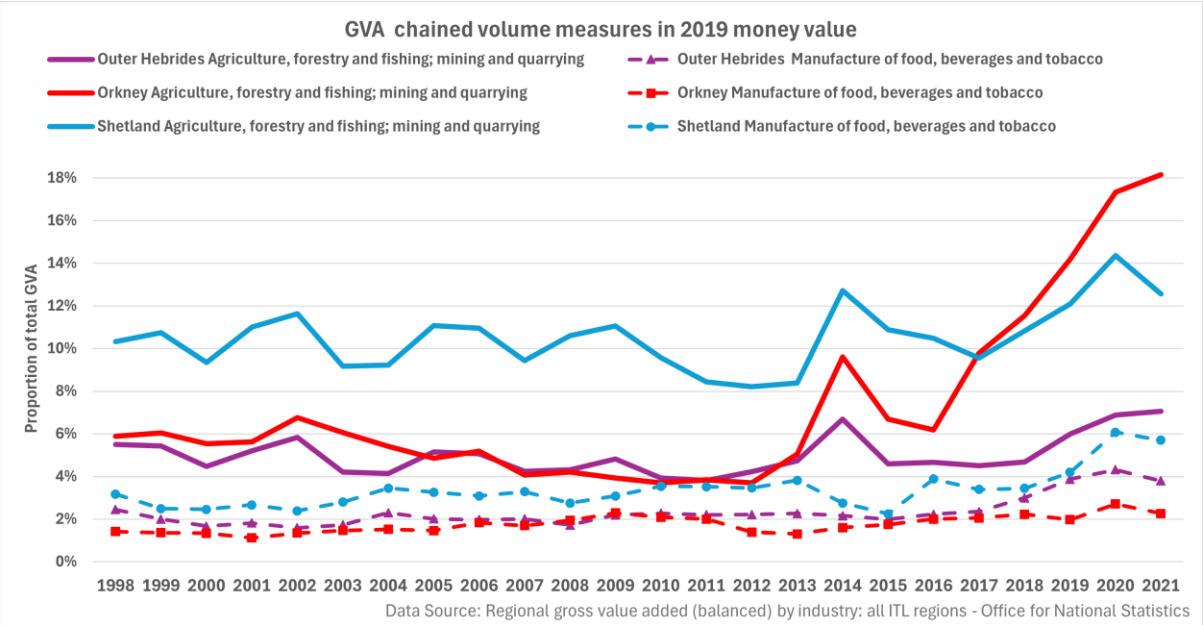
[172] QMS_Red_Meat_Economics_Report_Landscape_A4_2023_s10.pdf

[173] https://www.researchgate.net/profile/Hervey_Gibson/publication/322223007_OIIO_Orkney_Islands_Input_Output_A_social_and_economic_model_of_the_Orkney_Islands/links/5a4c943baca2729b7c8a1562/OIIO-Orkney-Islands-Input-Output-A-social-and-economic-model-of-the-Orkney-Islands.pdf and FAI_2021_Shetland_economic_accounts_2017.pdf

[174] Supporting documents - Scotland's Marine Economic Statistics 2021 - gov.scot (www.gov.scot)

352. Disaggregation of employment, turnover and GVA arising from agriculture, forestry, fishing and aquaculture sectors should be considered a priority for Local Authorities and Scottish Government, given the strategic importance of the land based sector as foundation industries for the food and drink sector, but also importantly in better understanding economic and environmental trade-offs when it comes to climate change mitigation and nature recovery.

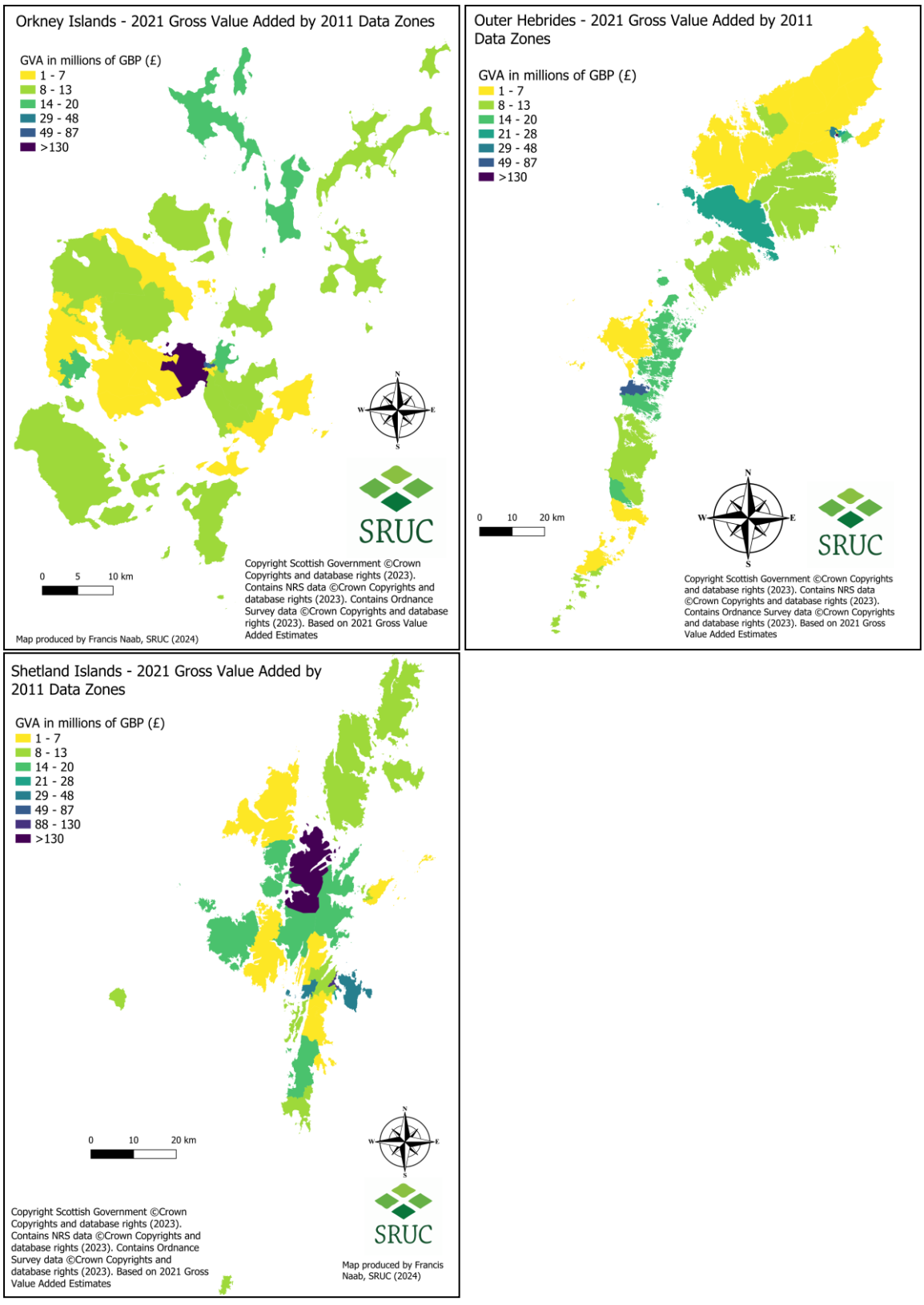
Figure 53 Contributions of agriculture, forestry and fishing and food and drink manufacturing to island GVA (expressed in 2019 prices) by Islands group, 1998-2021



353. GVA data recently released made available by ONS at data zone level[175] can help track local level GVA changes, alongside published Ward level estimates. An example of the data is shown in Figure 54 highlighting areas of lower and higher GVA, based on business density, scale and sector of businesses (e.g. Kirkwall in Orkney, Stornoway and Balivanich in the Outer Hebrides, Sullom Voe and Lerwick in Shetland).

[175] Supporting documents - Scotland's Marine Economic Statistics 2021 - gov.scot (www.gov.scot)

Figure 54 Local level GVA estimates, 2021



10.2.4 Workforce

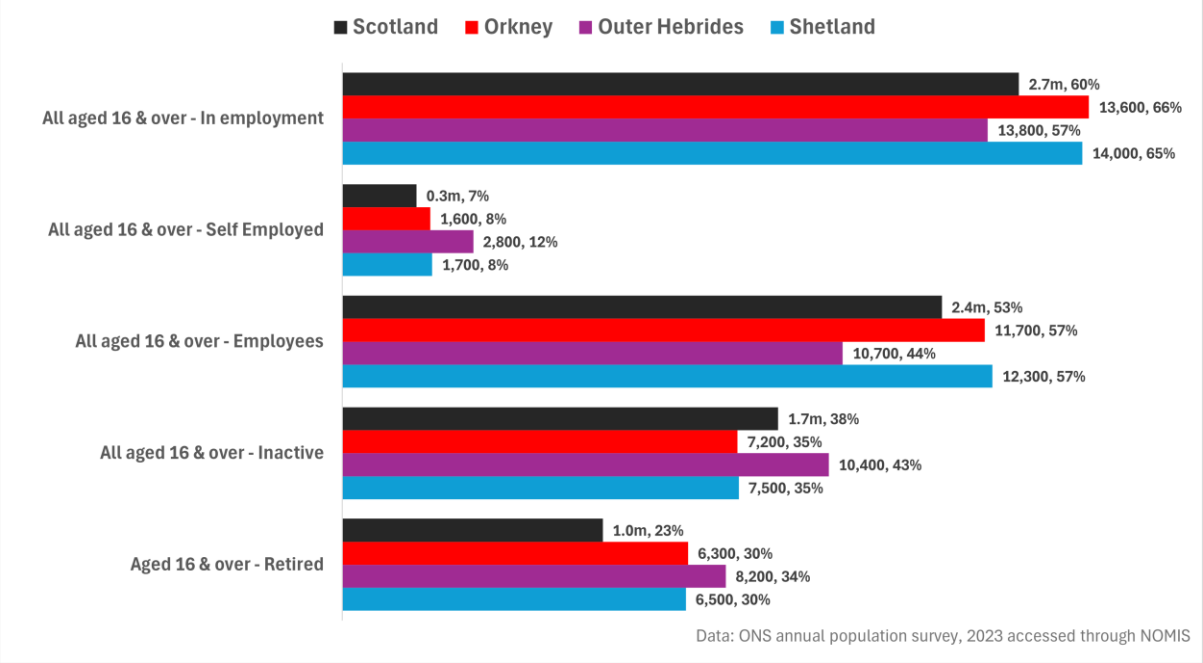
354. The total estimated workforce for Orkney was c.13.6k, 13.8k for the Outer Hebrides and 14.0k for Shetland.[176] in 2023. The ONS Annual Population Survey[177] suggests 42% public sector employment in Orkney, 41% in the Outer Hebrides and 49% in Shetland. This compares with a self-reported headcount of occupiers and spouses working on agricultural holdings (see Section 6 Trends in Agriculture) of 1.3k, 3.6k and 1.6k plus regular and casual employees of 595, 562 and 465.

355. Figure 55 shows that in 2023 there was higher levels of people working (in employment) in Orkney (66% of those aged 16 and over) and Shetland (65%) compared to Scotland (60%) – whereas the Outer Hebrides had lower levels of economic activity in the over 16 year old population (57%). This is also reflected in higher economic inactivity rates for the Outer Hebrides (43% of over 16 year olds) – where more than 1 in 3 people (34%) over 16 year of age were retired. Whilst Orkney and Shetland have lower economic inactivity rates compared to Scotland they both have 30% of the 16+ population as retirees, compared to only 23% across Scotland. Self-employment rates were high in the Outer Hebrides (12%) compared to Orkney and Shetland (8%) that were much more closely aligned to Scottish self-employment rates (7%). The higher self-employment rate in the Outer Hebrides is possibly a feature of a high density of crofters that are likely to be pluri-active.

[176] Total Labour Market Profile - Nomis - Official Census and Labour Market Statistics (nomisweb.co.uk)

[177] Accessed through NOMIS https://www.nomisweb.co.uk/

Figure 55 Economic activity and inactivity, year to September 2023, by island group

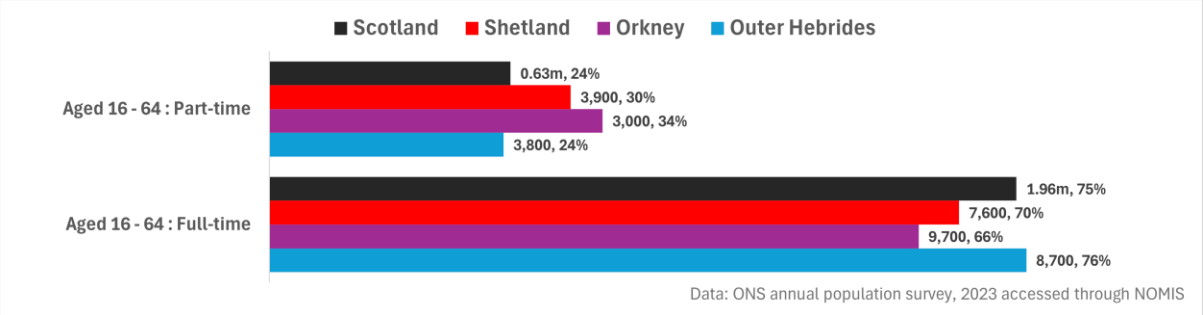


356. Of the three island groupings, in 2023 Orkney had the highest population of over 65 year olds that were economically active (26%), meaning they participate as self-employed persons or employees. In Shetland and the Outer Hebrides the corresponding activity levels were 20% and 12%, respectively. The relatively high percentage of economically active people aged 65 and above in Orkney and Shetland is likely reflective of the agricultural population, where on larger units there may be limited succession opportunity (or desire).

357. Figure 56 shows that part time employees[178] are a much more prominent feature in the Outer Hebrides (34%) and Shetland (30%) compared to Orkney (24%) and Shetland (24%). This likely, again, reflects the seasonal nature of some jobs in the hospitality and smaller scaled agricultural / fishing sectors. Whilst data on the proportion of employees with second jobs is not available for the islands due to small samples it is noticeable in the national data that 5% of agriculture and fishing employees have second jobs – considerably higher than any other sector of employment.

[178] The Annual Population Survey that utilises the Labour Force Survey which is self-reported meaning that the definition of full time and part time work is open to interpretation by the respondents

Figure 56 Proportion of full-time and part-time employees, year to September 2023, by island group



358. Table 58 confirms that agriculture[179] whilst only accounting for 5.4% of employees[180] on VAT and PAYE registered businesses in the Outer Hebrides in 2022 (and only 1.9% of full time employees) accounted for 10% of part-time employees[181] and 27.3% of total 'employment' (employees plus working owners). In Orkney agriculture was estimated to account for 6.9% of employees (including 4.6% of full time and 7.4% of part time employees) and 16.3% of total 'employment'. In Shetland agriculture only accounted for 3.6% of employees (1.1% of full time and 7.7% of part time) but still accounted for 14.1% of 'total employment'.

359. The relative importance of the fishing and food and drink manufacturing sectors in each of the island grouping is also shown in Table 58. These sectors combined accounted for 10.6% of full-time employees in the Outer Hebrides, 9.1% in Orkney and 13.2% in Shetland. The interconnectedness of the farming and crofting sector with the food and drink manufacturing sector cannot be over emphasized, nor can the strong links between the fishing and aquaculture sector with crofting (in particular).

[179] At SIC code level this relates to "Crop & animal production, hunting & related activities" and there is assumed to be limited "hunting and related services" on the islands

[180] Employees are on payroll, and this does not include self-employed people or volunteers.

[181] For ONS Business Register and Employment Survey fulltime labour is considered more than 30 hours a week and

Table 58 Estimated total employees (including part and full time) and employment in VAT and PAYE registered businesses for selected food and drink sectors, 2022

Region	Metric	Crop & animal production, hunting & related activities	Fishing & aquaculture	Manufacture of food products	Manufacture of beverages
Outer Hebrides	Employees	650	325	450	60
		5.4%	2.7%	3.8%	0.5%
	Full-time employees	130	300	375	60
		1.9%	4.3%	5.4%	0.9%
	Part-time employees	500	30	80	5
		10.0%	0.6%	1.4%	0.1%
	Employment	4,500	350	450	60
		27.3%	2.1%	2.7%	0.4%
Orkney	Employees	650	475	180	80
		5.9%	4.3%	1.6%	0.7%
	Full-time employees	300	400	120	70
		4.6%	6.2%	1.8%	1.1%
	Part-time employees	350	70	60	15
		7.4%	1.5%	1.3%	0.3%
	Employment	2,125	475	190	90
		16.3%	3.7%	1.5%	0.7%
Shetland	Employees	500	950	400	10
		3.6%	6.8%	2.9%	0.1%
	Full-time employees	90	850	250	5
		1.1%	10.0%	3.1%	0.1%
	Part-time employees	425	130	140	5
		7.7%	2.2%	2.5%	0.1%
	Employment	2,250	1,000	400	10
		14.1%	6.2%	2.5%	0.1%

Data Source: ONS Business Register and Employment Survey extracts from Nomis

10.2.5 Employee Earnings

360. Labour market data from the ONS also provide insights into the earnings of resident workers in the Islands of Shetland, Orkney and the Outer Hebrides. The data in Table 57 shows the distribution of earnings (25th to 60th percentile as well as mean) for full-time employees that are paying PAYE tax within the island groups. These earnings profiles provide valuable insights into regional pay disparities, income inequality, labour market dynamics, and regional economic disparities.

361. In the Shetland Islands, the median hourly earnings rate for full-time workers was £21.61 (19% higher than Scottish median), compared to £19.93 in Orkney (10% higher than Scotland) and £17.35 in the Outer Hebrides (4% lower than Scotland). In all of the islands the lower quartile (25th percentile) earnings[182] are higher than for Scotland (1% in the Outer Hebrides, 14% in Orkney and 24% in Shetland), and

[182] The 25th percentile means that 25% of employees earn less than this amount.

these may reflect higher costs of living associated with the Northern Isles and /or health of the job market. The data also shows that the hourly earnings of part time employees were significantly lower than the full-time workforce that reflects the lower paying seasonal jobs often associated with, for example tourism services and agriculture. Whilst median part time earnings were higher in all of the island groups than for Scotland it is worth noting that the hourly wage differentials to full time workers was £3.78 in the Outer Hebrides, £5.33 across Scotland, £6.35 in Orkney and £6.61 in Shetland (30% lower).

Table 59 Median gross hourly earnings of residents, 2023

Metric	Outer Hebrides		Orkney		Shetland		Scotland
	Rate	% Scotland	Rate	% Scotland	Rate	% Scotland	
Full Time							
Mean	£19.87	95%	£22.48	107%	£22.62	108%	£20.95
25th percentile	£13.89	101%	£15.76	114%	£17.08	124%	£13.77
30th percentile	£14.27	98%	£15.90	109%	£17.87	123%	£14.54
40th percentile	£15.98	98%	£17.78	109%	£20.99	129%	£16.30
Median	£17.35	96%	£19.93	110%	£21.61	119%	£18.16
60th percentile	£20.17	97%	£22.63	109%	£23.75	114%	£20.77
Part time							
Median	£13.57	106%	£13.58	106%	£15.00	117%	£12.83
25th percentile	#	#	£12.18	112%	£13.11	120%	£10.90
# insufficient data points for robust estimate							

Data Source: ONS Annual Survey of hours and earnings – resident analysis accessed through NOMIS[183]

10.3 Digital Connectivity

10.3.1 Broadband

362. Farmers, crofters and other businesses increasingly rely on digital connectivity for doing business, be that online trading, digital tax returns, online banking, news and weather services, continued professional development, accessing digital administrative platforms (such as the Scottish Government's Rural Payments and Services platform for farmers and crofters[184]), or even attendance at online meetings.

363. However, despite the increasing reliance on, and higher expectation of use of online digital services, during stakeholder engagement areas of poor or unstable digital connectivity were frequently referred to – with instances cited of having to

[183] See Annual Survey of Hours and Earnings - Data Sources - home - Nomis - Official Census and Labour Market Statistics (nomisweb.co.uk) and Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics (ons.gov.uk)

[184] Rural Payments and Services

travel to SAC Consulting offices to register animals for SSBSS or SUSSS payments to access a reliable digital connection.

364. Ofcom regularly update their 'Connected Nations' databases[185] that form the basis of their annual Connected Nations and Infrastructure Reports.[186] Using the Connected Nations September 2023 data, fixed line broadband performance was assessed for the Island groupings.

365. The Universal Service Obligation- (USO) is defined by Ofcom[187] as "a safety net to ensure that everyone in the UK has the **right to request access** to a minimum set of communications services at affordable prices". The services are determined by Government legislation and for broadband 'decent connection' is defined as a minimum 10Mbit/s download and 1Mbit/s upload speed from fixed broadband, Wireless Internet Service Provider (WSIP)[188] or mobile Fixed Wireless Access (FWA).[189] If the upgrade costs to meet the USO exceeds £3,400 then BT Group explain that the excess costs must be paid by the premises to be serviced[190]. Alternatives to fixed broadband, WSIP and FWA, such as the satellite based Starlink are available across all Scottish terrestrial areas with business tariffs starting at £90 per month plus equipment costs (c.£450).[191] In 2023 the UK Government announced an initiative[192] to connect the remote island of Papa Stour in Shetland to "OneWeb's constellation of low earth orbit (LEO) satellites to beam high-speed, reliable broadband connections to the island from space".

366. Table 60 shows that Ofcom report low proportions of premises across the Island groups without access to broadband speeds that meet the USO. 4% of matched premises in Orkney, 3% in Outer Hebrides and 5% in Shetland are reported to not receive the USO (noting that many of the unmatched premises are located in rural areas). There is very low (c.5%) penetration of ultra-fast (>100Mbits/s) fixed broadband in these islands, although super-fast (>30 Mbits/s) was much more prevalent with 78% of matched premises in the Outer Hebrides, 74% in Shetland and 78% in Orkney. Next Generation Access (NGA) replaces copper based networks with optical fibre and improved services and Ofcom report that 78% of

[185] Data downloads - Ofcom
[186] Connected Nations and infrastructure reports - Ofcom
[187] Universal service obligations (broadband and telephony) - Ofcom
[188] An Internet service provider (ISP) that permits subscribers to connect to a server at designated hot spots (access points) using a wireless connection such as Wi-Fi. See WISP internet providers, UK: Members list of UKWISPA for a list of approved members of UK Wireless Internet Service Providers Association.
[189] Such as 4G and 5G
[190] Universal Service Obligation (USO) for Broadband (bt.com)
[191] Starlink Business
[192] Bold plans to boost digital connectivity across the country, from wifi in lamp posts and satellites in most rural parts of Scotland - GOV.UK (www.gov.uk)

premises in Orkney, 89% of premises in Outer Hebrides and 85% of premises in Shetland have access to NGA broadband.

367. Despite, seemingly high coverage of key broadband services many households and businesses remain reliant on fixed broadband coverage for internet provisioning. In Orkney 17% of premises could not receive download speeds of 10Mbit/s, with 16% in Shetland, but only 5% in Outer Hebrides. 2 Mbit/s is defined as broadband, and there are still 2-3% of matched premises in these island groups that do not have access to fixed broadband.

Table 60 Fixed broadband performance of matched premises by island group, September 2023

Metric	Orkney	Outer Hebrides	Shetland
All Matched Premises	12,889	15,796	13,088
Unmatched premises (data missing)	270 (2.1%)	1,227 (7.2%)	123 (0.9%)
Below the USO	4%	3%	5%
Super-Fast Broadband (>30Mbit/s)	69%	78%	74%
Next Generation Access (optical fibre)	78%	89%	85%
Receive decent broadband from FWA	0%	0%	0%
Ultra-Fast Broadband (100Mbit/s) availability	5%	6%	6%
Full Fibre availability	5%	6%	6%
Gigabit availability	5%	6%	6%
Unable to receive 2Mbit/s	3%	2%	3%
Unable to receive 5Mbit/s	6%	3%	7%
Unable to receive 10Mbit/s	17%	5%	16%
Has 30<300Mbit/s download speed	64%	73%	67%
Has >=300Mbit/s download speed	5%	6%	6%

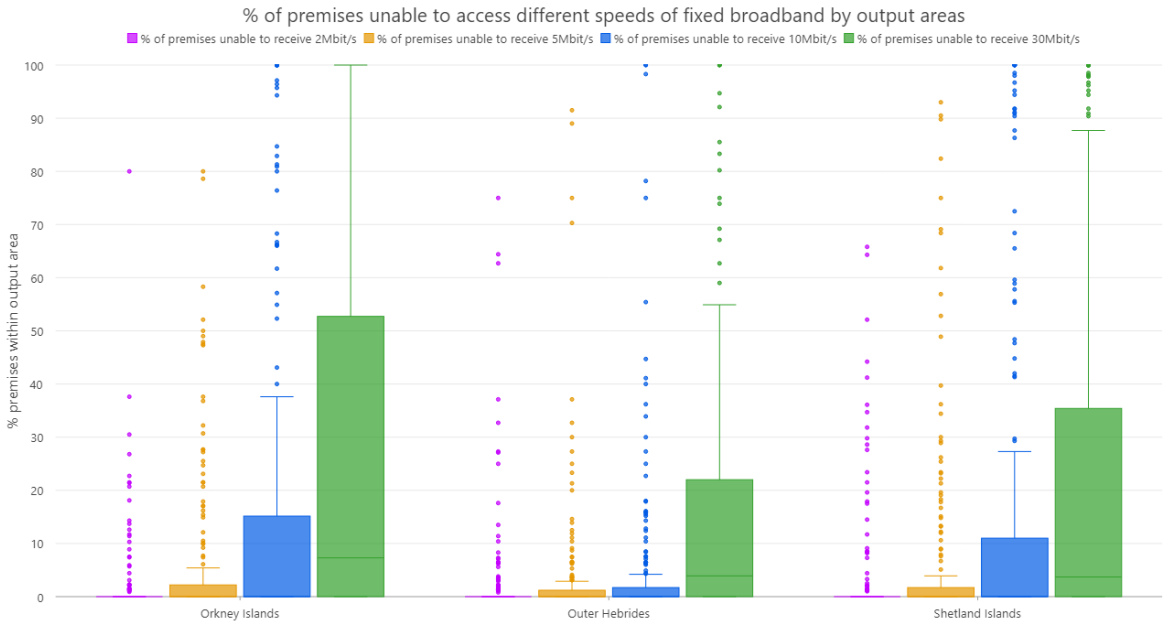
Data source: Ofcom (2023) Connected Nations

368. The location of where poorer fixed broadband access remains within island areas is important. Figure 57 presents a box-plot to highlight the proportion of output areas (small geographical areas) failing to meet different performance thresholds. The box represents the 25th percentile to 75th percentile (the interquartile range) with the median shown as a line within the box. The whiskers show the maximum and minimum observations excluding outliers that are shown as dots. From this chart it is evident that even at 2Mbit/s and 5Mbit/s there are a number of output areas where relatively high proportions of matched premises do not have access to any form of 'decent' fixed broadband. This may be through choices of occupants, but it may also be simply due to poor service that can hinder economic activity and social interaction and learning opportunities.

369. Figure 58 maps the proportion of matched premises within a census output area[193] that had access to the USO. This demonstrates that higher proportions of premises in more remote locations fail to meet the USO (e.g. Hoy and North Ronaldsay in Orkney, North Harris and parts of South Uist in the Outer Hebrides and West Mainland in Shetland).

370. Figure 57 shows a boxplot of the proportion of premises within statistical output areas with access to different broadband speeds.

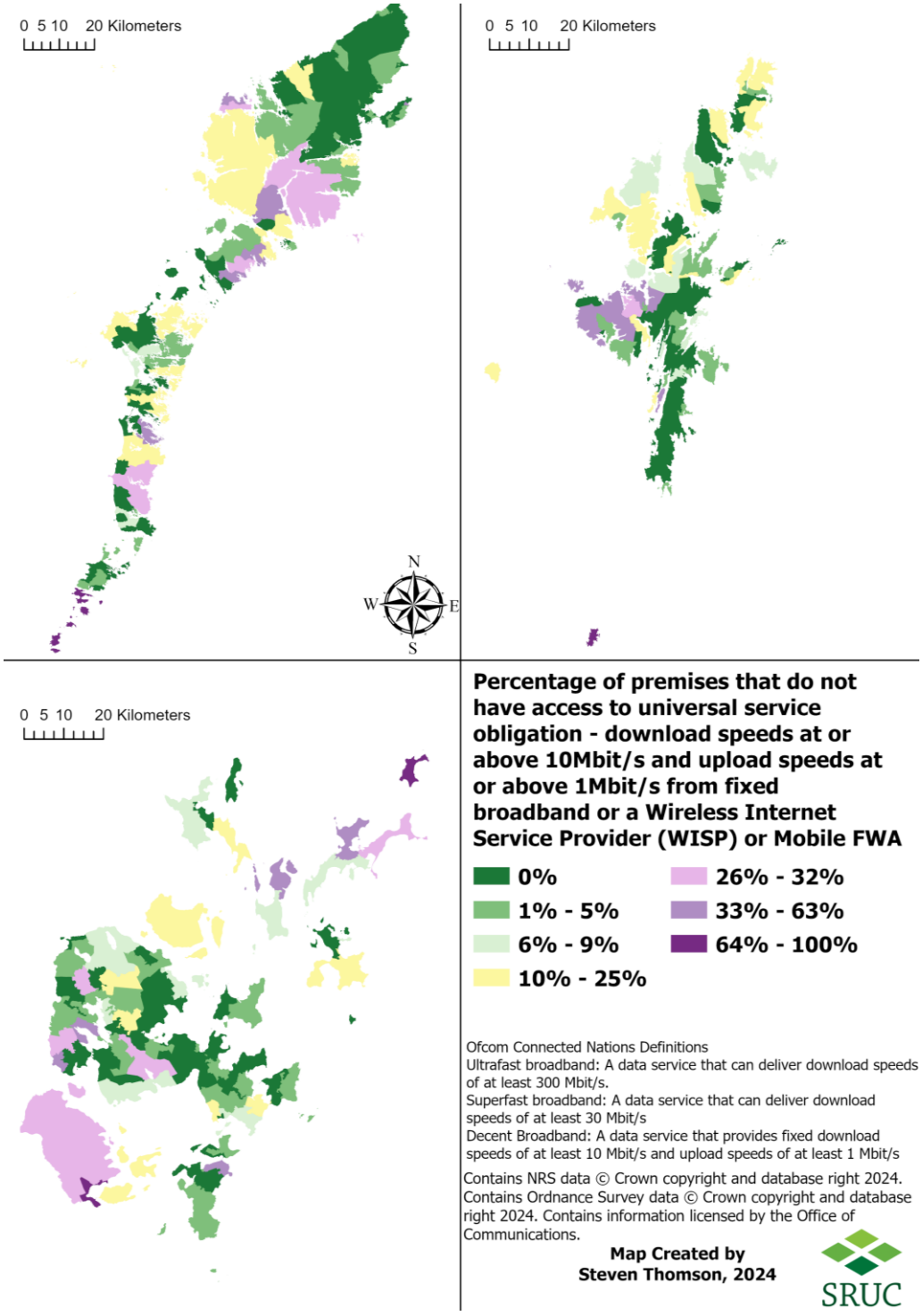
Figure 57 Boxplot (including outliers) of proportion of premises within an output area that do not have access to different broadband speeds, 2023



371. Maps showing the proportion of premises unable to reach 2Mbit/s (Figure 80), 5Mbit/s (Figure 81), 10Mbit/s (Figure 82) and 30Mbit/s (Figure 83) are available in Annex 6 .

[193] This is the lowest geography for the population census and each area contains at least 50 people and 20 households. In 2011 there were 46,351 output areas across Scotland. 2011 census: Geographies | Scotland's Census (scotlandscensus.gov.uk)

Figure 58 Proportion of premises that do not have access to Universal Service Obligation, 2023



10.3.2 Mobile Coverage

372. Ofcom also report on mobile coverage in their Connected Nations and Infrastructure reports,[194] but unfortunately data is only available at local authority

[194] https://www.ofcom.org.uk/research-and-data/multi-sector-research/infrastructure-research

or UK Parliamentary constituency level. The data shows coverage of 2G, 3G, 4G and 5G mobile networks and how many premises have access to these networks at premises outdoor and indoor.

373. Essentially 2G services provide SMS and voice services, 3G includes data application including web browsing, 4G supports more data intensive activities such as gaming and streaming through mobile broadband, whilst 5G offers higher digital speeds, greater reliability and negligible latency (time delays) offering opportunities for e.g. remote healthcare, precision agriculture, etc.

374. Table 61 shows that whilst only 4% of premises in Orkney and Shetland and 7% in the Outer Hebrides do not have indoor 4G services 15%, 16% and 18% respectively do not have access to 2G services. Whilst this is positive, anecdotal evidenced suggests that there is also a generation of mobile phone users that still do not use 'smart-phones' with 4G capabilities – meaning that enhanced digital opportunities may not be used.

Table 61 Proportion of premises receiving indoor mobile services by Island group, 2023

Metric	Orkney Islands	Outer Hebrides	Shetland Islands
Premises	13,159	17,023	13,202
Premises with no indoor 2G	15%	18%	16%
Premises with no indoor 3G	10%	10%	5%
Premises with no indoor 4G	4%	7%	4%
Premises with no indoor voice service	1%	3%	2%
Premises with no indoor data service	0%	1%	0%
Premises with no outdoor 5G	100%	100%	100%

Data Source: Ofcom (2023) Connected Nations

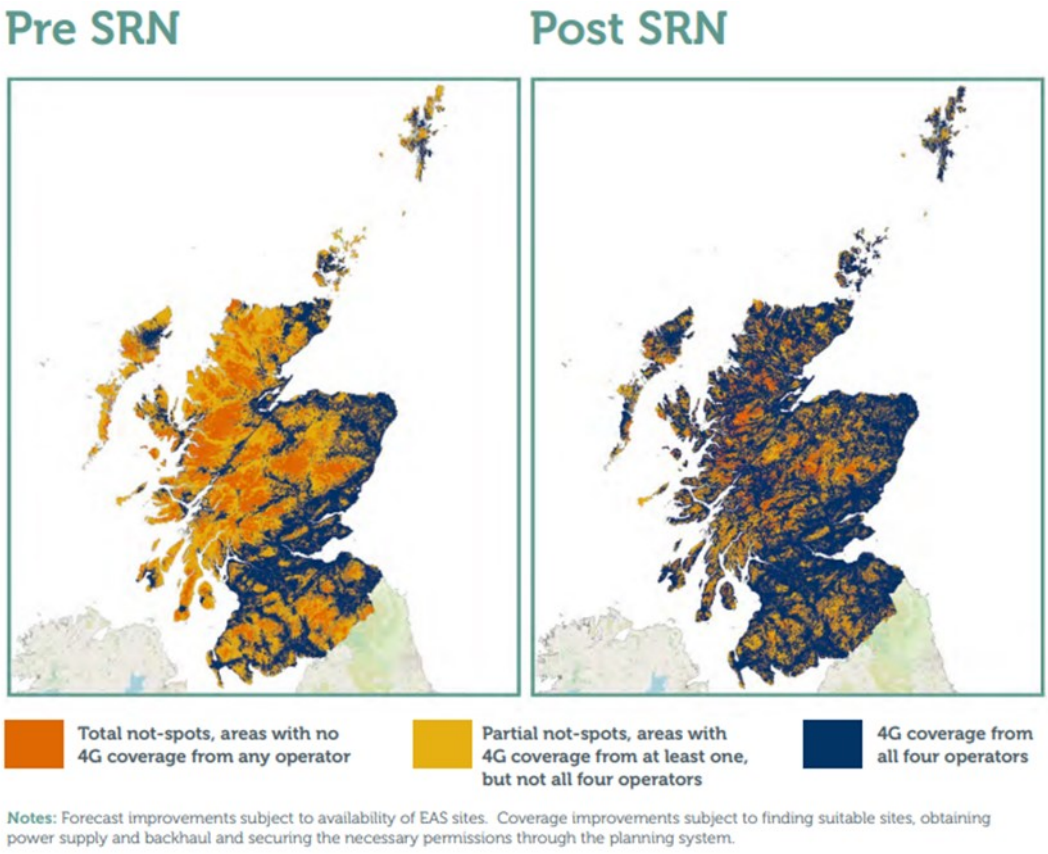
375. Whilst there is no unified mapping service for mobile coverage at broad geography, locally the best coverage can be found through Ofcom, and services are continually being improved.[195] The Shared Rural Network (SRN) initiative (being delivered by Building Digital UK)[196] is investing over £1bn of Government and private sector funds to deliver reliable mobile broadband in the UK's rural areas by improving 4G coverage. The UK's four mobile network operators – EE, Three VMO2 and Vodafone are upgrading their existing networks and developing shared infrastructure and new sites. A map showing current and expected 4G coverage post SRN investment is provided in Figure 59[197], where predicted improvement in the three Island groupings is apparent.

[195] For example see: https://www.ispreview.co.uk/index.php/2024/01/o2-uk-highlights-new-masts-to-boost-shetland-4g-mobile-cover.html

[196] See https://web-cdn.srn.org.uk/green/uploads/2024/02/BDUK-SRN-Brochure-Pack-DED23_v6.pdf

[197] https://web-cdn.srn.org.uk/green/uploads/2024/02/BDUK-SRN-Brochure-Pack-DED23_v6.pdf

Figure 59 Estimated 4G coverage pre and post Shared Rural Network investment



376. By 2033 the 2G and 3G services will be switched off[198] (Vodafone started its switch-off of 3G services in Glasgow in July 2023[199]) despite many rural residents and businesses still being reliant on 2G network coverage for voice and SMS services.

> "Rural communities rely on basic communication services, such as voice calls and messaging, to a great extent. This reliance on 2G phone networks is pervasive in areas where other communication services are either costly or unavailable. Expectedly, the 2G network closure will affect the livelihood of people in these rural communities. With no means of communication, people in rural areas might lose the opportunity to access basic emergency and healthcare services."
>
> **Ivan Romanov, UCTel September 2023[200]**

[198] 3G and 2G switch-off - Ofcom
[199] Connected Nations 2023 - Scotland report (ofcom.org.uk)
[200] 2G Network Shutdown in the UK: What You Need to Know | UCtel

10.4 Renewable Energy

377. Phimister and Roberts (2012)[201] highlight that the UK and Scottish Government consider renewable energy not only playing a vital role in delivering net zero ambitions, but also having important impacts on "green growth" for the wider rural economy. In particular they highlight a wide variety income and employment opportunities arising from renewable installations, including:

- Land rents (turbine sites & transmission wayleaves)
- Civil and electrical engineers
- Professional services – including planning consultants and local authorities
- Grid connections
- Income to site owner
- Construction and maintenance jobs and local spend on hospitality, etc.
- Community benefits[202]

378. Phimister and Roberts (2012) argue that the scale and extent of the economic benefits arising from renewable energy are heavily determined by ownership, noting that most large-scale developments are owned by non-local interests. Non-local ownership means there is increased economic leakage as investors and shareholders reap benefits from local Scottish natural assets – indeed in 2022 it was reported that "82.2 per cent of all current and pending UK offshore wind capacity is foreign-owned"[203]. In contrast, local ownership of renewable energy provides vital income streams for local farms, crofts, households and communities that circulate in local economies, whilst improving local energy resilience.

> "Generally, generation capacity is owned by private enterprises such as large utility companies. Thus, most of profit from energy generation does not remain in local economy and, instead, remains concentrated within city landscapes. With citizen-owned power plants, not only the financial gain goes to local people, the profit can be used for community development and environmental education."[204]

379. Fraser of Allander Institute (2023)[205] note that whilst off-shore renewables have overtaken on-shore in terms of economic output and employment, that onshore

[201] Journal of Agricultural Economics, Vol. 63, No. 2, 2012, 331–360 doi: 10.1111/j.1477-9552 .2012.00336.xÓ2012
[202] Community Benefits Map · Local Energy Scotland
[203] Power to the People: The Case for a Publicly Owned Generation Company | Report | Common Wealth (common-wealth.org)
[204] Ownership is Power: Scotland's Renewable Energy Transition – GLOBUS (globuswarwick.com)
[205] The Economic Impact of Scotland's Renewable Energy Sector - 2023 Update | FAI (fraserofallander.org)

wind generates c.£3.4bn and hydropower £1.2bn output with c. 12k FTE jobs supported by onshore wind, c.7k by renewable heat and c.6k by hydro..

380. The islands of "*Orkney, Shetland and the Western Isles are home to some of the best conditions in the world with high wind speeds and productivity."*[206] Renewable energy, particularly wind, therefore has greater potential than current operational capacity to bring income streams to farms, households and communities that can underpin wider economic activity in these fragile communities and economies.

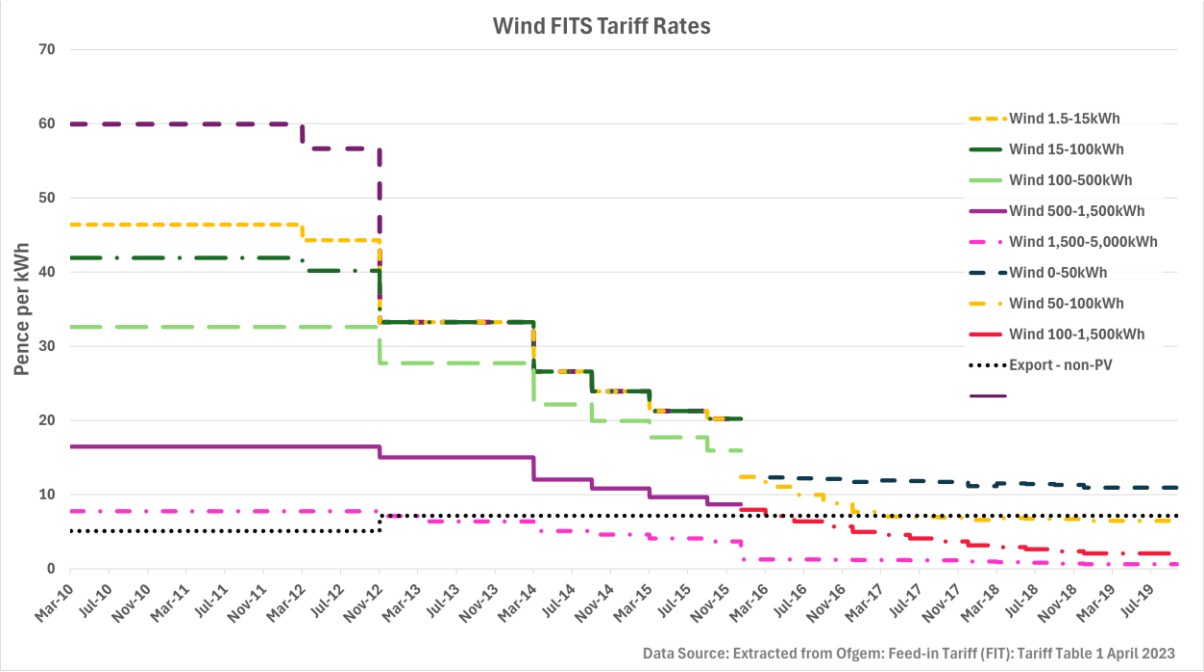
381. In order to stimulate smaller scale local renewable energy in the UK the Feed-in Tariff Scheme (FITs) was launched 1st April 2010 (its legal basis was the Energy Act 2008[207]), and closed to new applicants at the end of March 2019. Under the scheme households, businesses and communities received payments for electricity generated by eligible renewable installations - Solar photovoltaic (solar PV); Wind; Micro combined heat and power (CHP) up to 2kW; Hydro; and, Anaerobic digestion (AD). FITs payments comprised two separate tariffs: (a) generation tariff paid per kilowatt-hour (kWh) generated; and, (b) an export tariff paid per kWh exported to the electricity grid. This means that small-scale energy generators are paid for energy which they consume themselves as well as excess they export to the grid.

382. The Department of Business, Energy and Industrial Strategy (BEIS) set FIT rates, and a number of reviews brought downward pressure on the initial tariff rates as installation costs fell and uptake squeezed budgets. FITs were only available to renewable installations producing up to 5 MW, but the contracts were attractive, running for 20 years (25 years if signed up before August 2012) with payments usually made quarterly.

383. Whilst there are multiple tariffs based on type and scale of installation (recognising economies of scale) Figure 60 shows how the tariff rates for wind fell significantly between the start of FITs and the end last contracts in 2019 (similar patterns exist for hydro and PV). For example, the smallest installations receive 60p / kWh generation tariff for contracts signed between 2010 to 2012, yet installations contracted in 2019 only receive 11p / kWh generation tariff (an 82% reduction).

[206] Harnessing remote island wind | SSE Renewables
[207] Energy Act 2008 (legislation.gov.uk)

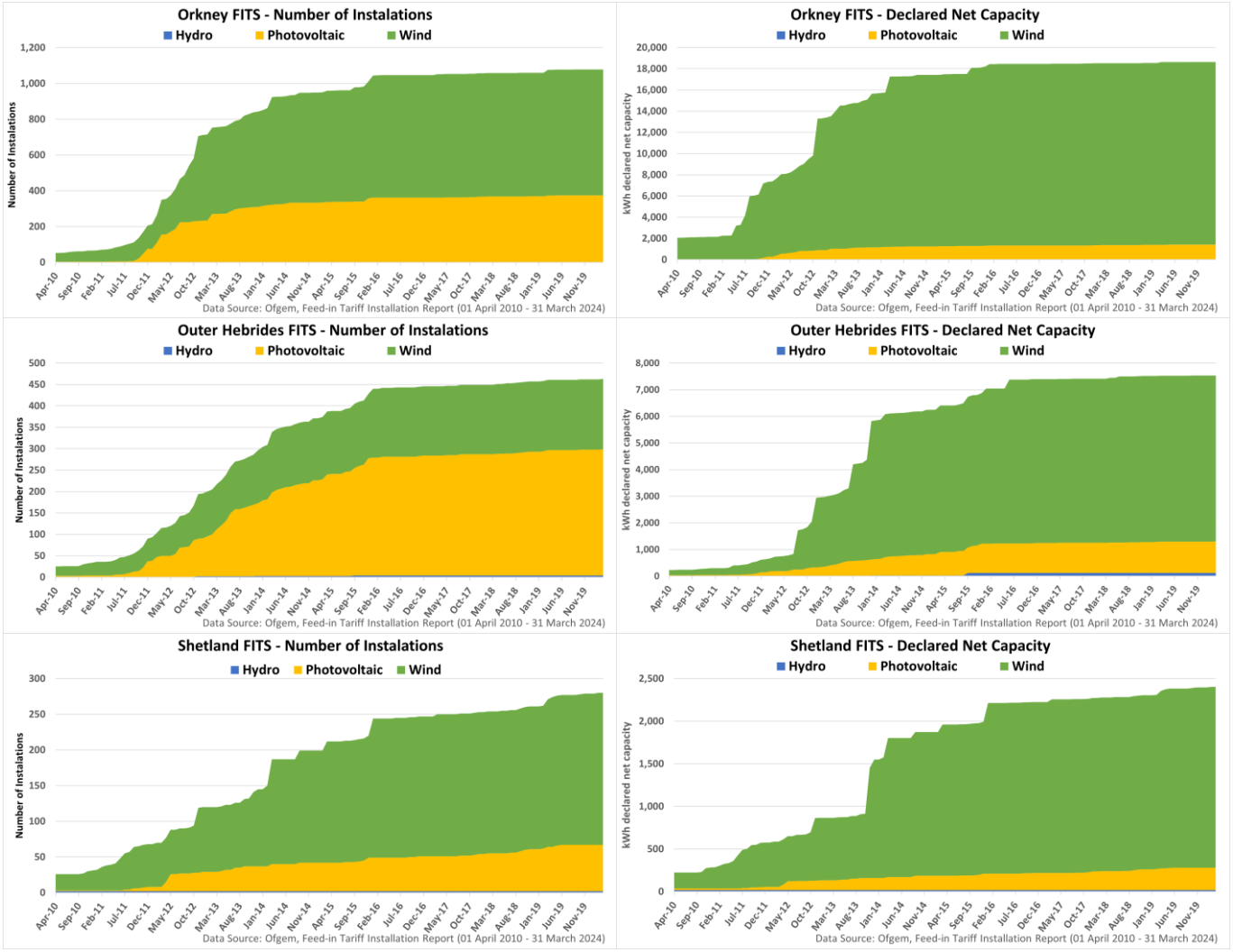
Figure 60 Wind installations – FITs tariffs (pence per kWh) 2009-2019



384. Uptake of FITS in Orkney was high from the outset (in terms of cumulative number of installations and installed capacity), with a rapid uptake prior to the first few rounds of tariff cuts (see Figure 61). Whilst the pattern of uptake appears similar for the Outer Hebrides and Shetland in Figure 61 it should be noted that the y-axis are different – and the cumulative number of FITS installations and declared capacity are considerably lower than Orkney. The lack of grid capacity and interconnector to the mainland has curtailed both large-scale and small scale renewable energy generation in Shetland and the Outer Hebrides, in particular. This means that despite attractive tariff rates in the early years of FITs, uptake was low in these two island groups.

385. The early uptake of FITs in Orkney means that a large number of Orcadian farmers, communities, businesses and households are still receiving these very high tariff rates – money that likely flows around the local economy, and supports the profitability of agricultural enterprises. In the next 10 years these FITS contracts will come to an end and some of the technology may already be starting to fail. Where FITs installations are nearing the end of their working life, and in order to repower outwith FITS many small turbines are likely to be replaced by larger installations that will require full planning permission (unlike the initial installations).

Figure 61 Number of FITS installations and declared net capacity installed (2010 – 2019)



386. Table 62 shows the total FITs installations by island group in 2024, split by technology (wind, PV, etc.) and type of installation (community, domestic, non-domestic commercial, non-domestic industrial), it is understood that for various reasons some farms, croft and community FITs installations are classed as 'domestic' meaning the community and commercial installations may be underestimates.

387. The Smart Export Guarantee (SEG)[208] was brought in as FITs closed and obligates some electricity suppliers[209] to pay small scale renewable generators (up to 5MW or 50kWh for micro combined heat and power) a tariff that varies by energy supplier[210]. These SEG tariffs may be less attractive to those repowering installations at the end of their FITs contract and advice on managing that

[208] Smart Export Guarantee (SEG) | Ofgem
[209] SEG Supplier List | Ofgem
[210] Smart Export Guarantee (SEG) Explained in 2024 (theecoexperts.co.uk)

transition will be required to manage expectations and encourage long-term small scale renewable energy generation.

Table 62 Number and declared net capacity (kWh) FITs installations, March 2024, by type of installation and technology

FITS	Outer Hebrides			Orkney Islands			Shetland Islands		
	Hydro	PV	Wind	Hydro	PV	Wind	Hydro	PV	Wind
Community									
Declared net capacity	4.0	68.6	3,757.0		25.0	4,521.5	16.0	30.2	81.0
Installations	1	7	17		1	14	1	2	12
Domestic									
Declared net capacity	8.8	966.1	1,049.3	11.0	1,340.2	4,576.7	2.5	220.1	1,313.2
Installations	1	270	119	1.0	367	595	1.0	62.0	184
Commercial									
Declared net capacity	106.0	146.3	1,070.1		33.8	8,013.2		12.0	228.1
Installations	2	18	24		5.0	93		1	16
Industrial									
Declared net capacity			357.0			120.0			499.0
Installations			4			2.0			1
Total net capacity	**118.8**	**1,181.0**	**6,233.4**	**11.0**	**1,398.9**	**17,231.4**	**18.5**	**262.4**	**2,121.3**
Total Installations	**4**	**295**	**164**	**1.0**	**373**	**704**	**2**	**65**	**213**

388. Figure 62 shows the relative density of FITs per 100 residents by data zone in 2024. This demonstrates the higher adoption of FITs in Orkney, in particular the Northern and Southern Isles. In Shetland, the number of installations per 100 people were higher in Northmavine, Yell and West Mainland, whilst in the Outer Hebrides there were higher densities of FITs installations per 100 people in North Uist and South Uist, compared to north of Lewis.

389. Whilst Figure 62 shows the relative number of FITs installations per capita, Figure 63 shows the declared installed capacity (kWh) through FITs in 2024. This provides a different lens that better reflects the relative earning capabilities of installations that can support farm and other businesses, or indeed provide income streams to households and communities. There was relatively low installed capacity per 100 people across much of Shetland and the Outer Hebrides, in contrast to the Northern Isles and South Isles in Orkney. During stakeholder engagement, the relative importance of such installations for some farms and communities was highlighted, especially those early adopters on high tariff rates.

Figure 62 FITS installations per 100 residents by 2011 data zones

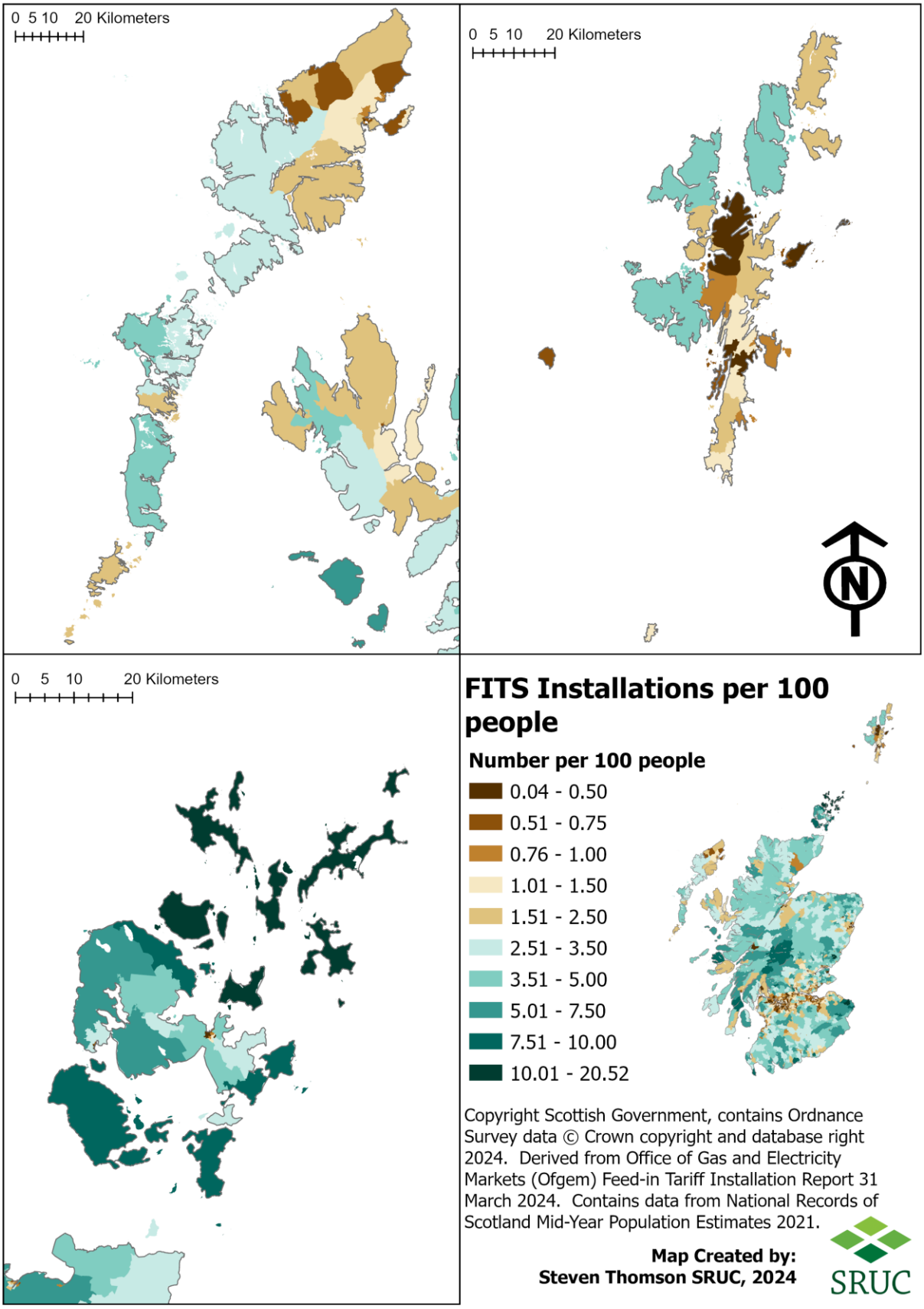
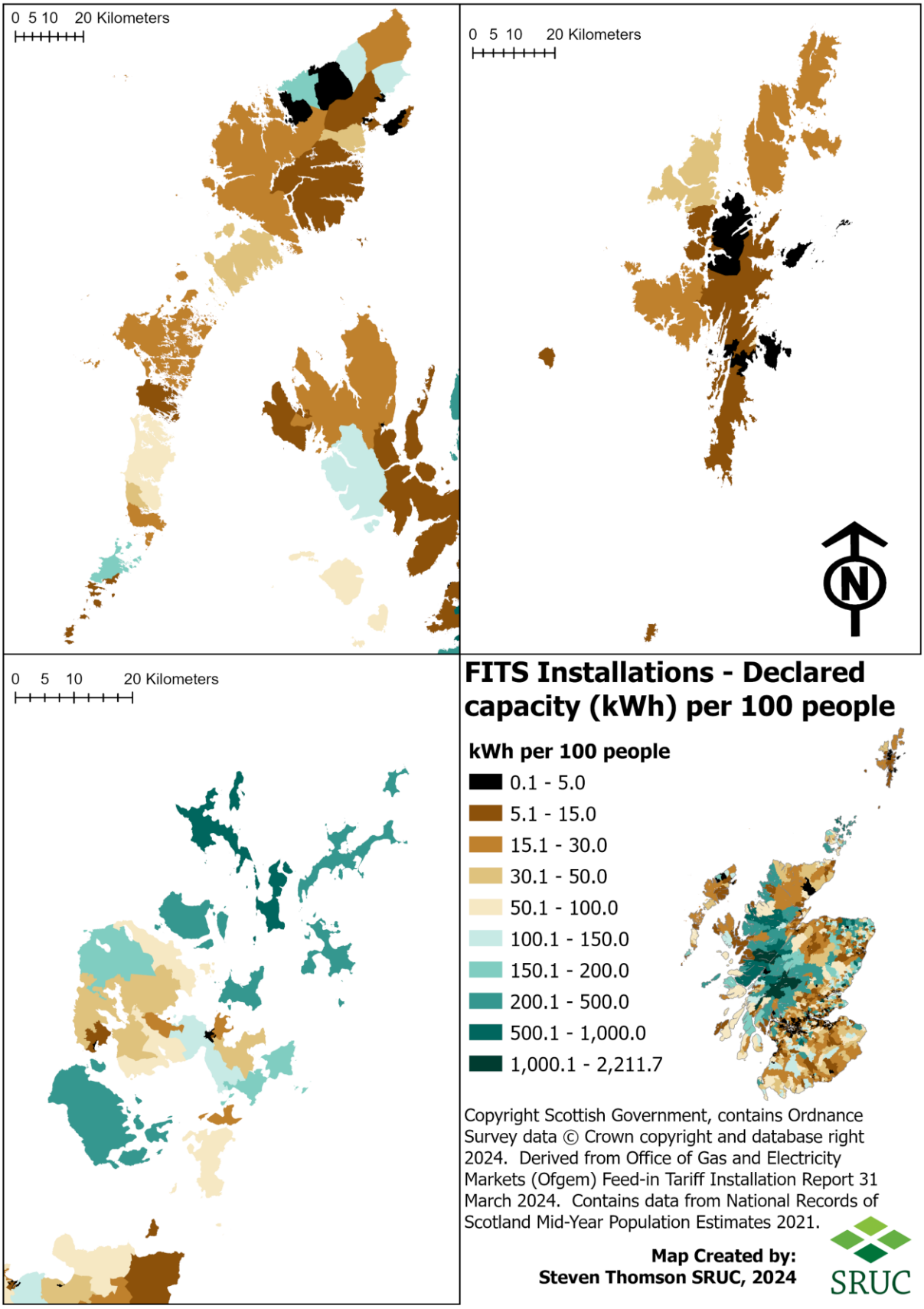


Figure 63 FITS installations and defined capacity per 100 residents by 2011 data zone



390. In addition to FITs installations, there is an increasing amount of larger scales renewable energy installations in operation, being constructed, within the planning system, or being scoped out. Where installations are not locally owned private or community owned installations (such as North Yell Development Council's Garth Wind Farm[211] or Lochcarnan Community Windfarm[212] in South Uist) there remains attractive annual rental income streams for landowners that can help underpin agricultural businesses and wider rural development. There is a growth in the number of solar installations in some localities in recent years.

391. For private and community energy developments renewable energy offers a long-term income stream that can be used to fund local development initiatives.

> "These turbines will generate over £20m of revenue directly for this community over the next twenty years, which will be invested in crofting, economic and social projects for the benefit of the whole community. In combination with the £10m Lochboisdale project, the restoration of Askernish Golf Course, the coastal defence projects, drainage work, development of the fishing, expanded operations at Grogarry Lodge and the numerous other small but important projects carried out by Stòras Uibhist over the past six years, the windfarm will transform these islands. This is just the beginning of what the community can achieve when ambition and aspiration is allowed to flourish." **Angus MacMillan, Chairman of Stòras Uibhist**[213]

Uist Wind

"Over £2 million in profit for the community over 22 years. This will mean:

- Jobs. NUDC will be able to employ project and development officers, who will then be able to work to bring in further funding
- A community benefit fund. This will be a central pot of money which could be accessed by local groups and businesses.
- Direct funding for NUDC-led projects, which can then bring in further benefits, employment, etc
- Match-funding. With many organisations only funding 50% of projects, the turbine revenue can help lever more funds"

Uist Wind - NORTH UIST DEVELOPMENT COMPANY (isleofnorthuist.com)

[211] Garth Wind Farm | North Yell

[212] Western Isles - Uist - News - Loch Carnan Community Windfarm Operating at Full Capacity (southuist.com)

[213] Western Isles - Uist - News - Loch Carnan Community Windfarm Operating at Full Capacity (southuist.com)

Figure 64 Operational or 'in-construction' renewable energy installations that require planning permission by installed capacity (MW), 2024