

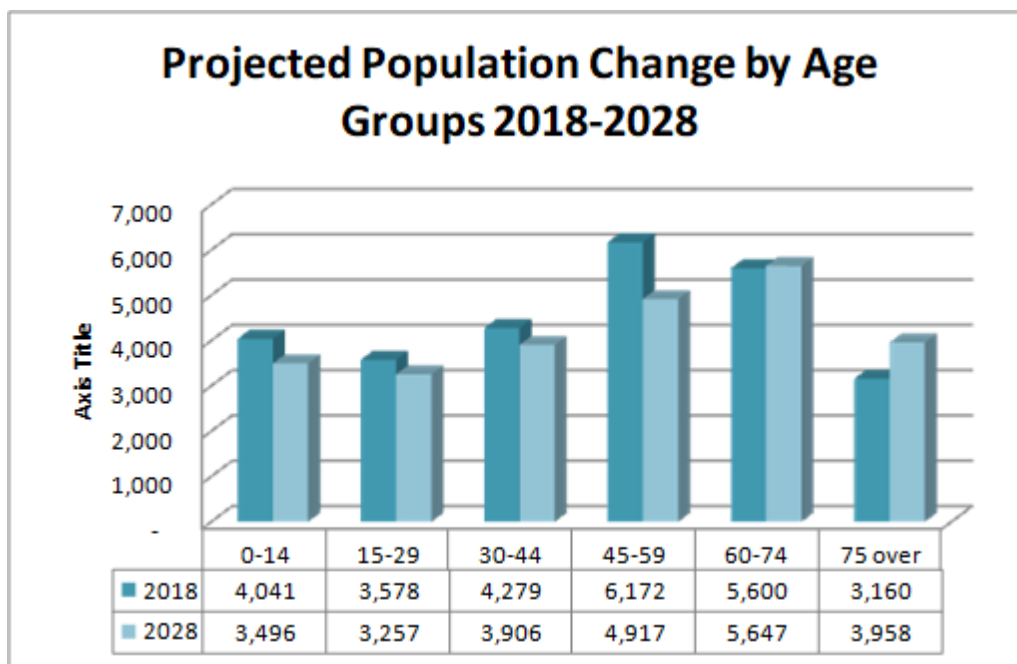
## Effect of Demographic Change on the Western Isles

### 1. SUMMARY

#### 1.1 Population Drop

Using updated population prediction, the islands are expecting to see a **6% drop** in population by 2028, one of the biggest population decreases in Scotland. Working age population is set to **decrease by 6%** by 2028 and in contrast the over 75s with the greatest levels of co-morbidity is set to **rise by 25%**. The population changes will result in a year-on-year reduction in the available workforce to nurse, care and attend to the most vulnerable of people whose numbers are increasing year on year. The Health and Social Care services are already feeling the effect of the changes in demographic change with high levels of vacancies and difficulty in recruitment in all areas and specialities as described in paragraph 1.4.

Chart 1



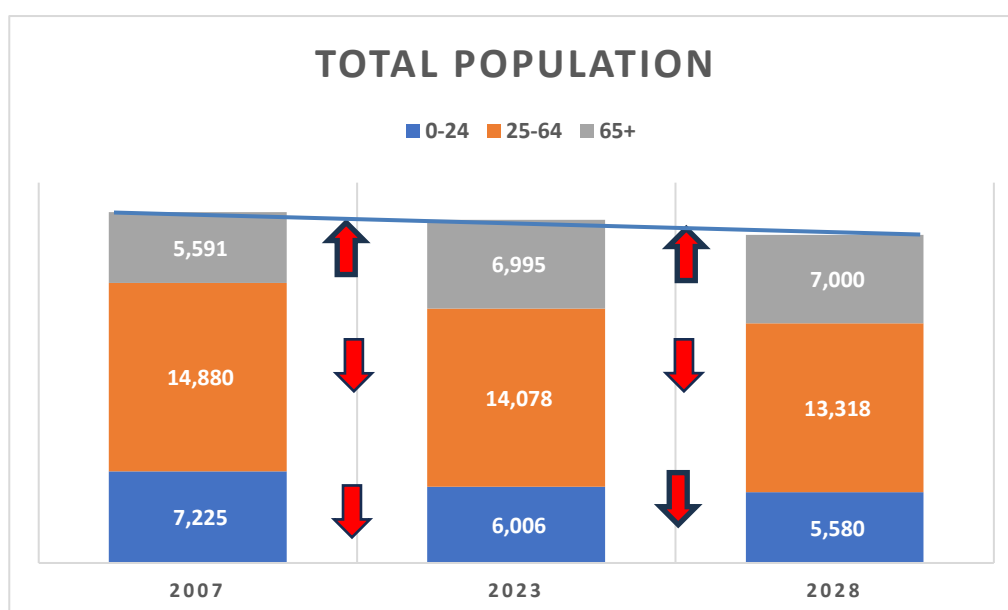
#### 1.2 Why the change now

For the last 15 years or so the total population has been reasonably stable in total numbers, however using GP List data across the islands we can see what is happening in individual age bands. The increasing elderly population of the islands are now dying naturally in larger numbers than children being born.

The National Records Scotland (NRS) projections for net migration and other changes are showing negative figures on average for the next 10 years. This is further compounded by outward migration being the younger age bracket, mostly school leavers going to university education and the inward migration often being people close to pensionable age or above. As shown in chart 2 with

the young decreasing and the old increasing you can start seeing the drop in population forecast. The island has been mostly replacing its population drop through the loss of births and the young migrating, with the people mostly over the age of retirement or in the middle age bracket. Net migration can now no longer keep up with negative natural change. This is why there is a predicted drop in population of 6% from 2018 – 2028, most of the drop occurring in the next 5 years. Without immediate intervention the drop in population is now lined up to occur as per NRS projections.

**Chart 2**



### 1.3. Cost of Care – Demographic Effect

The work undertaken for the Scottish Government, as part of the precursor to the Integrated Joint Boards using 2011 data, calculated a cost per patient, per age group, per area (using GP Practices). This showed that the costs are far higher to provide care for the over 65s than under 65s. The figures calculated have been updated to today's costs and recalculated totals are shown for the change in population in under 65s, 65-74 and the 75s and over. Table 1 shows there is a **£5.3m gap** over and above the inflation uplift which can be attributed to demographic changes over the last 12 years.

**Table 1**

	All Ages	-65	65-74	75+
<b>£ 2011 direct cost at 2023</b>	<b>£74,940,000</b>	<b>£36,570,000</b>	<b>£13,750,000</b>	<b>£24,620,000</b>
No. Population 2011 (GP Lists)	27,388	21,544	3,099	2,735
£ per person in 2011 at 2023	<b>£2,736</b>	<b>£1,697</b>	<b>£4,437</b>	<b>£9,002</b>
No. Population 2023 (GP Lists)	27,079	20,084	3,689	3,306
<b>Inc Cost</b>	<b>£80,219,538</b>	<b>£34,091,714</b>	<b>£16,367,780</b>	<b>£29,760,044</b>
Change in Cost after Inflation	<b>-£5,279,538</b>	<b>£2,478,286</b>	<b>-£2,617,780</b>	<b>-£5,140,044</b>
<b>% Change in Population</b>	<b>-1.1%</b>	<b>-6.8%</b>	<b>19.9%</b>	<b>19.0%</b>

## 1.4 Recruitment and Workforce Issues

With the falling work age demographics, the jobs that are overall affected by the reducing workforce on the islands are the semi-skilled jobs. These types of jobs for the Health and Social Care Partnership would be for example, Health Care Assistants, Social Care Assistants and Workers, Domestic and Catering staff. Although salary paid plays a part in recruiting, the biggest issue is there is not enough people of workforce age on the islands that are not employed already in the Western Isles. Our semiskilled work force are mostly women (94%) including Health and Social Care, so in fact we are reducing the available workforce to recruit from by half. To note both Health and Social Care must compete with the tourist industry as well as the retail industry, wind farms and fish farms.

The second group of workers that need to be recruited are the skilled workforce, i.e., Allied Health Professionals, GPs, Senior Social Workers and Medical Consultants, recruitment issues are more dependent on available trained workers. However, there is a lack of long-term rental and available housing properties on the Islands (not necessarily key worker housing). The lack of childcare for the under 3s, lack of after school clubs and school holiday facilities is affecting off Island recruitment amongst the skilled workforce. Under 3 childcare has further reduced from July 2023 with the closure of a Stornoway nursery. There are reducing school roles which has meant the closure of many rural schools which can also be off putting for potential inward migrating families that expect a school to be in walking distance for their young children.

Table 2 shows vacancy % on 30 June 2023 within NHS Western Isles and has a rag status to show where vacancies have increase as a % from 31 March 2019. To note the covid vaccination service is not included in the figures below as funded posts have not been confirmed by Scottish Government.

**Table 2**

Estab. Head	Estab. WTE	As of 30 June 2023 Service Area	Vac. Head	Vac WTE	% Vac Head	% Vac WTE	RAG 2019-2023
29	28.4	Medical Staffing	15	15.0	52%	53%	↑
100	77.4	Allied Health Professionals	12	10.7	12%	14%	↑
71	60.3	Dental	11	7.8	15%	13%	↑
280	233.1	Hospital (Acute) Nursing	15	12.7	5%	5%	↓
59	48.9	Community Hospital Nursing	9	5.2	15%	11%	↔
134	102.8	Community Nursing	13	9.0	10%	9%	↑
169	120.9	Facilities	20	10.9	12%	9%	↑
59	49.7	Technical Services	15	15.0	25%	30%	↑
155	139.1	Non Clinical Admin	19	16.4	12%	12%	↓
62	53.5	Mental Health	12	11.4	19%	21%	↑
69	56.2	Clinical Admin	12	8.0	17%	14%	↑
<b>1,187</b>	<b>970.3</b>	<b>Total</b>	<b>153</b>	<b>122.0</b>	<b>13%</b>	<b>13%</b>	↑

To note in Table 2 and Table 3 the vacancies are the total funded posts that are not filled with substantive post holders. They may have been out for advert a number of times, working with agency or bank as we cannot fill, but all show the vulnerabilities to the service both regards to workforce sustainability and in some cases pressures on the financial envelope by not being able to recruit. Table 3 shows the vacancies by the same service areas in 2019. To note there has been a higher increase in established posts in community nursing due to GP Practice nurses being TUPE over to the NHS and increased funding for Primary Care nurses and school nurses. There has also been changes in the way unscheduled care and out of hours is undertaken and there has been increased funding for mental health nurse provision.

**Table 3**

Estab. Head	Estab. WTE	As of 31 March 2019 Service Area	Vac. Head	Vac WTE	% Vac Head	% Vac WTE
27	25.2	Medical Staffing	7	7.0	26%	28%
91	72.2	Allied Health Professionals	5	3.2	5%	4%
73	60.3	Dental	4	4.0	5%	7%
299	236.1	Hospital (Acute) Nursing	19	11.3	6%	5%
55	46.6	Community Hospital Nursin	8	5.7	15%	12%
87	69.3	Community Nursing	7	4.6	8%	7%
170	113.6	Facilities	17	9.8	10%	9%
46	42.0	Medical Technical Services	10	8.4	22%	20%
168	146.1	Non Clinical Admin	22	16.5	13%	11%
54	46.7	Mental Health Nursing	4	3.0	7%	6%
56	41.2	Clinical Admin	6	3.3	11%	8%
<b>1,126</b>	<b>899.3</b>		<b>109</b>	<b>76.67</b>	<b>10%</b>	<b>9%</b>

Three of the demographic workforce indicators that were published for NHS Scotland were the median age of the workforce population for 31 March 2023. NHS Scotland was **44**, NHS Western Isles **48**. The % of the workforce that is over 54, NHS Scotland **24.4%**, NHS Western Isles **31.1%**. The % of woman in the workforce, NHS Scotland **78.8%**, NHS Western Isles **85%** although these figures vary between job families.

## 1.5. Demographic projections in last 5 years (NRS)

There has been a sizable drop in birthrate and a far higher negative natural change than projections produced by the Improvement Service in collaboration with the (NRS), (using 2018 data) were calculating as shown in Table 4.

**Table 4**

Year	Births	Deaths	Actual Natural Change	Projected Natural Change	Variation	Death Ratio
2018	206	356	-150	-146	-4	0.58
2019	200	349	-149	-135	-14	0.57
2020	183	355	-172	-116	-56	0.52
2021	181	392	-211	-132	-79	0.46
2022	182	434	-252	-145	-107	0.42
2023 5 mths	74	177	-103	-65	-38	0.42
	1,026	2,063	-1,037	-739	-298	

The 5-year average of births registered for the 5 years before 2018 was 229.5 so there has been a sustained drop in birth rates of nearly 21% in only 5 years.

Examining by Ward area the biggest above the projected reduction in natural changes in 2022 were North and South Uist, Point and North Stornoway.

To note the birth to death ratio in total was **0.42** for the Western Isles in both 2022 and 2023 to date, compared to the Scottish Average of **0.75**. **Without net positive inward migration and of the young and working age, the population needs will become unsustainable.**

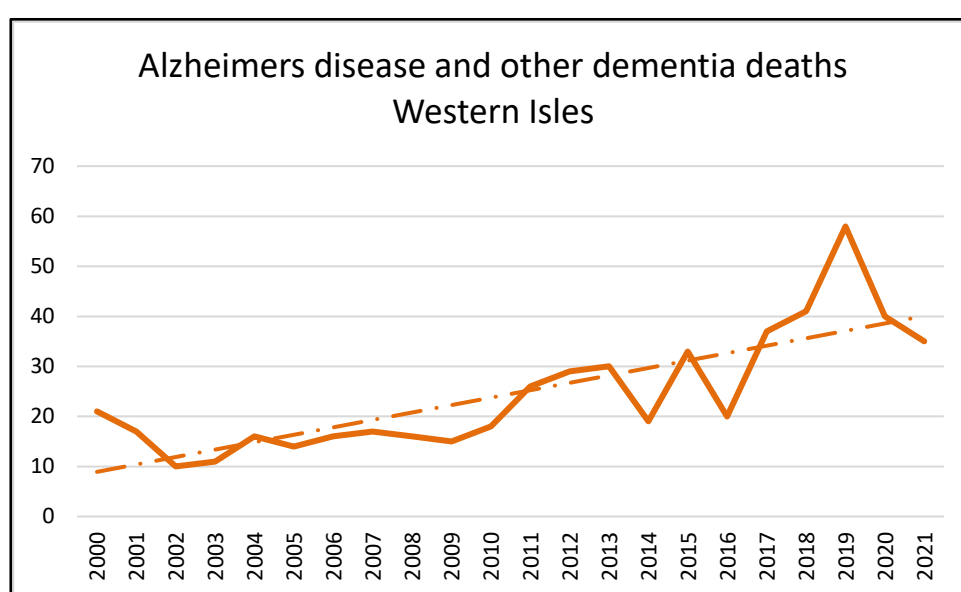
## 1.6 Other Effect of Demographic Change on the Western Isles

There are a number of effects on NHS Western Isles and the Western Isles of changing demographics, the financial one being picked up at 1.3, and recruitment at 1.4 as follows:

- Falling School Rolls – rolls have been falling for many years but due to the low birth rates from 2018 to 2023 the primary school roles will drop more rapidly, specifically if the birth rate does not recover. The knock-on effect on senior school rolls and on to young employment candidates will take another 5-10 years to work through the system.
- Lower passenger payloads on planes – as the population numbers drop this could affect the viability of plane links as this will increase subsidy on Public Service Obligation (PSO) routes and could affect the routes run without a PSO contract. This has already started becoming an issue in Uists, Barra and Benbecula.

- Higher Co-morbidities – With the aging population there are now more people that are requiring renal treatment, orthopaedic procedures, ophthalmology care, cardiac intervention, and oncology treatments for example. Not only does this increase the cost as shown in 1.3 it may mean more patients having to go off island depending on the type of procedure required. A health needs assessment is underway for the Island population which will allow precise strategic health planning. As an example of what is changing with regards to the increased 65+ population, Chart 3 shows the increase in Alzheimer and other dementia deaths over 20 years in the Western Isles.

**Chart 3**



## **2. SNAPSHOT BY ISLAND/AREA**

### **2.1 Summary**

It is useful to understand how each island or area's demographics are changing which may allow the Health Board to pinpoint areas where recruitment will become even more difficult, and that more capacity maybe required from certain services. It may also lead to understanding what could be undertaken to improve the population decline in certain geographical locations.

Data is taken from NRS (records are published a month in arrears) by post codes for birth and death data and a birth to death ratio is calculated. To put it into a greater perspective for comparison, table 5 shows the birth to death ratio for the last published year (2021) for all UK nations against the Western Isles (2022 ratio has dropped to 0.42). The birth to death ratio has been calculated for each Island/Area in paragraph 2.2 to 2.6.

**Table 5**

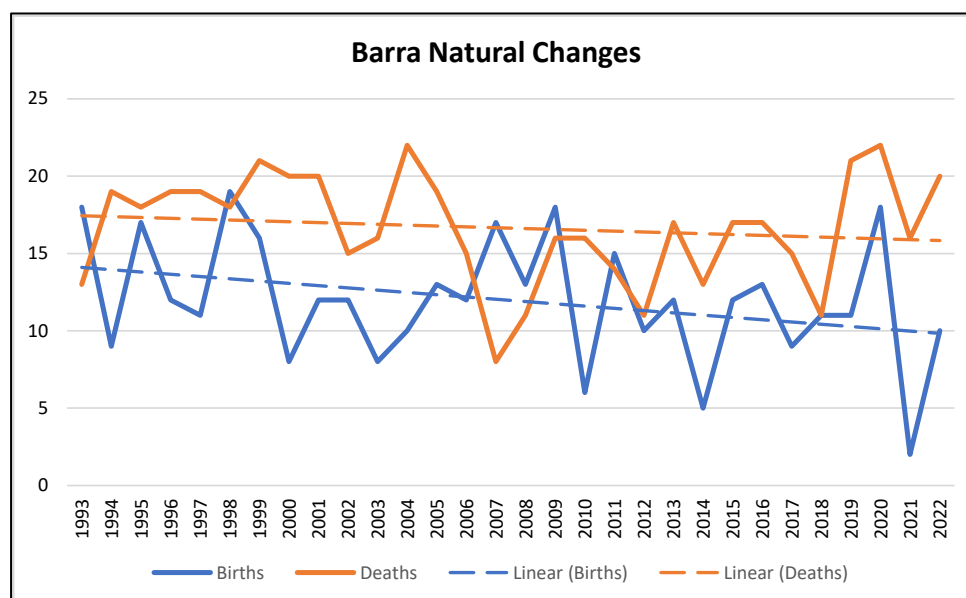
Birth to Death Ratio	England	Wales	N Ireland	Scotland	WI
<b>2021</b>	1.08	0.80	1.26	0.75	0.46
<b>2020</b>	1.03	0.77	1.18	0.73	0.52
<b>2019</b>	1.23	0.90	1.42	0.86	0.57
<b>2018</b>	1.24	0.91	1.43	0.88	0.58

The change in demographics is undertaken every 5-year from GP Lists which is used as a substitute for estimated census. There will be some temporary residences on the list, but this will be relatively small and normally effect work age population or the 24-64 population mostly due to the tourist season – October lists are used except for 2023 which is April.

## 2.2 Barra

As can be seen by Chart 4 below, due to the low numbers in Barra the actuals show in peaks and troughs, however looking at the trend lines you can see the gap widening between births and death but less than some other Island areas. The birth to death ratio for Barra for 2021 and 2022 were **0.13** and **0.50** respectively.

**Chart 4**



Using GP Lists as shown in Table 6 from the years 2007-2023 you can see the 0-4 are stable and while there has been a decrease in the 5-24 over the last 16 years numbers have increased in the last few years. However worryingly there has been a decrease in work age population over 15 years and a very big disproportional increase in the 65+ population, leading to higher needs for the 65+ but less opportunity to recruit Health and Social Care Workers, specifically in a remote location with low available housing. The increase in over 65+ will

also mean more of the population living with long term conditions, specifically as the biggest increase is in the over 75s category (48%).

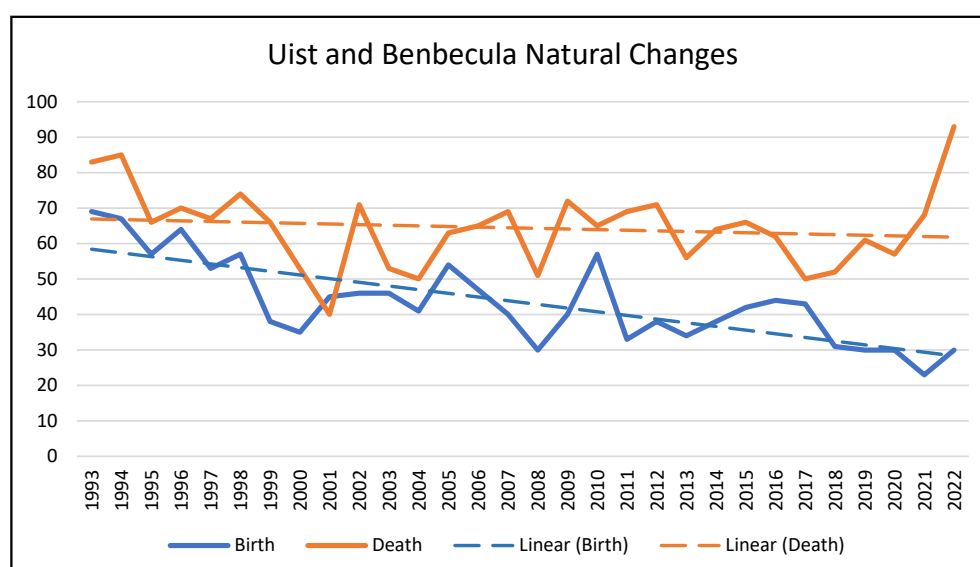
**Table 6**

	Oct-07	Oct-12	Oct-17	Apr-23	07-23	17-23
Barra	No.	No.	No.	No.	% Change	% Change
0-4	58	65	56	59	1.7%	5.4%
5-24	290	256	240	273	-5.9%	13.8%
25-64	653	623	607	635	-2.8%	4.6%
65+	218	269	297	310	42.2%	4.4%
<b>Total</b>	<b>1,219</b>	<b>1,213</b>	<b>1,200</b>	<b>1,277</b>	<b>4.8%</b>	<b>6.4%</b>

## 2.3 North Uist, South Uist and Benbecula

As can be seen in Chart 5 the gap between births and deaths has increased considerably over the last 30 years. The wider the gap between the linear birth and death lines the less births to deaths have occurred. There was a high jump in death in 2022 which hopefully will fall back in 2023. The birth to death ratios for Uists and Benbecula for 2021 and 2022 were **0.34** and **0.32** respectively.

**Chart 5**



Using GP Lists from the years 2007-2023 as shown in Table 7, you can see the large reduction in births, specifically in the last 5 years. There has been a sizable drop in the last 15-16 years in work age population but that has stabilised in the last 5 years. However, with the high increase in over 65+ there will be a higher need for care both in the home, community and hospital which will put a high pressure on those services with poor recruitment opportunities.



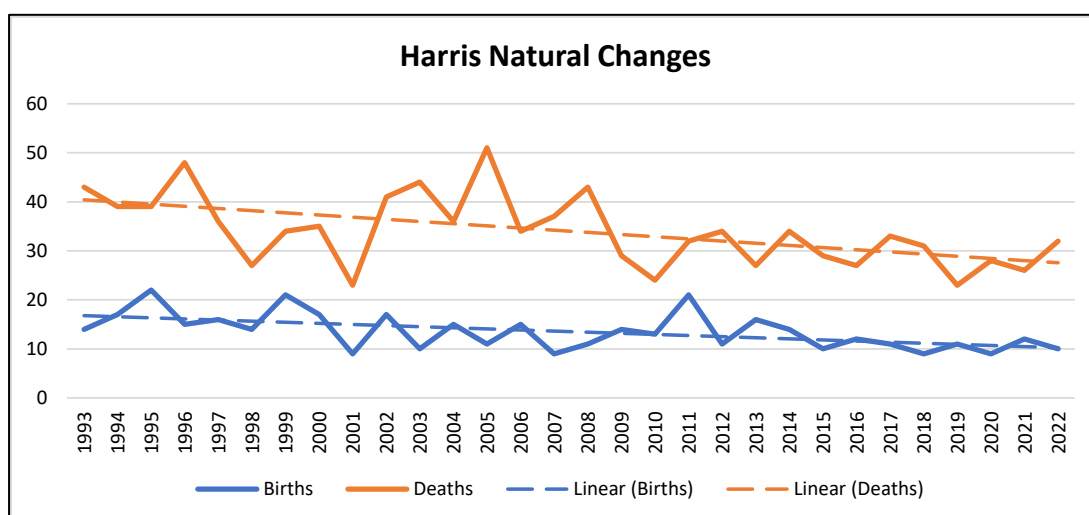
**Table 7**

	Oct-07	Oct-12	Oct-17	Apr-23	07-23	17-23
Uists and Benbecula No.	No.	No.	No.	No.	% Change	% Change
0-4	238	191	217	150	-37.0%	-30.9%
5-24	1,101	987	893	879	-20.2%	-1.6%
25-64	2,713	2,615	2,455	2,448	-9.8%	-0.3%
65+	896	1,000	1,146	1,254	40.0%	9.4%
<b>Total</b>	<b>4,948</b>	<b>4,793</b>	<b>4,711</b>	<b>4,731</b>	<b>-4.4%</b>	<b>0.4%</b>

## 2.4 North Harris, South Harris and Scalpay

As can be seen in Chart 6 the ratio between births and deaths has reduced slightly during the last 30 years, as Harris was starting from a very poor ratio to begin with. The birth to death ratios for 2021 and 2022 were **0.46** and **0.31** respectively.

**Chart 6**



Using GP Lists from the years 2007-2023 as shown in Table 8, you can see the large reduction in 0-4 years, specifically in the last 5 years, although the relative numbers are small it is sizable for the Harris population. The biggest drop is in South Harris, but this is not compensated by an increase in North Harris. Although overall births are dropping slightly the numbers do not correspond with the 0-4 on the Harris GP Lists. There may have been outward migration of some families with young children either off island or to another island in the Western Isles. Looking further into the data the drop commenced around 20/21 and continued into 21/22 and there has been no recovery to-date. The Leverhulme Memorial School roll has dropped from 28 in 2019 to 20 in 2023 which backs up the area population figures from GP Lists.

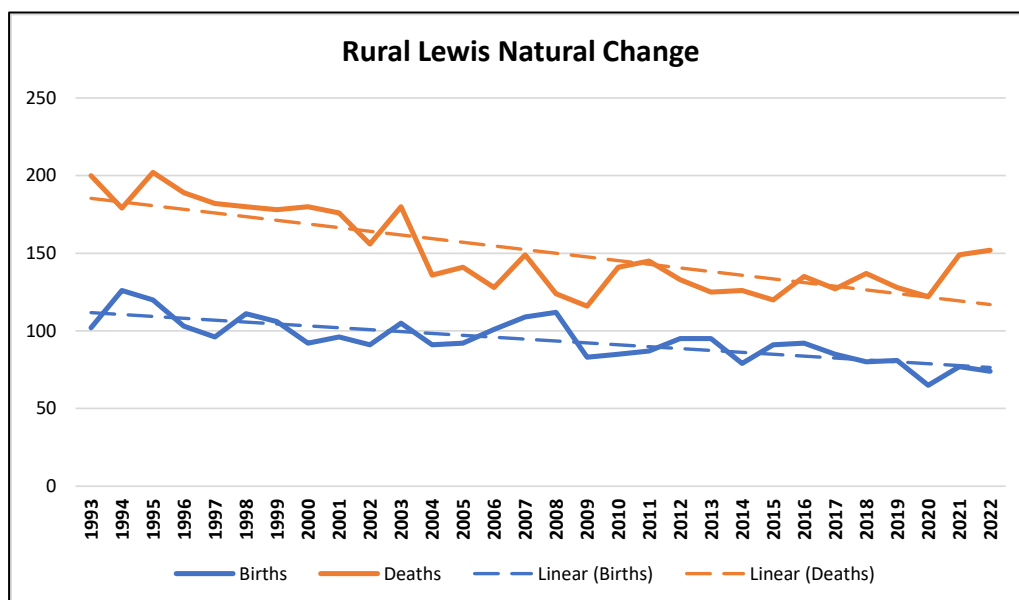
**Table 8**

	Oct-07	Oct-12	Oct-17	Apr-23	07-23	17-23
Harris	No.	No.	No.	No.	% Change	% Change
0-4	62	69	77	51	-17.7%	-33.8%
5-24	361	320	294	288	-20.2%	-2.0%
25-64	965	920	883	927	-3.9%	5.0%
65+	518	535	555	569	9.8%	2.5%
<b>Total</b>	<b>1,906</b>	<b>1,844</b>	<b>1,809</b>	<b>1,835</b>	<b>-3.7%</b>	<b>1.4%</b>

## 2.5 Rural Lewis

As can be seen in the Chart 7 the ratio between births and deaths has actually increased over the last 30 years. However, Rural Lewis is made up of various wards and the increase in birth to death ratio appears to be mostly in one area/ward, Broadbay. The birth to death ratios for the whole of rural Lewis for 2021 and 2022 were **0.52** and **0.49** respectively. Within Chart 7 is the Wards; Broadbay, Point, Uig and Carloway, Lochs and Westside and Ness, analysing further, the Broadbay ward (Tolsta, Back, Coll and Gress) has a far higher birth to death ratio than the other wards within Rural Lewis. The rate for Broadbay 2021 and 2022 were **0.76** and **0.83** respectively.

**Chart 7**



It is more difficult to break down the population for Rural Lewis as people from Point and Broadbay are registered at the Stornoway Practices. However, by removing Broadbay and Point out of the equation you can see clearly in Table 9, the changes in the population on the Westside of the Island and Lochs with the highest % reductions in work age population across the islands by far, again an ever increasing over 65s population. This means it will become difficult to recruit locally for Health and Social Care workers but also a reduction in

available workforce for Stornoway as many would have travelled into town for work.

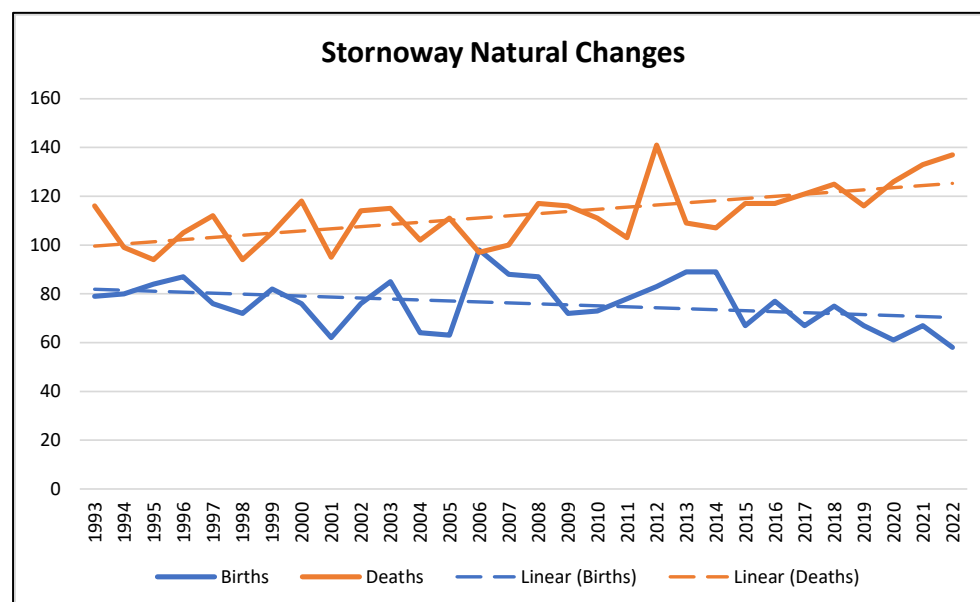
**Table 9**

	Oct-07	Oct-12	Oct-17	Apr-23	07-23	17-23
Westside/Lochs	No.	No.	No.	No.	% Change	% Change
0-4	207	198	196	166	-19.8%	-15.3%
5-24	1,088	987	888	872	-24.2%	-19.7%
25-64	2,879	2,751	2,639	2,689	-24.4%	-20.7%
65+	1,247	1,336	1,475	1,576	26.4%	6.8%
<b>Total</b>	<b>5,421</b>	<b>5,272</b>	<b>5,198</b>	<b>5,303</b>	<b>-2.2%</b>	<b>2.0%</b>

## 2.6 Stornoway – North and South Wards

As can be seen in Chart 8 the gap between births and deaths has increased considerably over the last 30 years within Stornoway North and South. The wider the gap between the linear birth and death lines the less births to deaths have occurred. Stornoway North (built up housing area) always had a higher birth to death ratio but that has dropped considerably in the last 3-4 years. Stornoway South had dropped too but not as much proportionately.

**Chart 8**



Although Table 10 includes the Broadbay and Point population you can clearly see that Stornoway is suffering from the same issue that the majority of the Island is, with reducing child and youth population and an ever-increasing elderly population. Although the workforce has not dropped considerably in Stornoway, if you take into consideration much of the Westside and Lochs areas (whose workforce age population has dropped considerable) will commute to work in Stornoway then there will be a gap between availability of workforce and requirement for staff in the Stornoway area. NHS Western Isles and Social

Care will have to compete with a much wider range of businesses including retail and catering trade than in rural areas of the Western Isles.

**Table 10**

	Oct-07	Oct-12	Oct-17	Apr-23	07-23	17-23
Stornoway	No.	No.	No.	No.	% Change	% Change
0-4	715	678	675	542	-24.2%	-19.7%
5-24	3,105	3,102	2,888	2,726	-12.2%	-5.6%
25-64	7,670	7,487	7,360	7,379	-3.8%	0.3%
65+	2,712	2,895	3,120	3,286	21.2%	5.3%
<b>Total</b>	<b>14,202</b>	<b>14,162</b>	<b>14,043</b>	<b>13,933</b>	<b>-1.9%</b>	<b>-0.8%</b>

### 3. CONCLUSIONS

- 3.1 If the depopulation and changes in demographics of the Islands continues unchecked then Health and Social Care Services will become unsustainable due to the increasing inability to recruit and the increase in requirements in terms of increasing acuity for complex treatment due to the aging workforce.
- 3.2 Assuming the population trends are accepted, with the consequential impact on workforce availability and service sustainability, the impact on service and patient public experience and expectation of services, needs a managed strategic approach.
- 3.3 Without significant inward migration of young families it is highly unlikely that birth rates will recover and reverse the low birth to death ratio. Across the islands since 2007, the category women aged 25-44 have dropped from 3,289 to 2,787, 15%. Many of the younger population of the islands go away for university education, marry and have families elsewhere. It is key that we can attract as many as possible of this population back to the Islands. In 21/22, 80 school leavers went into Higher Education which would predominantly mean leaving the islands to achieve degree education.
- 3.4 There are some areas of the Islands that are seeing lower birth rates, high death rates and increasing aging population than other parts. The area that is changing more rapidly than elsewhere, is the Uists and Benbecula. To reverse the depopulation trend that is heading in the next 5 years and more, you need new economic development, industry, housing, increased childcare provision, better transport infrastructure and employment for partners, to bring onto or back to the Islands, families in large numbers.
- 3.5 An important figure to note within the Western Isles workforce population, in the 16-64 age group, 16,449 (includes 15-year-olds from GP Lists), 2,400 (15%) are inactive and of that number 2,000 have indicated they do not want a job. There will be some long-term sickness within the figure, but a large proportion of this number would be earlier retirees, many who have migrated onto the

islands who have taken early retirement from their jobs and careers elsewhere in the UK and do not need to work for financial sustainability.

**END**