



Delta Pearl
Partners

Updating the Quarterly Retail Price Index for Norfolk Island - March Quarter, 2023 – Results

Prepared for the Norfolk Island Regional Council

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Headline Result

For the March 2023 (Q1) quarter:

- quarterly inflation is 0.4% (compared with 2.38% in Q4, and 4.39% in Q3 2022)
- annualised inflation is 10.54% (compared with 11.09% in Q4, and 9.50% in Q3 2022).

The Price Inflation Data Dashboard has been updated.

Executive Summary

This Report is prepared as part of a project to assist the Norfolk Island Regional Council (NIRC) recommence price inflation monitoring on Norfolk Island. The purpose of this report is to outline price inflation on Norfolk Island for the first quarter of 2023 (the March quarter), following the previous estimates provided for May, September, and December 2022.

In brief, and as noted in earlier reports, Norfolk Island collated price data and prepared its own RPI between 1990 and 2011. However, for various reasons, largely data issues,¹ measurement of the RPI paused in 2011. Some efforts to reinstate the RPI were undertaken by consulting firm Acil Allen between 2012 and 2018-19, including developing a basket of goods and expenditure weights, although this “draft RPI” work did not lead to official reinstatement of the RPI for Norfolk Island.

In late 2021/early 2022, NIRC commissioned DeltaPearl Partners to investigate reinstatement of the RPI for Norfolk Island. DeltaPearl Partners have built on the draft RPI work and continued to collate price data to provide:

- an estimate of inflation between 2012-2017 based on price data collated from various historical sources;
- an interim inflation measure for 2017-2022. We completed a price collection on Norfolk Island during 10-15 March 2022², and updated the same preliminary basket of goods as the 'Draft RPI' prepared by Acil Allen, in the absence of an updated household expenditure survey to provide a new basket of goods and expenditure weights.

We estimated inflation on Norfolk Island over the five years to February 2022 running at an annualised rate of 3.76%. There would have been higher and lower rates of inflation during this five-year period around this average that we were unable to measure precisely due to the lack of data. This average was calculated after having monitored prices in early March 2022 and comparing these prices to the last estimates taken in February 2017. The overall price increase over the five years to February 2022, weighted using the existing weighted basket of goods and services, was calculated as 18.79%.

Initially, for the first (Q1) exercise, we only had price data for 2017 and February 2022; therefore, the price increase for the February quarter was calculated on an annualised basis for the five-year period to Q1 February. We noted at this time that it was possible that most of the increase was experienced in the last few years (particularly post-COVID) but we could not measure this precisely to confirm. The higher estimates for subsequent quarters make it likely that this was the case.

¹ DeltaPearl Partners, 2021, "Measuring inflation on Norfolk Island: A general recap - Updated."

² For convenience and consistency, we have referred to the March 2022 data as February 2022 data.

During the course of 2022, we estimated inflation for Q2, Q3, and Q4, now Q1 2023 (the subject of this report) on the same basis (using the same basket of goods and expenditure weights and on-island price data collation) as the 2017-2022 exercise.³

In summary, the results of the Q2, Q3, and Q4 2022 estimations were as follows:

- Q2 2022: from February 2022 (Q1) to May 2022 (Q2), quarterly inflation was 3.02% and annualised inflation was 5.85%. The higher estimated annualised inflation rate for Q2 (5.85%) compared with the estimate for Q1 (3.76%) suggests that most of the inflation measurement for 2017-2022 was likely to have been experienced in the last few years of the period, post-COVID-19. Some of the largest increases were related to transportation, and to food and beverages and household contents, which, being imported to Norfolk, are influenced heavily by transportation/shipping costs.
- Q3 2022: to September 2022, quarterly inflation was 4.39% and annualised inflation was 9.50%. The largest increases related to food and beverages (particularly fruit and vegetables and dairy products), as well as transportation.
- Q4 2022: to December 2022,⁴ quarterly inflation was 2.38% and annualised inflation was 11.09%. The prices of dairy products and vegetables, which rose in Q3, did not continue to rise as rapidly, but other food and non-alcoholic beverage prices rose, as did alcohol prices. As in Q3, alcohol products have experienced very significant price rises owing to the reduced frequency of shipments to Norfolk and the need to transport alcohol via air freight rather than ship.

Thus, in summary, for the year of 2022 as a whole, the annual rate of inflation was 11.09%. It should be noted that 2022, particularly Q3 and Q4, were also periods of rising inflation in Australia and New Zealand (and around the world). Thus, the results for Norfolk Island align with worldwide trends.

Results - Prices and inflation, 1st Quarter 2023

For Q1 2023, we have determined that:

- **quarterly inflation is 0.4% (compared with 2.38% in Q4, and 4.39% in Q3 2022)**
- **annualised inflation is 10.54% (compared with 11.09% in Q4, and 9.50% in Q3 2022).**

Overall, the rate of growth of inflation has slowed slightly since the last quarter of 2022. Again, this aligns with trends in the US, and expected trends for Australia and New Zealand, which are yet to release their March quarter results.⁵

The table below provides a summary of the results to date by expenditure groups.

³ As detailed in earlier reports, in the first two measurements for Norfolk Island's RPI, we collected price data on NI in February 2022 (when the project commenced) followed by May 2022. To bring Norfolk Island into alignment with the quarters used for measurement by Australia and New Zealand,³ we shifted the third measurement of the RPI for Norfolk to September rather than August; thus, Q3 covers the four months of May to August as a one-off adjustment. Aligning with the quarters used for the Australian and NZ CPIs allows for greater comparability and will be more informative for Norfolk Island.

⁴ The 2022 annual inflation rate of 11.09% is for inflation through to December 2022. Previously, annual inflation rates were estimated through to February of each year. This change has been made to align Norfolk Island's reporting intervals with Australia and New Zealand's to improve comparability.

⁵ Australia will release its March quarter results on 26 April 2023, and New Zealand on 20 April.

Group	Group no.	Weight	Change Feb 2017 to Feb 2022	Change to May Quarter 2022	Change to September Quarter 2022	Change to December Quarter 2022	Change to March Quarter 2023
Food and non-alcoholic beverages	1	23.9%	19.23%	12.36%	14.11%	17.73%	17.42%
Tobacco and alcohol	2	6.8%	31.93%	3.55%	19.32%	24.29%	25.66%
Clothing and footwear	3	3.6%	9.76%	1.49%	8.93%	15.23%	17.88%
Housing	4	18.0%	27.14%	2.93%	1.94%	0.96%	0.00%
Household contents & services	5	8.9%	50.08%	9.25%	13.62%	13.33%	10.93%
Health	6	4.3%	15.13%	-0.67%	-4.41%	-4.75%	-5.73%
Transportation	7	12.1%	26.37%	8.15%	13.64%	14.36%	11.71%
Communication	8	3.1%	-4.51%	-0.45%	-0.20%	0.24%	0.48%
Recreation	9	10.7%	-13.42%	-0.58%	7.76%	10.99%	12.95%
Insurance services	10	8.6%	0.18%	0.03%	4.01%	4.00%	3.99%
All groups			18.79%	3.02%	4.39%	2.38%	0.40% (quarterly change)
			3.76%	5.85%	9.05%	11.09%)	10.54% (annualised quarterly change)

As the table indicates, there continue to be increases inflation in some subgroups, particularly tobacco and alcohol prices and clothing and footwear prices, as well as increases in the communication and recreation subgroups. However, they are offset by reductions in some health costs, and in transportation costs, in particular, airfares are a little cheaper than last quarter. Price rises for the household contents and services group have slowed as have those for the food and non-alcoholic beverages subgroup as a whole

1. Introduction

This report is prepared as part of a project to assist the Norfolk Island Regional Council (NIRC) recommence price inflation monitoring on Norfolk Island. The Norfolk Island version of the Australian consumer price index (CPI) is known as the retail price index (RPI).

Norfolk Island collated price data and prepared its own RPI between 1990 and 2011. However, for various reasons, largely data issues,⁶ measurement of the RPI paused in 2011. Some efforts to reinstate the RPI were undertaken by consulting firm Acil Allen between 2012 and 2018-19, including developing a basket of goods and expenditure weights, although this “draft RPI” work did not lead to official reinstatement of the RPI for Norfolk Island.

In late 2021/early 2022, NIRC commissioned DeltaPearl Partners to investigate reinstatement of the RPI for Norfolk Island. DeltaPearl Partners have built on the draft RPI work and continued to collate price data to provide:

- an estimate of inflation between 2012-2017 based on price data collated from various historical sources;
- an interim inflation measure for 2017-2022 based on estimating inflation for the February quarter 2022. This work was completed by undertaking a price collection on Norfolk Island during 10-15 March 2022, and updating the same preliminary basket of goods as the 'Draft RPI', which measured inflation up to 2017. We know that this approach aligns with the practice of other small island economies (see Case Study Report on Small Island Economies).
- subsequent quarterly updates during 2022 of the RPI for the May, September, and December quarters.

We have collected prices on 10 categories of goods and services: food, alcohol and tobacco, clothing, transport, communications, housing (including household utilities), household contents, health, recreation and insurances. A detailed list of the 250+ goods and services in these 10 categories is provided in the appendix. A spreadsheet contained the detailed data collected has been provided separately to NIRC.

We have provided NIRC with reports for 2012-2017, 2017-2022, and the four quarters of 2022 (February, May, September, and December. This report concerns the next update, which is for the 1st quarter of 2023, the March 2023 quarter.

As noted in earlier reports, the process that we followed to measure inflation is designed to enable development of an interim inflation measure without (and prior to) the possible development of a new household expenditure survey (HES) to update the basket and associated expenditure weightings. We have suggested to NIRC that a new updated HES is required for the future and NIRC is currently assessing how and when to undertake this.

⁶ DeltaPearl Partners, 2021, "Measuring inflation on Norfolk Island: A general recap - Updated."

2. Earlier measurements of inflation, 2017 - February 2022

2.1. Determining inflation for 2017 to February 2022

To measure inflation from 2017 to the present day, we completed a price collection on Norfolk Island during 10-15 March 2022, and updated the same preliminary basket of goods as the 'Draft RPI' which measured inflation up to 2017. This is the most straightforward approach to developing an ad interim inflation measure, and we know that this basket and the goods align with the practice of other small island economies (see Case Study Report on Small Island Economies), and that the weights used align roughly in terms of the importance given to food, transport and housing in those other economies. A spreadsheet containing the prices has been separately developed and will be provided to NIRC, including quantities to allow for future updates. This same exercise was then repeated in May, and then September 2022, and now for December 2022.

The data collection was aimed at updating the same basket from 2017 for continuity, subject to reviewing whether any items are no longer appropriate or require updating. Therefore, we collected prices on the following 10 categories of goods and services: food, alcohol and tobacco, clothing, transport, communications, housing (including household utilities), household contents, health, recreation, and insurances.

Based on the earlier work by Acil Allen, we have price data for the first half of 2017. As noted above, we collated data during March 2022; we have used the February 2017 data from the Acil Allen Draft RPI as it is from the same quarter of the year for comparable seasonality, and refer to it as February 2022 data for simplicity in the spreadsheet to maintain the same system for quarterly collection.

A detailed spreadsheet containing prices for February 2017 (collected for the Draft RPI by Acil Allen) and prices for the same goods and services in 2022 has been provided to NIRC for the 250+ prices collected that make up the 10 groups of goods. A spreadsheet developing the inflation index based on the prices and allocated expenditure weights will also be separately provided.

A summary of the index for the 10 groups of goods in the basket is shown below. The index shows how prices have changed relative to a value of 1.00 in the index reference period. An index of 1.10, for example, would mean that there has been a 10% increase in price since the index reference period.

The index from May 17 to February 2022 is backfilled based on the price data collated in March 2022, smoothed and annualised over the period 2017-2022.

3. Determining inflation for February 2022 to September 2022

NIRC's intention is to measure the RPI on a quarterly basis. The February 2022 data collection and report measured inflation for the first quarter of 2022.

In May 2022, we undertook the same price collection process to determine inflation between the first and second quarters of 2022.

The data collection process took place on-island over two weeks in the middle of May 2022. The data collection was aimed at updating the same basket as used in February 2022 for continuity. Therefore, we collected prices on the following 10 categories of goods and services: food, alcohol and tobacco, clothing, transport, communications, housing (including household utilities), household contents, health, recreation, and insurances.

This is the most straightforward approach to developing an ad interim inflation measure, and we know that this basket and the goods align with the practice of other small island economies (see Case Study Report on Small Island Economies), and that the weights used align roughly in terms of the importance given to food, transport and housing in those other economies.

A detailed spreadsheet containing prices for February 2017 (collected for the Draft RPI by Acil Allen) and prices for the same goods and services in February 2022 has been provided to NIRC for the 250+ prices collected that make up the 10 groups of goods. A spreadsheet developing the inflation index based on the prices and allocated expenditure weights has also been separately provided.

A summary of the index for the 10 groups of goods in the basket is shown in Section 4.1.

Q2: May Quarter

As we only had price data for 2017 and February 2022 initially, we smoothed the price increase on an annualised basis for this five-year period to Q1 February. We noted at this time that it was possible that most of the increase has been experienced in the last few years (particularly post-COVID), but we could not measure this precisely to confirm.

The result for May Q2 (i.e., for inflation from February to May) implied that this was likely to have been the case. We note that Australia's inflation rate to March 2022 was 2.1% for the quarter, giving an annualised rate of 5.1% for the preceding 12 months, slightly lower than Norfolk Island's annualised rate of 5.85%. For the June 2022 quarter in Australia, inflation rose 1.8% between the quarters, and the annualised rate of inflation (inflation over the 12 months to the June 2022 quarter) rose to 6.1%, driven by price rises for dwellings, petrol, and furniture in particular.

Q3, September Quarter

To bring Norfolk Island into alignment with the quarters used for measurement by Australia and New Zealand, we shifted the third measurement of the RPI for Norfolk to September rather than August; thus, the third inflation measurement for Norfolk Island covers four months rather than three as a one-off adjustment to ensure alignment. The Australian Consumer Price Index (CPI) is issued on a quarterly basis in March, June, September and December and the New Zealand CPI is collected during the same quarters. Aligning with the quarters used for the Australian and New Zealand CPIs allows for greater comparability and will be more informative for Norfolk Island.

Based on the price collation exercise on Norfolk Island, we determined that inflation for Q3 was 9.5% on an annualised quarterly basis, compared with 5.85% in Q2.

This quarter was also a period of rising inflation in Australia, with the most significant price rises in relation to dwellings, petrol, and furniture. During the September quarter, the annualised inflation of inflation for Australia was 7.3%, a rise over the previous quarter, though lower than Norfolk Island's 9.5%; however, Norfolk experienced price pressures due to shortages of some goods necessitating high freight costs, which did not affect Australia to the same extent.

Q4: December Quarter

During Q4, to bring Norfolk Island into alignment with the quarters used for measurement by Australia and New Zealand going forward, we shifted the RPI for Norfolk to September rather than August; thus, it covers the four months of May to August as a one-off adjustment to ensure alignment. Aligning with the quarters used for the Australian and New Zealand CPIs allows for greater comparability and will be more informative for Norfolk Island.

Based on the price collation exercise on Norfolk Island, we determined that inflation for Q4 was 11.09% compared with 9.50% in Q3. Based on the prices collected, we found that there were significant increases in prices in a number of areas, including food and non-alcohol beverages prices (with a small easing of pressure on the prices of dairy products and fruit and vegetables compared with the previous quarter, which was also the case on the Australian mainland); recreation costs, including magazines, exercise books, and airfares rose, and alcohol costs in particular, due to the need to utilize air freight rather than ships.

- alcohol - prices have increased quite significantly on Norfolk Island, which is largely due to the alcohol being transported by air freight not ship;

As for Q3, this was also a period of rising inflation in both Australia and New Zealand, as well as in other countries around the world. Australia's inflation rate during December was 7.8%, which is below Norfolk's rate; however, as noted, due to freight costs and its remoteness, there are additional cost pressures for Norfolk compared with the mainland of Australia.

4. Determining inflation for the March Quarter 2023 (Q1, 2023)

In commencing measurements for Norfolk Island's RPI, we collected price data on Norfolk Island in February 2022 (when the project commenced) followed by May 2022. Then, to bring Norfolk Island into alignment with the quarters used for measurement by Australia and New Zealand going forward, we shifted the third measurement of the RPI for Norfolk to September rather than August, which therefore covered an extra month as a one-off adjustment to ensure alignment, meaning that the fourth quarter was the December quarter. Aligning with the quarters used for the Australian and New Zealand CPIs allows for greater comparability and will be more informative for Norfolk Island.

Based on the price collation exercise on Norfolk Island, we have determined that inflation for Q1 2023 is as follows:

- quarterly inflation is 0.4% (compared with 2.38% in Q4, and 4.39% in Q3 2022)
- annualised inflation is 10.54% (compared with 11.09% in Q4, and 9.50% in Q3 2022).

For Norfolk Island, based on the prices collected, overall, the rate of growth of inflation has slowed slightly since the last quarter of 2022. Again, this aligns with trends in the US, and expected trends for Australia and New Zealand, which are yet to release their March quarter results.⁷

The table below provides a summary of the results to date by expenditure groups.

⁷ Australia will release its March quarter results on 26 April 2023, and New Zealand on 20 April.

Table 1: Price changes and inflation 2017-2023 Q1

Group	Group no.	Weight	Change Feb 2017 to Feb 2022	Change to May Quarter 2022	Change to September Quarter 2022	Change to December Quarter 2022	Change to March Quarter 2023
Food and non-alcoholic beverages	1	23.9%	19.23%	12.36%	14.11%	17.73%	17.42%
Tobacco and alcohol	2	6.8%	31.93%	3.55%	19.32%	24.29%	25.66%
Clothing and footwear	3	3.6%	9.76%	1.49%	8.93%	15.23%	17.88%
Housing	4	18.0%	27.14%	2.93%	1.94%	0.96%	0.00%
Household contents & services	5	8.9%	50.08%	9.25%	13.62%	13.33%	10.93%
Health	6	4.3%	15.13%	-0.67%	-4.41%	-4.75%	-5.73%
Transportation	7	12.1%	26.37%	8.15%	13.64%	14.36%	11.71%
Communication	8	3.1%	-4.51%	-0.45%	-0.20%	0.24%	0.48%
Recreation	9	10.7%	-13.42%	-0.58%	7.76%	10.99%	12.95%
Insurance services	10	8.6%	0.18%	0.03%	4.01%	4.00%	3.99%
All groups			18.79%	3.02%	4.39%	2.38%	0.40% (quarterly change)
			3.76%	5.85%	9.05%	11.09%)	10.54% (annualised quarterly change)

4.1. RPI, 2012-2023 (Q1)

Below we present the retail price index for the period from 2011 (when the official RPI ceased) to March 2023. The index for the period up to February 2017 is based on the data collated by Acil Allen on prices and price adjustments on a quarterly basis, using May 2012 as the base year. The index from February 2017 to February 2022 is based on the price data collated in March 2022, smoothed and annualised over the period from 2017-2022. The index for May 2022 is based on the May and February data collections. The index for September 2022 (noting the shift to September from August to align with the Australian and NZ CPIs) is based on the data collection during September, and the indexes for December 2022 and March 2023 are based on the price collection exercise during December 2022 and March 2023.

Table 2: Updated RPI for Norfolk, 2011-2023 (Q1)

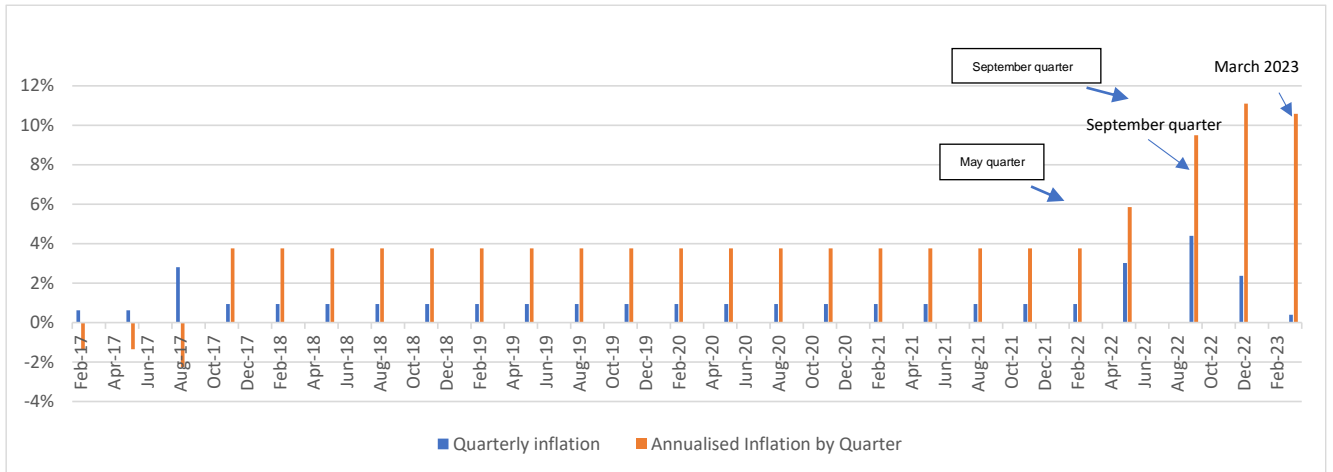
Group	Group number	Group Weight	May-12	Aug-12	Nov-12	Feb-13	May-13	Aug-13	Nov-13	Feb-14	May-14	Aug-14	Nov-14	Feb-15	May-15	Aug-15	Nov-15
Food and non-alcoholic beverages	1	23.9%	1.00	1.00	1.00	1.02	1.02	1.02	1.00	1.01	1.00	1.01	1.00	1.02	1.01	1.00	1.00
Tobacco and alcohol	2	6.8%	1.00	1.00	1.00	1.00	0.96	1.00	1.00	1.01	1.00	1.01	1.00	1.00	1.01	1.03	1.02
Clothing and footwear	3	3.6%	1.00	1.00	1.00	1.03	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00
Housing	4	18.0%	1.00	1.01	1.00	1.02	0.98	1.00	0.99	1.01	0.99	1.02	1.00	1.00	1.00	1.00	1.03
Household contents and services	5	8.9%	1.00	1.00	1.00	1.01	1.01	1.07	1.00	1.01	1.00	1.01	1.00	1.00	1.04	1.00	1.00
Health	6	4.3%	1.00	1.00	1.00	1.10	1.00	1.01	0.99	1.02	1.00	0.97	1.00	1.01	1.00	1.00	1.00
Transportation	7	12.1%	1.00	1.03	1.00	0.99	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.00	1.00	0.98	0.98
Communication	8	3.1%	1.00	1.00	1.00	1.01	1.00	1.48	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Recreation	9	10.7%	1.00	1.00	1.00	1.09	1.00	1.01	1.00	1.11	1.00	1.04	1.00	1.00	1.00	0.99	1.01
Insurance services	10	8.6%	1.00	1.00	1.00	1.60	1.00	1.00	1.00	1.00	1.32	1.00	1.00	1.02	1.00	1.00	1.00
All Groups			1.00	1.01	1.00	1.08	1.00	1.03	1.00	1.02	1.03	1.01	1.00	1.01	1.01	1.00	1.01

Group	Group no.	Group Weight	Feb-16	May-16	Aug-16	Nov-16	Feb-17	May-17	Aug-17	Nov-17	Feb-18	May-18	Aug-18	Nov-18
Food and non-alcoholic beverages	1	23.9%	0.99	1.00	1.08	1.00	1.02	0.99	1.02	1.03	1.04	1.05	1.07	1.08
Tobacco and alcohol	2	6.8%	0.98	1.00	1.00	0.99	1.00	1.03	1.05	1.06	1.08	1.09	1.11	1.12
Clothing and footwear	3	3.6%	1.03	1.00	1.01	1.18	1.00	1.01	1.01	1.01	1.02	1.02	1.03	1.03
Housing	4	18.0%	1.31	1.00	0.81	1.12	1.00	1.00	1.05	1.07	1.08	1.09	1.10	1.11
Household contents and services	5	8.9%	0.99	1.00	1.02	1.00	1.01	1.00	1.06	1.08	1.11	1.13	1.16	1.18
Health	6	4.3%	1.09	1.00	0.40	1.01	1.01	0.99	1.02	1.02	1.03	1.04	1.05	1.06
Transportation	7	12.1%	0.92	1.00	1.00	1.01	1.00	0.98	1.01	1.02	1.04	1.05	1.07	1.08
Communication	8	3.1%	1.00	1.00	1.13	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.98
Recreation	9	10.7%	0.97	1.00	1.03	0.98	1.00	0.78	0.80	0.80	0.81	0.81	0.81	0.82
Insurance services	10	8.6%	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
All Groups			1.04	1.00	0.97	1.03	1.01	0.98	1.00	1.01	1.03	1.04	1.05	1.06

Group	Group no.	Group Weight	Feb-19	May-19	Aug-19	Nov-19	Feb-20	May-20	Aug-20	Nov-20	Feb-21	May-21	Aug-21	Nov-21	Feb-22	May-22	Sept-22	Dec-22	Mar-23
Food and non-alcoholic beverages	1	23.9%	1.09	1.10	1.11	1.12	1.13	1.14	1.15	1.16	1.17	1.18	1.19	1.21	1.22	1.33	1.36	1.42	1.43
Tobacco and alcohol	2	6.8%	1.14	1.15	1.17	1.18	1.20	1.21	1.23	1.24	1.26	1.27	1.29	1.30	1.32	1.32	1.54	1.62	1.66
Clothing and footwear	3	3.6%	1.04	1.04	1.05	1.05	1.06	1.06	1.07	1.07	1.08	1.08	1.09	1.09	1.09	1.10	1.18	1.26	1.29
Housing	4	18.0%	1.13	1.14	1.15	1.16	1.17	1.19	1.20	1.21	1.22	1.24	1.25	1.26	1.27	1.27	1.27	1.27	1.27
Household contents and services	5	8.9%	1.21	1.24	1.26	1.29	1.31	1.34	1.36	1.39	1.42	1.44	1.47	1.49	1.52	1.57	1.67	1.69	1.68
Health	6	4.3%	1.07	1.07	1.08	1.09	1.10	1.11	1.12	1.12	1.13	1.14	1.15	1.16	1.17	1.13	1.10	1.10	1.10
Transportation	7	12.1%	1.09	1.11	1.12	1.14	1.15	1.17	1.18	1.19	1.21	1.22	1.24	1.25	1.26	1.32	1.40	1.43	1.41
Communication	8	3.1%	0.98	0.98	0.98	0.98	0.97	0.97	0.97	0.97	0.96	0.96	0.96	0.96	0.95	0.96	0.96	0.96	0.96
Recreation	9	10.7%	0.82	0.82	0.83	0.83	0.84	0.84	0.84	0.85	0.85	0.86	0.86	0.86	0.87	0.85	0.93	0.96	0.98
Insurance services	10	8.6%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.04
All Groups			1.07	1.08	1.09	1.10	1.11	1.12	1.13	1.14	1.15	1.16	1.17	1.18	1.20	1.23	1.29	1.32	1.32

A graphical representation of quarterly and annual inflation between 2017 and the first quarter of 2023 is provided below.

Figure 1: Quarterly and Annualised Quarterly Inflation, Norfolk Island 2017 - Q1 2023 (March)



Appendix 1: Pricing - data collation process, assumptions, and caveats

Below we list the individual goods and services that were used in the last basket of goods, developed in the Draft RPI in 2018. Each of these goods was priced and expenditure weights were developed.

The locations from which prices were collected include:

- Liquor Bond
- Foodland
- P&R Groceries
- Trading Post Newsagent
- Burnt Pine Pharmacy
- Slick and Sons (butcher and deli)
- Clothing stores - Focus Fashions, Max's, Ross's, and Norfolk Emporium (school uniforms)
- Petrol and service stations - Cascade Motor Repairs, Paw Paws Garage, Central Station
- Building and home goods suppliers - Norfolk Island Building Supplies (NIBS), Christian Bailey's, Pete's Place (smaller appliances)
- Bakery in Foodland mall
- Norfolk Telecom
- Customer Care, NIRC
- Nadine Murray, Norfolk hospital
- Dentist
- Vet (Candice Knobbs)
- Banyan childcare
- Norfolk Island school (principal, school canteen menu)
- Hairdresser (Wilde Rose)
- Electrician, Plumber
- Home support services for the elderly
- Optometrist (John Kelly)
- Sport and recreation clubs - bowls club, golf club, rugby, and netball club members

It should be noted that in some cases, we have made assumptions to determine prices that were not available, or to make prices comparable when goods were available in different quantities between 2017 and 2022.

For instance, some products were not available - black and gold rice was priced in 2017 but was not available on the island in 2022. Therefore, we imputed the difference in prices based on the percentage change for a similar substitute product, in this case, Sun Rice. Another example was Saos biscuits not being available in 2022, and we substituted a different brand of savoury crackers. There were other examples of products not being available in the same quantity priced in 2017. For instance, the 2017 toilet paper price was based on 4 rolls; in 2022, the smallest size available was 16

rolls. We therefore imputed the price rise based on the percentage change in paper towel prices, given that simply quartering the 2022 price (16 rolls / 4 rolls) would not have given an accurate price due to buying in bulk leading to lower prices per roll.

Where prices involved subsidies, e.g. childcare and home support, we have adopted the subsidised price (i.e. after the subsidy) as recommended by the ABS, and made reasonable assumptions regarding the proportion of people subsidised. For instance, in the case of child-care, we were informed that the majority of parents received 50% to 95% of the cost of childcare (\$78 per day pre-subsidy) back in subsidies. However, the child-minding centre could not give us more than a rough estimate due to privacy issues. Therefore, in the absence of other information, we assumed that 50% of people received a 50% subsidy and the other 50% received a 95% subsidy. Child-care costs remained well above those in 2017 (\$220/per term) even after this generous allowance of the subsidy. We assumed also that the 2017 price was subsidised and determined a price per day for comparability based on a child attending 5 days per week for a 10 week term. For medical costs, as we were informed by the hospital that all patients with Medicare cards were bulk billed, we have assumed no gaps in payments, which appears to be the same assumption made in 2017.

In some cases, Norfolk Islanders may have been able to purchase certain products more cheaply online - e.g. electrical appliances, TVs, and even groceries (via Amazon and catch.com). We have not taken this into account in this exercise because of uncertainty concerning how many consumers were accessing lower prices in this way and what the prices were in this situation. The majority of prices are on-island prices - the only exception is Triumph ladies underwear, which was not available on the island and we were informed would be purchased online. Children's clothing is also not available on the island - we priced school uniforms for children in line with the Acil Allen report.

Moreover, we only collected prices in one month, March 2022. For simplicity, we have assumed that these prices would also apply in February 2022, as the quarterly data collation is for the February quarter, then May, then August, and November from 2011 onwards. We have also disregarded the May and August 2017 data collected by Acil Allen for the earlier Draft RPI due to what appear to be data measurement issues influencing the results.

It should also be noted that for the long-term historical data series, four data sources are utilised: 1) official RPI 1991-2011; (2) Acil Allen data 2011-2017; (3) 2017-2021 - backfilled data, based on the prices collated in March 2022, smoothed and annualized over the five-year period by DPP; and March 2022 - price collation on Norfolk by DPP.

Group 1: Food and non-alcoholic drinks

Bread - white sliced
Bread - wholemeal sliced
Bread - 8 grain slice
Cake - lamington/sponge
Chelsea fruit bun
Mudcake
Scotch fingers - Arnott's
Saos - Arnott's
Cornflakes - Kellogg's
Nutri Grain
Weetbix - Sanitarium
Muesli - Cerola
Oats - uncle toby's quick pack
Noodles - Maggi 2 minute range
Pasta - san remo
Rice long grain - sun

Rice long grain - black & gold
Pork chops - loin
Topside roast
Beef mince
Corned beef
lamb chops - loin
Cockerill frozen skinless chicken pieces - thigh
Cockerill frozen skinless chicken pieces - breast
Ham - Hans leg ham
Bacon - deli
Sausages - fresh
Devon - deli sliced
Trumpeter
Canned salmon - Ally, pink tin
Canned tuna - black and gold tin
Canned smoked oysters - John West
Milk - anchor full cream packet
Milk UHT - anchor full cream
Milk - condensed sweetened - Nestle
Meadow fresh milk
Butter - Anchor
Camembert cheese - Kraft
Cheese - Mainland range
Thickened cream - Anchor
Yoghurt - ski range
Potatoes
Onions
Lettuce
Tomatoes
Carrots
Cucumber
Kumera
Bananas
Dried peas - Birds eye packet
Frozen chips - Wattie's
Frozen peas - Wattie's
Canned sliced beetroot - Wattie's
Canned corn - Wattie's
Canned sliced mushroom - Edgell
Canned fruit salad - Wattie's
Canned pineapple - golden circle
Dried sultanas - sanitarium
Prunes - Angus Park
Dried apricots - sanitarium
Just juice carton
Fresh Up juice
Raro drink powder
Coca Cola can

Cordial - Cottee range
Ice Cream - Tip Top
Liquorice allsorts - Pascalls range
Marshmallows - Pascalls range
Barley sugar - Pascall range
Cherry ripe
Crunchie
Cadbury chocolate
Eggs
Margarine - meadow Lea
Cooking oil - Meadow Lea
Sugar - Chelsea polypak
Marmalade - sweet orange Cottee
Honey - Sanitarium
Vegemite
Mayonnaise - Praise
Peanut butter - Kraft
Soy Sauce - Kikkoman
Tomato sauce - Wattie's tin
Tea - Lanchoo bag
instant coffee - Nescafe
Milo
Cooking stock - continental range
Plain flour - white wings
Plain flour - black & gold
Self-raising flour - white wings
Self-raising flour - black & gold
Norfolk Blue - Rib fillet
Norfolk Blue - Soup du Jour
Barney Duffy's - Rib fillet
Barney Duffy's - Soup du Jour
Wood fire - Pizza - Medium Australian
Chook shop - Barbequed pizza
The Olive - BLT
The Olive - regular flat white
meat pie
sausage roll
roll chicken with salad filling
School canteen - hotdog
School canteen - toastie - two fillings

Group 2: alcohol and tobacco

Toohey's Draught cans
Victoria Bitter cans
Hahn Premium Light bottles
Houghton's White Burgundy
Cask wine - Stanley Mozelle/Riesling
Black Douglas Whiskey

Bundaberg Rum
Jim Beam white label
St Agnes Brandy
Cigarettes - Benson and hedges 200/25's

Group 3: Clothing

Bisley dress slacks
Bisley long sleeve business shirt
Bisley cotton work trousers
Bisley cotton work shorts
Bisley canvas work shorts
Bisley short sleeve cotton work shirt
Bisley long sleeve cotton work shirt
Label One polo shirt
Huski shorts range
Hole proof casual socks
Bonds athletic singlet
Hole proof hero hipster underwear
Woolmark classic cardigan
New cover pants
Gerry Webber t shirt
Gerry Webber jeans
Triumph support bra
Triumph Hikini
Norfolk Island Central School - navy blue polo
Norfolk Island Central School - Sports polo
Norfolk Island Central School - Boys grey shorts
Norfolk Island Central School - Girls navy shorts
Norfolk Island Central School - Blacks sports shorts
Norfolk Island Central School - Track pants
Norfolk Island Central School - Fleecy Jacket
Nike air Pegasus men's senior
Redback steel cap bobcat boots
Reiker black leather lace-up
Nike air Pegasus women's senior
Reiker ladies court
Nike air Pegasus juniors

Group 4: Transport

Petrol
Petrol
Servicing of Vehicle - Labour
Vehicle Repair - Labour
Lubricating Oil, Castrol XL
Tubeless Tyre, Dunlop - 175/70R13
Battery, NS40Z
Driver's License

Registration of Motor Car

Group 5: Communications

Stamps Local

Stamps Australia

Stamps New Zealand

Telephone Rental

Norfolk internet service

Overseas calls to Australia

Group 6: Housing and household utilities

Rent

Electricity

Group 7: Household maintenance and contents

Double Bed Mattress

Bath Towel

Washing Machine 750 - EV004

Chest Freezer, Westinghouse EV 301, 150 lt.

Refrigerator, EV087

Electronic Iron, Sunbeam Pro-Steam

Paint - Wattyl Solargard, Gloss White

Paint Brush, Craftsman, bristle 75mm

Bolts, 100mm x 10mm, #ZI 037

Pliers, Stanley 250mm, Multi-Grip #SW 207A

Mineral turps

Araldite

Knobs Spartan passage set

Chux superwipes, J&J regular

Laundry powder - Drive

Laundry powder - Cold power

Softener - Cuddly Ultra

Dishwashing liquid - Palmolive

Disinfectant - Pine-O-Clean

Toilet cleaner - Harpic heavy duty

Shampoo - Sunsilk, bottle

Annie's: Lipstick, Innoxa, Extra Moisture

Mascara, Innoxa

Razor Blades, Gillette

Moisturiser - Nivea

Palmolive Soap - 125gm

Tampon, Carefree Regular

Tooth Paste, Colgate's Regular, tube

Toilet Paper - Sorbent

Baby Powder, Johnson & Johnson, Bottle

Bandaid Plastic Strips, J & J. packet

Facial Tissues- Kleenex

Batteries AA - Ever ready
Fire starters - little lucifers
Insecticides- Mortein
Gladwrap
Light Bulb - black & gold 14W
Paper Towel - Handee
Child Minding, Banyan Park
Hair cut - men
Hair cut - women
Shampoo and Set
Permanent Wave, short hair
Plumbing- Norfolk Plumbing & Gas
Electrical - Middlegate
Household Help (Care Norfolk)
Lawn Mowing

Group 8: Health

General Practitioner - basic consultation
Specialist visit (Ophthalmologist)
Public Ward Charges
Optometrist - John Kelly Optometrist, Initial Consultation
Dental Charges - basic consultation
Panadol Tablets
Preventative (Becotide) Inhaler, 100 microgram
Cough Mixture - Benadryl
Vitamin Tablets - Pluravit Multi
Contraceptive Pills
Band-aids - Elastoplast
Amoxil Capsules, 250mg
Amoxil Suspension, 125 mg
Lasix Tabs
Tenormin Tabs
Ventolin Inhaler, 100 microgram

Group 9: Recreation and education

Television - 46 inch Samsung LED
Blue-ray player - LG
Apple iPod shuffle
TV repair
Exercise book - GNS 64 page
Exercise book - GNS 48 page
Kindergarten - Year 2 workbook
Year 3 - Year 4 workbook
Year 5 - Year 6 workbook
New Idea magazine
Women's Day magazine
Newspaper - local

Sydney Morning Herald
Golf ball - top flight XL
Junior rugby league registration fee
Junior netball registration fee
Bowls club annual subscription
Cheryl Tennis club annual subscription
Golf Club annual subscription
Golf club green fees
Dog food - chum
Cat food - Whiskas
Veterinary service - basic consult
Annual show admission
Air New Zealand - Sydney resident return airfare weighted average for quarter
Air New Zealand - Auckland resident return airfare weighted average for quarter

Group 10: Insurances

Household insurance
Content insurance
Compulsory third party insurance
Comprehensive insurance
Norfolk Island healthcare insurance

