

# The Impact of Aircraft Noise on Brisbane Residential Property Sectors: 1988-2023

2021-2023 BRISBANE RESIDENTIAL PROPERTY INVESTMENT PERFORMANCE UPDATE

FULL SUBURB SUMMARY

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Commissioned by  
Brisbane Airport Corporation 2024



# 1. Introduction

This report updates the study that commenced in 2013 by including 2023 transactional data. The study aims to analyse the investment performance of a range of suburbs across Brisbane to determine how median and average house price movements and subsequent investment performance have tracked relative to their location with respect to flight paths and potential aircraft noise. This analysis of the period 1988-2023 and the years 2021, 2022 and 2023 should be read in conjunction with the sub sector analysis report that was provided in early 2024.

The initial 2013 report provided an extensive review of literature including international studies on aircraft noise, a review of popular media and comments in relation to aircraft noise and a longitudinal analysis of the capital return performance and saleability of Brisbane residential properties impacted by aircraft noise over the period 1988 to 2013.

Following the 2013 report, an annual update on the investment performance of these Brisbane suburbs has been carried out for the period 2014 to 2019 prior to operations commencing on the second runway. These updates have now covered the period from the original legacy runway to the operations of the second runway at Brisbane Airport and has now tracked both median and average house price investment performance for the period 1988 to 2023. This 36-year period covers the operation of the current Brisbane Airport from the first day of operation in 1988 to December 2023, with the period 2021 to 2023 including flight operations from both the Brisbane Airport runways.

Again, the following Tables represent the annual capital returns for 2021, 2022 and 2023 as well as the investment performance of 53 geographically diverse suburbs across Brisbane based on all residential property sales over the period 1988-2023. These 53 suburbs are subject to varying levels of exposure to the flight paths for the legacy runway at Brisbane Airport, as well as the revised flight paths with the second runway at Brisbane Airport having opened in 2020 with very limited flights due to the Covid pandemic and increased air traffic for the three years 2021, 2022 and 2023.

This report updates the suburbs selected as shown in the following tables. These suburbs have been grouped based on geographic location in Brisbane and are subject to a range of intensity of exposure to aircraft noise from the legacy and new runway operations at Brisbane Airport:

- » Brisbane Northern Suburbs
- » Brisbane Southern suburbs
- » Brisbane Eastern Suburbs
- » Brisbane Western suburbs
- » Brisbane Inner City suburbs

For reporting purposes, the suburbs are grouped by geographic location, but each of these groupings contain a range of suburbs based on socio-economic status and current impact from the legacy and new runway flight paths with groupings from high exposure, moderate exposure and limited (no) exposure to aircraft noise. Some of the suburbs that were previously (prior to 2020) defined as no or limited exposure to aircraft noise are now subject to increased exposure from the commencement of the new runway.

With the addition of the 2021, 2022 and 2023 residential property sales transactions, the investment performance analysis now covers the years 1988 to 2023, a 36-year period. Over these thirty-six years, the Brisbane residential property sector has been subject to periods of housing booms and recessions and the impact of the Covid 19 lockdowns, net migration to Queensland and restrictions for travel. The results reflect an accurate and comprehensive overview of the investment performance of each of the suburbs in the study.

This summary report now covers a total of 53 Brisbane suburbs and over 300,000 sales transactions. These 53 suburbs represent:

- » 33% of the Brisbane Inner City suburbs
- » 26% of Northern Brisbane suburbs
- » 20% of Southern Brisbane suburbs
- » 52% of Eastern Brisbane suburbs
- » 24% of Western Brisbane suburbs

Overall, these 53 suburbs represent most of the Brisbane suburbs that are currently exposed to aircraft noise from the legacy runway operations from 1988 to 2020 and a considerable number of suburbs that are exposed to aircraft noise since the new runway commenced operations in 2020.

These groupings allow the investment performance for Brisbane suburbs to be compared on both a geographic and socio-economic basis.

In total 53 suburbs of Brisbane have now been analysed to determine their average annual capital returns and investment performance based on median and average house prices. An alphabetical listing of these suburbs and their investment performance is also included as appendices 1 and 2 to this report.

In all cases, the analysis is based on both the annual median house price and the annual average house price for each of the suburbs analysed. The investment performance analysis for this report comprises:

- » 2021, 2022 and 2023 capital return (median house price)
- » 2021, 2022 and 2023 capital return (average house price)
- » 1988-2023 capital return (median house price)
- » 1988-2023 capital return (average house price)
- » Average annual volatility (median and average house price)
- » Risk/Return Ratio

## 2. Major Findings 2021-2023

The most significant result from the 2021 to 2023 annual investment performance update data is the considerable variation in property investment performance across these three years. The majority of suburbs recorded very significant median and average house price increases in 2021 and 2022. Suburbs with the highest increases in the median house price for these two years generally showed some adjustment in 2023 with a negative capital return for 2023. Overall, the strong capital gains in the period 2021-2023 have resulted in all Brisbane suburbs in the study recording increased average annual capital returns (based on both median and average house prices) for the period 1988-2023 compared to the last full study for the period 1988-2020. The last three years of sale transaction data has also resulted in the majority of suburbs in the study recording lower average annual volatility in house price movements and improved risk/return ratios.

Generally, those suburbs that recorded negative capital returns in 2020 have shown an improved investment performance with positive price growth in 2021 and 2022 but a negative return in 2023 or in some cases a continued slight fall in median house prices but not at the same levels as 2020. The suburbs in this study that have experienced the most significant increase in capital returns (greater than 30%) for 2021 are:

- » Ascot
- » Chermside West
- » Gordon Park
- » Stafford
- » Fairfield
- » Balmoral
- » Belmont
- » Hawthorne
- » Bardon
- » Graceville
- » Sherwood

All suburbs in the study recorded a positive capital return from 2020 to 2021.

The upward trend in median and average house price increases continued in 2022 but not at the same levels as the 2021 increases. In 2022, only Bulimba, Seven Hills and Chelmer recorded a 2022 capital return greater than 30%. Highgate Hill, Kangaroo Point, Teneriffe and Graceville were the only suburbs in the study to record a negative capital return in 2022.

The very strong growth in house prices during 2021 and 2022 did not necessarily continue in 2023. In 2023, the majority of suburbs in the study recorded a decrease in house prices and a negative capital return for 2023 ranging from -0.29 (Carindale) to -13.91 (Fairfield).

In 2023 the better performing suburbs with a capital return from 2022 to 2023 greater than 15% were:

- » Teneriffe
- » Balmoral
- » Belmont
- » Murarrie

These 2021, 2022 and 2023 results continue to support the previous analysis for 1988-2020 study by showing that exposure to aircraft noise is not the only factor that influences buyer choice and subsequent impacts on the investment return for residential property in Brisbane. Even on an annual basis, suburbs subject to aircraft noise can still outperform suburbs with minimal or no aircraft noise impact due to overriding value drivers such as services, proximity to CBD, good transport and recreation facilities.

The full 36-year analysis confirms that the suburbs under the legacy runway flight paths and within the inner city and middle ring locations of Brisbane are still showing higher average annual capital returns compared to other less well-located suburbs. This is still evidenced by the 36-year average annual returns for Brisbane suburbs under flight paths showing average annual returns over 36 years in excess of 8% per annum, well above the Brisbane average of 6.82%. If aircraft noise was the main driver of value in these suburbs it would be expected that the average annual returns would be lower than the Brisbane median house price average capital return.

The base data for the years 1988 to 2013 can be found in the full QUT/BAC report released in 2013, with the 2015, 2016 and 2017, 2018, 2019, 2020 data update and the sub sector analysis for the period 1988-2023 available in separate reports.

# 3. Individual Suburb Performance:

## Median and Average House Prices: 2021-2023 and 1988-2023

This suburb comparison has been initially broken down based on geographic location in Brisbane. The classifications are:

- » Inner city suburbs
- » Northern suburbs
- » Southern suburbs
- » Eastern suburbs and
- » Western suburbs.

For each of these suburbs the investment performance is recorded in respect to the capital return for 2021, 2022 and 2023, based on the change in median and average house prices for each of these years, as well as the long-term investment performance of houses in these suburbs over the period 1988 to 2023. In addition to the capital returns, the volatility and risk return ratios for these suburbs are analysed.

# 4. Individual Suburb Performance:

## Inner City

Table 1 shows the capital returns for the inner-city suburbs in the study for 2021, 2022 and 2023 based on median house prices. These results show the significant increases in median house prices for all suburbs from 2020 to 2021. Kangaroo Point increased 66.23% over that 12-month period but it should also be noted that the number of sales transactions were limited and included the significant sale of

'Lamb House' for \$12.75 million. This also applied to the other inner-city suburbs. The returns in 2022 were varied, with Highgate Hill, Kangaroo Point and Teneriffe recording negative returns in 2022 but positive returns were recorded in 2023. Of note is that all three suburbs that experienced reduced returns in 2022 recorded higher returns in 2021.

**Table 1: Inner City Houses: Annual Capital Returns (%): Median House Price 2021-2023**

Suburb	2021 Capital Return (%)	2022 Capital Return (%)	2023 Capital Return (%)
East Brisbane	24.73	23.75	-4.93
Highgate Hill	42.61	-8.91	13.25
Kangaroo Pt	66.23	-14.38	5.56
New Farm	40.26	21.30	14.20
Teneriffe	39.78	-3.85	17.60
Woolloongabba	29.59	23.45	-13.12
Greater Brisbane	18.83	19.85	13.99

Although both East Brisbane and Woolloongabba showed positive median house price growth in 2022, this was followed by a decrease in median house prices in 2023.

Table 2 provides details of the investment performance for the inner-city suburbs based on median house prices. Over this 36-year period all of these suburbs recorded average annual capital returns greater than the overall Brisbane average of 6.82%. These returns

have increased slightly since the 2020 report. Over this study period the higher performing suburbs have been New Farm and Teneriffe (11.08% and 13.22% respectively). The higher average annual capital return for New Farm has also been more consistent with a relatively lower annual volatility of 14.49% and a risk/return ratio of 1.31 being well below the other inner-city suburbs and more in line with the middle ring suburbs in the study.

Table 2: Inner City Houses; Investment Performance; Median House Prices; 1988-2023

Suburb	Average Annual Capital Return (%)1988-2023	Average Annual Volatility (%)	Risk return Ratio
East Brisbane	8.82	14.00	1.59
Highgate Hill	9.12	12.86	1.41
Kangaroo Pt	10.61	24.24	2.28
New Farm	11.08	14.49	1.31
Teneriffe	13.22	25.70	1.94
Woolloongabba	8.62	12.51	1.45
Greater Brisbane	6.82	8.24	1.24

Again, the small number of house sales per annum in these inner-city suburbs, that are predominately unit based, can result in significant annual house price variations. However, the longer-term investment performance provides a more accurate measure of the average annual capital returns for houses in these suburbs.

These average and median house price increases for the majority of the inner-city suburbs in the study in 2021, 2022 and 2023 are based on a greater number of higher priced houses being sold in these locations and not the lower value properties that dominated these markets in the previous study reports.

Table 3: Inner City Houses: Annual Capital Returns (%); Average House Prices: 2021-2023

Suburb	2021 Capital Return (%)	2022 Capital Return (%)	2023 Capital Return (%)
East Brisbane	46.01	21.03	-16.07
Highgate Hill	43.48	-9.04	6.15
Kangaroo Pt	51.38	-32.22	-11.79
New Farm	37.15	16.39	5.22
Teneriffe	38.26	18.02	11.52
Woolloongabba	19.32	30.16	-11.83

The analysis of the inner-city residential housing market based on average house prices shows similar results compared to the median house price analysis. All inner-city suburbs in the study recorded significant capital returns in 2021 (ranging from 37.15% for New Farm to 51.38% for Kangaroo Pt). Capital returns for

2022 and 2023 for these suburbs were more variable, with Highgate Hill and Kangaroo Pt recording negative growth in average house prices in 2022 and negative returns for East Brisbane, Kangaroo Pt and Woolloongabba in 2023.



Table 4: Inner City Houses; Investment Performance; Average House Prices; 1988-2023

Suburb	Average Annual Capital Return (%)1988-2023	Average Annual Volatility (%)	Risk return Ratio
East Brisbane	10.18	18.53	1.82
Highgate Hill	9.54	17.28	1.81
Kangaroo Pt	13.27	39.46	2.97
New Farm	11.84	14.14	1.19
Teneriffe	14.73	30.41	2.07
Woolloongabba	9.26	13.39	1.45

Based on average house prices, the investment performance for these inner-city suburbs is also very strong and similar to the median house price results. Although Teneriffe and Kangaroo Pt have recorded

the highest average annual capital returns (14.73% and 13.27% respectively), New farm has also recorded the lowest risk at 14.14% and the better Risk/Return ration to the other inner-city suburbs over the 36-year period.

# 5. Individual Suburb Performance:

## Northern Suburbs

Tables 5 and 6 show the capital returns and investment performance for a range of suburbs located in areas north of the Brisbane CBD.

**Table 5: Northern Suburb Houses: Annual Capital Returns (%); Median House prices: 2021-2023**

Suburb	2021 Capital Return (%)	2022 Capital Return (%)	2023 Capital Return (%)
Albion	4.62	7.84	3.38
Ascot	37.93	25.50	-3.19
Chermside West	31.75	8.43	-2.78
Clayfield	18.40	21.62	-1.11
Gordon Park	40.35	16.67	-1.29
Hamilton	25.00	15.00	3.74
Mitchelton	22.43	15.40	2.33
Northgate	24.33	25.45	-6.60
Nudgee beach	5.21	5.44	6.11
Pinkenba	12.42	21.74	8.78
Stafford	37.31	7.07	-3.96
Virginia	17.33	7.39	-0.53
Woolloowin	27.43	28.25	-4.06
Greater Brisbane	18.83	19.85	13.99

The suburbs of Nudgee Beach and Pinkenba have a much smaller number of properties and consequently fewer sales. The results for Nudgee Beach and Pinkenba in 2021, 2022 and 2023 need to be viewed separately to the other suburbs with much more housing stock and a greater number of sales.

These two suburbs showed median house price capital returns much lower than the other Northern suburbs in 2021 (5.21% and 12.42% respectively). However, in 2022 Pinkenba recorded a higher return of 21.74% and the highest return across these suburbs in 2023 of 8.78%.

Table 5 also shows that the other eleven northern suburbs in this study followed a similar trend to the inner-city suburbs, with very high capital growth from 2020 to 2021, and generally slightly lower returns in 2022 compared to 2021. In 2021 the average annual capital returns for these northern suburbs ranged from 4.62% (Albion) to 40.35% for Gordon Park. In 2022 the range was 7.07% (Stafford) to 25.45% (Northgate).

Results for 2023 for these suburbs has been more variable. Eight of the suburbs recorded negative capital returns in 2023, ranging from -6.60% (Northgate) to -0.53 (Virginia). The better performing

northern suburbs in 2023 were Pinkenba (8.78%) and Nudgee Beach (6.11%). All these northern suburbs recorded 2023 capital returns (median house price) lower than the overall Brisbane capital return.

**Table 6: Northern Brisbane Suburbs: Investment Performance: Median Price: 1988-2023**

Suburb	Average Annual Capital Return (%)1988-2023	Average Annual Volatility (%)	Risk return Ratio
Albion	9.07	18.11	2.00
Ascot	9.39	15.94	1.70
Chermside West	6.52	11.18	1.72
Clayfield	8.65	12.21	1.41
Gordon Park	9.29	11.36	1.22
Hamilton	10.78	20.20	1.87
Mitchelton	8.22	9.30	1.13
Northgate	8.47	12.27	1.45
Nudgee beach	14.55	38.67	2.60
Pinkenba	10.74	26.43	2.46
Stafford	8.12	11.25	1.38
Virginia	8.40	11.00	1.31
Woolloowin	9.13	14.34	1.57
Greater Brisbane	6.82	8.29	1.24

Table 6 shows the investment performance for the northern suburbs in the study for the period 1988-2023. These results confirm the strong investment performance of the higher value suburbs in this grouping, with Hamilton, Ascot, Albion, and Woolloowin recording long term average annual capital returns greater than 9.07% and the middle value suburbs showing average annual capital return greater than 8%. The lower value suburb of Chermside West has only recorded an average annual capital return for the 1988-2023 period of 6.52%, the only suburb in the grouping with a lower average annual capital return lower than the Brisbane average.

When the 2021 capital return for the Northern Brisbane suburbs is based on average house prices, there is a noticeable difference in the returns compared to the Median house price analysis (Refer to Table 7). Based on median house prices (excluding Nudgee Beach) all northern suburbs recorded significant positive capital gains based on average house prices with a range from a low of 14.05% (Pinkenba) to a high of 31.60% (Gordon Park).

Results for 2022 based on average prices were very similar trends to the results based on median house prices. In 2022 all northern suburbs recorded a positive return, with a range from 1.52% (Nudgee Beach) to 27.34% (Clayfield). Again, there has been considerable variation in housing performance in 2023 based on average house prices for these suburbs.

Table 7: Northern Suburb Houses: Annual Capital Returns (%); Average House Prices: 2021-2023

Suburb	2021 Capital Return (%)	2022 Capital Return (%)	2023 Capital Return (%)
Albion	30.50	7.50	0.83
Ascot	22.11	7.79	-0.46
Chermside West	30.29	10.32	2.90
Clayfield	17.04	27.34	-0.62
Gordon Park	31.60	18.76	0.68
Hamilton	19.02	11.40	19.90
Mitchelton	19.10	18.47	-0.37
Northgate	21.81	20.17	-2.92
Nudgee beach	-10.98	1.52	40.62
Pinkenba	14.05	22.50	8.16
Stafford	31.81	11.28	-5.97
Virginia	18.60	4.58	5.31
Woolloowin	24.63	18.15	8.76

Five suburbs recorded a decrease in average house prices in 2023, with Hamilton and Nudgee beach

recording high capital returns in 2023 of 19.9% and 40.62% respectively..

Table 8: Northern Brisbane Suburbs: Investment Performance: Average Price: 1988-2023

Suburb	Average Annual Capital Return (%)1988-2023	Average Annual Volatility (%)	Risk return Ratio
Albion	8.99	17.04	1.90
Ascot	8.59	12.26	1.43
Chermside West	6.72	10.47	1.56
Clayfield	8.45	12.51	1.48
Gordon Park	9.31	9.83	1.06
Hamilton	9.76	16.59	1.70
Mitchelton	8.53	10.56	1.29
Northgate	8.69	12.13	1.40
Nudgee beach	15.19	34.90	2.26
Pinkenba	14.79	43.73	2.96
Stafford	8.30	11.33	1.37
Virginia	8.45	10.43	1.23
Woolloowin	9.05	12.03	1.40

Table 8 presents the long-term investment performance of the Northern suburbs in the study based on average house prices from 1988 to 2023. This table shows that over this extensive time period the average annual capital returns (excluding Nudgee Beach 15.19% and Pinkenba 14.79%) have ranged from

a low of 6.72% (Chermside West) to a high of 9.76% (Hamilton). The other suburbs have recorded similar results to the median house price analysis with the higher value suburbs recording both higher returns and volatility but similar Risk/Return ratios.

# 6. Individual Suburb Performance:

## Southern Suburbs

Table 9 shows the 10 suburbs classified as southern Brisbane suburbs in the study. All these suburbs are currently located under or adjacent to the current Brisbane Airport runway and southern flight paths.

The 2021, 2022 and 2023 results show a very similar trend in capital returns across these three years. With the exception of Fairfield and Rocklea, capital returns

for these suburbs have been in the range of 21.38% to 28.28% for 2021. As was the case with the inner-city and northern suburbs the capital growth in 2022 was not as significant as 2021. In 2022 all suburbs recorded positive increases in capital returns based on median house prices, with these returns ranging from 2.00% for Dutton Park and 23.21% for Forest Lake.

**Table 9: Southern Suburb Houses: Annual Capital Returns (%); Median House Prices: 2021-2023**

Suburb	2021 Capital Return (%)	2022 Capital Return (%)	2023 Capital Return (%)
Annerley	21.38	16.58	-1.94
Dutton Park	25.00	2.00	13.73
Fairfield	39.24	4.55	-13.91
Forest Lake	25.84	23.21	6.52
Holland Park West	27.33	22.51	-7.69
Mansfield	28.28	12.90	2.57
Moorooka	24.27	10.53	-1.59
Mt Gravatt east	26.89	16.49	-1.38
Rocklea	19.91	3.52	0.00
Tarragindi	24.91	14.31	1.78
Greater Brisbane	18.83	19.85	13.99

Again, the results for 2023 were a mix of low capital returns to significant negative capital returns. Fairfield recorded the most significant capital return reduction

in 2023 of -13.91%. The highest positive return for these Southern suburbs in the study was Dutton Park at 13.73%.

Table 10 shows the investment performance for the southern suburbs across the full 36-years of the study based on median house prices. This table shows that the lower value suburbs such as Forest Lake, Mansfield, Moorooka and Rocklea have recorded average annual capital returns less than 8%, with the middle value

suburbs recording capital returns from 8.00% (Mt Gravatt East) to 8.59% (Tarragindi). Overall, all these suburbs have shown an increase in the average annual capital return for the period 1988-2023 compared to the period 1988-2020 (the last full report).

**Table 10: Southern Brisbane Suburbs: Investment Performance: Median Price: 1988-2023**

Suburb	Average Annual Capital Return (%)1988-2023	Average Annual Volatility (%)	Risk return Ratio
Annerley	8.10	9.73	1.20
Dutton Park	9.20	12.94	1.41
Fairfield	8.29	12.17	1.47
Forest Lake	5.50	12.95	2.34
Holland Park West	8.05	10.64	1.32
Mansfield	7.52	9.53	1.27
Moorooka	7.84	9.38	1.20
Mt Gravatt East	8.00	9.46	1.18
Rocklea	7.66	13.28	1.73
Tarragindi	8.59	9.66	1.13
Greater Brisbane	6.82	8.29	1.24

The variation in the volatility of the capital returns for these southern suburbs is within a much narrower range than the suburbs classified as northern, eastern and western suburbs in the study. For these suburbs, the range in volatility for the movement in median house prices from 1988 to 2023 was 9.38% for Moorooka, to a high of 13.28% for Rocklea. For this

suburb grouping there are five suburbs recording an average annual volatility of less than 10% based on median house prices from 1988 to 2023. These high capital returns and lower volatility have generally resulted in better risk/return ratios compared to the suburbs located to the north, east and west of the Brisbane CBD.

**Table 11: Southern Suburb Houses: Annual Capital Returns (%); Average House Prices: 2021-2023**

Suburb	2021 Capital Return (%)	2022 Capital Return (%)	2023 Capital Return (%)
Annerley	28.73	12.71	-0.17
Dutton Park	55.07	-21.14	16.96
Fairfield	30.69	14.64	1.89
Forest Lake	27.02	22.78	3.14
Holland Park West	37.68	18.87	-8.73
Mansfield	33.42	9.55	4.12
Moorooka	37.43	-1.01	4.57
Mt Gravatt east	30.51	15.52	-1.75
Rocklea	20.50	-0.57	3.99
Tarragindi	19.63	16.67	4.66

Tables 11 and 12 show the 2021, 2022 and 2023 capital returns based on average house prices as well as the investment performance for the period 1988-2023 also based on average house prices for these suburbs.

Based on average house prices each of these suburbs have shown higher 2021, 2022 and 2023 annual capital returns compared to the median house price analysis for the same suburbs. The 2021 returns have ranged from a low of 20.50% for Tarragindi to a high of 55.07% for Dutton Park (note: there is a low sales transaction volume for this suburb impacting results evidenced by the 2022 return of -21.14%).

2022 saw a general reduction in returns compared to the results in 2021. Three suburbs showed a negative capital return in 2022 (Dutton Park, Moorooka and Rocklea). The highest 2022 return was recorded in Forest Lake (22.78%) and the lowest positive capital return southern suburb was Mansfield (9.55%).

The southern suburbs in the study have shown a trend similar to the previous suburb groupings for 2023. There are a number of suburbs with negative growth in 2023 and apart from Dutton Park (16.96%) the suburbs recording a positive capital return in 2023 ranged from a low of 1.89% (Fairfield) to 4.66% (Tarragindi).



Table 12: Southern Brisbane Suburbs: Investment performance: Average Price: 1988-2023

Suburb	Average Annual Capital Return (%)1988-2023	Average Annual Volatility (%)	Risk return Ratio
Annerley	8.46	12.01	1.42
Dutton Park	10.50	22.77	2.17
Fairfield	8.70	14.11	1.62
Forest Lake	5.50	12.50	2.27
Holland Park West	8.09	11.29	1.40
Mansfield	7.83	11.40	1.46
Moorooka	8.20	11.29	1.38
Mt Gravatt East	7.98	10.16	1.27
Rocklea	8.45	17.25	2.04
Tarragindi	8.79	9.60	1.09

When the investment performance of these southern suburbs is based on average house prices the results for a number of the southern suburbs varies from the median house price analysis. Table 12 shows that based on average house prices the lower value suburbs have not performed as well across the 1988-2023 period as the middle and higher value suburbs in this classification.

On a risk/return basis, the better performing suburbs in this grouping are still Tarragindi, Mt Gravatt East, Moorooka and Annerley. Forest Lake has one of the lowest capital returns and high level of volatility resulting in a high risk/return ratio of 2.27, a decline for the 2020 results.

# 7. Individual Suburb Performance:

## Eastern Suburbs

The eastern suburbs of Brisbane analysed in the study vary in socio-economic status. They include high-value suburbs such as Bulimba, Hawthorne, and Balmoral, as well as lower-value suburbs such as Murarrie and Tingalpa. The majority of the suburbs in this classification are subject to varying degrees of aircraft noise.

Tables 13 and 14 again show considerable variation in 2021, 2022 and 2023 capital returns based on median house prices. Eastern Brisbane suburbs that experienced high median house price growth in through to 2020 tended to have high capital growth in 2021 and moderate growth in 2022. Table 13 shows the significant difference in capital returns through from 2021 to 2023, with all suburbs, apart from Murarrie (13.92%), recording capital returns in 2021 greater than the overall Brisbane capital return of 18.83%. In 2021, there were nine suburbs with a capital return greater than 25%:

» Balmoral	29.12%
» Belmont	28.24%
» Camp Hill	37.42%
» Cannon Hill	31.84%
» Carindale	31.00%
» Coorparoo	32.98%
» Hawthorn	53.68%
» Norman Park	30.41%
» Wynnum	33.04%

Unlike the inner-city, northern, southern and western suburb groupings in the study, there were no eastern suburbs recording a negative capital return in 2022 based on median house prices. In 2022 the capital returns for these eastern suburbs ranged from 3.66% (Hawthorne) to 35.28% (Seven Hills).

However, in 2023 the capital return results for the eastern suburbs followed a similar trend to the other suburb groupings, with a number of suburbs recording a negative return in 2023:

» Bulimba	-5.50
» Carindale	-0.29
» Morningside	-0.79
» Norman Park	-9.13
» Seven Hills	-4.26
» Tingalpa	-1.18

The 2023 positive capital returns for Eastern suburbs range from 3.38% (Wynnum) to 25.06% (Murarrie).

Table 13: Eastern Suburb Houses: Annual Capital Returns (%); Median House Prices: 2021-2023

Suburb	2021 Capital Return (%)	2022 Capital Return (%)	2023 Capital Return (%)
Balmoral	29.12	6.89	17.00
Belmont	28.24	10.63	21.36
Bulimba	17.31	31.15	-5.50
Camp Hill	37.42	17.31	23.93
Cannon Hill	31.84	13.21	6.83
Carindale	31.00	16.25	-0.29
Coorparoo	32.98	12.00	10.71
Hawthorne	53.68	3.66	14.13
Morningside	21.65	26.00	-0.79
Murarrie	13.92	7.56	25.06
Norman Park	30.41	26.48	-9.13
Seven Hills	22.83	35.28	-4.26
Tingalpa	19.17	18.88	-1.18
Wynnum	33.04	7.84	3.38
Greater Brisbane	18.83	19.85	13.99

Table 14: Eastern Brisbane Suburbs: Investment Performance: Median Price: 1988-2023

Suburb	Average Annual Capital Return (%)1988-2020	Average Annual Volatility (%)	Risk return Ratio
Balmoral	9.96	12.20	1.22
Belmont	7.83	10.65	1.36
Bulimba	11.31	18.24	1.67
Camp Hill	10.17	13.49	1.33
Cannon Hill	9.31	11.51	1.29
Carindale	7.18	11.60	1.61
Coorparoo	9.41	12.67	1.35
Hawthorne	10.59	12.84	1.21
Morningside	9.23	11.03	1.19
Murarrie	8.87	11.26	1.27
Norman Park	9.27	11.21	1.21
Seven Hills	9.73	13.75	1.41
Tingalpa	7.50	10.97	1.46
Wynnum	8.48	11.53	1.36
Greater Brisbane	6.82	8.29	1.24

Table 14 shows that over the full 36-year period of the study, the average annual capital return for all the eastern suburbs has been well above the Brisbane median house price return of 6.82%, with the best performing suburbs in this grouping being the higher value suburbs of Bulimba, Balmoral, Hawthorne and Camp Hills, with average annual capital returns based on median house prices in excess of 9.96%.

The median house price volatility for the eastern suburbs for the 36-year period has ranged from 18.24% for Bulimba to a low of 10.65% for Belmont. The higher value suburbs of Bulimba, Balmoral, and Norman Park have also shown the higher levels of capital return volatility; however, these high returns have also resulted in very similar risk/return ratios compared to the middle value suburbs in this classification.

Table 15: Eastern Suburb Houses: Annual Capital Returns (%); Average House Prices: 2021-2023

Suburb	2021 Capital Return (%)	2022 Capital Return (%)	2023 Capital Return (%)
Balmoral	35.18	10.96	5.95
Belmont	51.74	8.28	12.02
Bulimba	11.31	31.15	-5.50
Camp Hill	23.26	36.06	-4.03
Cannon Hill	27.72	12.56	2.71
Carindale	27.87	16.73	2.59
Coorparoo	22.67	20.19	2.93
Hawthorne	49.75	5.27	21.51
Morningside	24.89	17.24	3.60
Murarrie	21.65	25.06	-0.47
Norman Park	25.35	22.50	-6.14
Seven Hills	20.48	32.17	-0.72
Tingalpa	21.24	17.91	9.87
Wynnum	30.50	-1.38	9.90

When the analysis of the eastern suburbs is carried out on the basis of average house prices in 2021 the annual capital returns for each of these suburbs were in line with the median house price results, only Wynnum recorded a negative capital return in 2022 (-1.38%).

2023 saw a similar trend in returns based on average house prices with 6 suburbs recording negative capital growth:

» Bulimba	-5.50
» Camp Hill	-4.03
» Murarrie	-0.47
» Norman Park	-6.14
» Seven Hills	-0.72

All the other suburbs in this grouping had a positive capital return based on average house prices in 2023 ranging from a low of 2.59% (Carindale) to a high of 21.51% (Hawthorne). Based on average house prices these eastern suburbs of Brisbane have recorded long term average annual capital returns well above other suburbs located in the north, south and western locations of Brisbane. Table 16 shows that ten eastern suburbs in the study have recorded average annual capital returns greater than 9.00%. These higher capital returns are also subject to higher capital return volatility ranging from 10.90% for Morningside and a high of 18.01% for Bulimba.

Again, although the majority of these suburbs are located under existing flight paths the returns based on both median and average house prices are still significantly higher than to the Brisbane median house price and similar socio-economic suburbs with no or limited exposure to aircraft noise. Volatility of house price movement across the eastern suburbs has been consistent across all suburbs, with the high value suburbs showing higher levels of risk/return compared to lower value suburbs.

Table 16: Eastern Brisbane Suburbs: Investment Performance: Average Price: 1988-2023

Suburb	Average Annual Capital Return (%)1988-2023	Average Annual Volatility (%)	Risk return Ratio
Balmoral	9.88	12.33	1.25
Belmont	8.69	14.36	1.65
Bulimba	10.46	18.01	1.72
Camp Hill	10.51	13.89	1.32
Cannon Hill	9.41	13.00	1.38
Carindale	7.40	11.13	1.57
Coorparoo	9.75	13.54	1.39
Hawthorne	11.08	15.48	1.40
Morningside	9.29	10.90	1.17
Murarie	9.09	13.36	1.47
Norman Park	9.74	13.77	1.41
Seven Hills	9.79	13.38	1.37
Tingalpa	8.21	13.80	1.68
Wynnum	8.44	11.59	1.37

# 8. Individual Suburb Performance:

## Western Suburbs

Again, the suburbs in the study located to the west of the Brisbane CBD range in socio economic status from lower middle in the middle ring suburbs of Brisbane, to higher value suburbs such as Ashgrove and Bardon, located closer to the inner-city areas.

In 2021, the range in capital returns, based on median house prices, varied from 10.24% for Chelmer to 40.54% for Sherwood. In 2021 only Ashgrove (17.13%) recorded median house price capital returns less than the Greater Brisbane average median house price capital return of 18.83%.

When these suburbs are analysed, there is a very similar trend to the previous suburb grouping analysis, with a number of suburbs recording capital growth and others with positive capital returns greater than their long-term averages.

In 2022, these Western suburbs in the study recorded a similar trend in capital returns as the other suburb groups in the study. There were three suburbs with strong capital return performance from 2021 to 2022:

- » Chelmer 30.36%
- » Toowong 21.54%
- » Kenmore 19.70%

**Table 17: Western Suburb Houses: Annual Capital Returns (%); Median House Prices: 2021-2023**

Suburb	2021 Capital Return (%)	2022 Capital Return (%)	2023 Capital Return (%)
Ashgrove	17.13	9.87	12.84
Bardon	30.81	13.16	-2.33
Chapel Hill	29.57	14.54	0.00
Chelmer	10.24	30.36	9.59
Graceville	30.69	-0.37	-4.39
Jindalee	29.84	14.29	-4.85
Kenmore	21.08	19.70	3.64
Sherwood	40.54	12.85	-4.50
The Gap	25.13	15.14	0.46
Toowong	30.00	21.54	-4.43
Greater Brisbane	18.83	19.85	13.99

Graceville was the only suburb in this grouping to record a negative capital return in 2022 (-0.37%). As was the case with the north, south and eastern suburb groupings, the capital returns for these suburbs in 2023 was significantly less compared to 2021 and 2022. Six suburbs recorded no capital or a negative capital return in 2023:

- » Bardon -2.33%
- » Chapel Hill 0.00%

- » Graceville -4.39%
- » Jindalee -4.85%
- » Sherwood -4.50%
- » Toowong -4.43%

Ashgrove (12.84%) was the only suburb in this grouping to record an annual capital return over 10%, there were no Western suburbs in the study that recorded a capital return greater than the overall Brisbane 2023 capital return of 13.99%.

**Table 18: Western Brisbane Suburbs: Investment Performance: Median Price: 1988-2023**

Suburb	Average Annual Capital Return (%)1988-2023	Average Annual Volatility (%)	Risk return Ratio
Ashgrove	8.73	8.95	1.02
Bardon	8.90	10.82	1.22
Chapel Hill	7.73	12.02	1.56
Chelmer	10.09	16.07	1.59
Graceville	8.66	11.28	1.30
Jindalee	7.35	15.47	2.11
Kenmore	7.25	9.22	1.27
Sherwood	8.76	10.80	1.23
The Gap	7.67	10.24	1.33
Toowong	8.50	12.39	1.46
Greater Brisbane	6.82	8.24	1.24

Table 18 shows the investment performance for the western suburbs across the full 36-years of the study based on median house prices. This table shows that the lower value suburbs such as Jindalee, Chapel Hill and Kenmore have recorded average annual capital returns less than 8%, with the middle value suburbs recording capital returns ranging from 8.50% (Toowong) to 8.90% (Bardon). Only Chelmer has recorded a long-term average annual capital return over 10% (10.09%). Overall, all these suburbs have shown an increase in the average annual capital return for the period 1988-2023 compared to the period 1988-2020 (the last full report).

The variation in the volatility of the capital returns for these western suburbs is more in line with the southern suburb grouping with a narrower range in average annual volatility across the full 36-year study period. For these suburbs, the range in volatility for the movement in median house prices from 1988 to 2023 was 8.95% for Ashgrove, to a high of 16.07% for Chelmer. For this suburb grouping there are only two suburbs recording an average annual volatility of less than 10% based on median house prices from 1988 to 2019. These high capital returns and lower volatility have generally resulted in better risk/return ratios compared to the suburbs located to the north and east of the Brisbane CBD.



Tables 19 and 20 show the capital returns for 2021, 2022 and 2023 and the investment performance from 1988-2023 based on average house prices. In 2021, the highest capital return was recorded in Graceville (44.03%), with Chelmer recording the lowest 2021 capital return of 9.05. Other western suburbs in the study showed a range of capital returns based on average house prices from 19.98% for Ashgrove to

28.99% for Jindalee. Again, the 2022 capital returns for these western suburbs were significantly less than the 2021 results. Although Toowong recorded an average house price 2022 capital return of 21.15%, all other suburbs in western suburb grouping recorded an average house price capital return ranging from 9.54% (Sherwood) to 13.14% (Chelmer).

**Table 19: Western Suburb Houses: Annual Capital Returns (%); Average House Prices: 2021-2023**

Suburb	2021 Capital Return (%)	2022 Capital Return (%)	2023 Capital Return (%)
Ashgrove	19.98	7.08	11.92
Bardon	26.65	16.28	5.92
Chapel Hill	21.72	18.79	-0.22
Chelmer	9.05	17.87	6.24
Graceville	44.03	-3.81	-3.84
Jindalee	28.99	17.31	-3.89
Kenmore	24.78	19.76	-2.90
Sherwood	27.46	8.50	4.58
The Gap	23.96	15.56	-0.94
Toowong	28.26	9.61	-13.15

There was a similar trend in 2023 compared to the north, south and eastern suburb groupings based on average house prices, with 5 suburbs recording negative capital returns in 2023:

» Chapel Hill	-0.22%
» Graceville	-3.84%
» Jindalee	-3.89%
» Kenmore	-2.90%
» The Gap	-0.94%

Table 20: Western Brisbane Suburbs: Investment Performance: Average Price: 1988-2023

Suburb	Average Annual Capital Return (%)1988-2023	Average Annual Volatility (%)	Risk return Ratio
Ashgrove	8.62	9.28	1.08
Bardon	9.07	10.14	1.12
Chapel Hill	7.68	11.12	1.45
Chelmer	8.67	13.14	1.52
Graceville	8.99	12.94	1.44
Jindalee	6.48	9.71	1.50
Kenmore	7.32	10.72	1.46
Sherwood	8.14	9.54	1.17
The Gap	7.15	10.77	1.39
Toowong	9.33	21.15	2.27

Based on average house prices, Ashgrove recorded the highest capital return in 2023 at 11.92%.

When the investment performance is carried out based on average house prices, Table 20 shows that there have been moderate variations in capital returns based on average house prices across the western suburbs.

Table 21: Western Brisbane Suburbs: Average Price: 1988-2020

Suburb	2020 Capital Return (%)	Average Annual Capital Return (%)1988-2020	Average Annual Volatility (%)	Risk return Ratio
Ashgrove	1.98	7.94	9.50	1.20
Bardon	5.51	8.45	10.18	1.21
Chapel Hill	2.63	7.02	11.25	1.60
Chelmer	12.18	8.40	13.88	1.65
Graceville	-5.11	8.69	11.74	1.35
Jindalee	1.71	5.69	9.04	1.59
Kenmore	0.40	6.71	10.53	1.57
Sherwood	8.99	7.66	9.49	1.24
The Gap	5.47	7.41	10.83	1.46
Toowong	-9.32	9.13	21.80	2.39

The range in average house price capital returns from 1988 to 2023 for these western suburbs has followed a similar trend to the median house price analysis, with the lower value suburbs recording returns from 6.48% (Jindalee), 7.32% (Kenmore) and 7.15% (The Gap). The middle value suburbs recorded average house capital returns from 8.14% (Sherwood) to 9.33% (Toowong).

Again, the generally higher capital returns in 2021 and 2022, based on average house prices, has resulted in slightly higher full study period average annual capital returns for average house prices in most suburbs in this grouping.

The risk/return performance of these suburbs are in line with the other 43 suburbs in the analysis.

# 9. Summary

Again, the 2021, 2022 and 2023 results have shown significant variations in median and average house price movements. The high capital returns across all suburbs in 2021 and 2022 has resulted in all suburbs recording increased average annual capital returns across the period 1988 to 2023.

The significant price increases in 2021 and 2022 were recorded during the Covid 19 lockdown period and influenced by the strong interstate migration from Victoria and New South Wales to Brisbane. All suburbs in the study recorded significantly lower returns in 2023 with over 40% of all suburbs experiencing a negative return in 2023. These negative returns for 2023 were across all geographic and socio-economic locations, as well as varying degrees of exposure to aircraft operations.

Over the full 36-year study the percentage of suburbs recording average annual capital returns greater than the Brisbane median house price average annual capital return is considerably higher at 95%. The suburbs that have recorded lower average annual capital returns less than the Brisbane average tend to be outer Brisbane suburbs of lower socio-economic status such as Forest Lakes and Chermside West. Inner city and higher value suburbs are still recording average annual capital returns well in excess of the Brisbane median house price average. The higher value Brisbane suburbs are still showing longer term investment performance well above the returns for the middle and inner ring suburbs of Brisbane.

Generally, the full 1988-2023 analysis shows the highest price growth over the full 36-year period has been in the suburbs located close to the Brisbane CBD, with investment returns lower as the distance from the CBD increases. Inner city suburbs located on the current flightpaths are still recording average annual capital returns between 8 and 10%, well above the Brisbane median house price average annual return of 6.82%.

The findings of this study reinforce the main drivers of residential house prices in Brisbane are location, connectivity with good transport access and availability of services.

# Appendices

The background of the page is an abstract composition of flowing, organic shapes in various shades of green and blue. On the right side, there is a prominent circular metallic structure, possibly a part of a machine or a piece of art, featuring a silver-colored rim and a dark, textured interior. Several small, dark, circular elements are visible along the rim of this structure.

# Appendix 1: Alphabetical Suburb Listing: Median House Price Capital Returns (%): 1988-2020

Suburb	2020 Capital Return (%)	Average Annual Capital Return (%)1988-2020	Average Annual Volatility (%)	Risk return Ratio
Albion	8.45	9.61	19.20	2.00
Annerley	2.95	7.69	9.77	1.27
Ascot	-3.72	8.77	15.52	1.77
Ashgrove	1.26	7.95	9.12	1.15
Balmoral	9.83	9.32	12.39	1.33
Bardon	1.64	8.15	10.44	1.28
Belmont	3.35	6.83	10.30	1.53
Bulimba	2.86	11.50	19.37	1.68
Camp Hill	-0.23	8.72	13.08	1.50
Cannon Hill	-1.81	8.46	11.47	1.36
Carindale	0.00	6.42	11.12	1.76
Chapel Hill	-0.74	7.04	11.99	1.70
Chelmer	21.83	9.59	16.88	1.83
Chermside West	5.62	6.10	10.79	1.74
Clayfield	-9.25	8.51	12.19	1.43
Coorparoo	15.64	8.87	12.60	1.42
Dutton Park	-10.97	8.66	13.35	1.54
East Brisbane	-3.42	8.82	14.00	1.59
Fairfield	9.93	8.34	10.85	1.30
Forest Lake	-1.57	4.33	12.78	2.95
Gordon Park	-1.06	8.63	10.30	1.19
Graceville	-4.81	8.42	10.86	1.29
Hamilton	18.46	10.63	21.25	2.00
Hawthorne	5.13	9.80	10.78	1.05
Highgate Hill	17.78	9.12	12.86	1.41
Holland Park West	4.47	7.62	9.99	1.31
Jindalee	4.06	6.85	15.75	2.30
Kangaroo Pt	21.01	10.61	24.24	2.28
Kenmore	-0.69	6.55	9.21	1.36
Mansfield	3.37	6.93	9.16	1.40
Mitchelton	1.67	7.83	9.38	1.20
Moorooka	-0.74	7.49	9.34	1.25
Morningside	14.11	8.93	10.81	1.21
Mt Gravatt East	-1.08	7.45	9.10	1.23
Murrarie	-2.36	8.11	11.53	1.42
New Farm	5.26	11.08	14.49	1.31
Norman Park	-5.60	8.71	10.28	1.18
Northgate	-3.60	8.29	11.84	1.43
Nudgee beach	-7.93	15.22	41.05	2.70
Pinkenba	65.41	11.38	27.50	2.42
Rocklea	3.05	7.72	13.86	1.80
Seven Hills	10.91	8.98	13.40	1.49
Sherwood	8.28	8.37	9.39	1.12
Stafford	5.22	7.74	10.46	1.35
Tarragindi	0.76	8.07	9.69	1.20
Teneriffe	5.20	13.22	25.70	1.94
The Gap	8.47	7.25	10.22	1.41
Tingalpa	-3.57	6.92	11.15	1.61
Toowong	1.69	7.72	12.10	1.57
Virginia	24.17	7.93	11.10	1.40
Woolloongabba	2.01	8.84	12.66	1.43
Woolloowin	2.38	8.41	14.26	1.70
Wynnum	0.00	7.99	11.55	1.42
Greater Brisbane	8.08	6.82	8.24	1.21

## Appendix 2: Alphabetical Suburb Listing: Average House Price Capital Returns (%): 1988-2020

Suburb	2020 Capital Return (%)	Average Annual Capital Return (%)1988-2020	Average Annual Volatility (%)	Risk return Ratio
Albion	4.67	9.06	17.06	1.88
Annerley	-2.32	7.94	12.10	1.52
Ascot	8.39	8.21	12.45	1.52
Ashgrove	1.98	7.94	9.50	1.20
Balmoral	18.66	9.58	12.03	1.26
Bardon	5.51	8.45	10.18	1.21
Belmont	-11.53	6.77	13.22	1.95
Bulimba	14.35	11.07	18.01	1.63
Camp Hill	3.63	8.78	12.29	1.40
Cannon Hill	0.90	8.89	13.35	1.50
Carindale	-1.64	6.63	11.62	1.75
Chapel Hill	2.63	7.02	11.25	1.60
Chelmer	12.18	8.40	13.88	1.65
Chermside West	4.46	6.11	10.19	1.67
Clayfield	11.40	7.87	12.45	1.58
Coorparoo	20.61	9.50	13.91	1.46
Dutton Park	20.17	10.22	22.12	2.16
East Brisbane	-8.15	9.63	22.00	2.28
Fairfield	23.12	8.41	14.20	1.69
Forest Lake	0.64	4.29	12.02	2.80
Gordon Park	-1.60	8.57	9.33	1.09
Graceville	-5.11	8.69	11.74	1.35
Hamilton	-7.80	8.79	17.38	1.98
Hawthorne	-0.66	10.23	14.37	1.41
Highgate Hill	1.69	8.63	16.69	1.93
Holland Park West	0.37	7.36	9.91	1.35
Jindalee	1.71	5.69	9.04	1.59
Kangaroo Pt	27.11	12.43	38.88	3.13
Kenmore	0.40	6.71	10.53	1.57
Mansfield	3.67	7.27	11.13	1.54
Mitchelton	1.89	8.17	10.80	1.32
Moorooka	3.09	7.66	10.61	1.39
Morningside	12.94	9.00	10.98	1.22
Mt Gravatt East	2.22	7.44	9.71	1.30
Murrarie	-1.03	8.64	13.58	1.57
New Farm	4.59	11.32	14.60	1.29
Norman Park	1.39	9.46	13.87	1.47
Northgate	-3.06	8.27	12.14	1.47
Nudgee beach	-7.93	14.64	35.45	2.42
Pinkenba	45.37	15.90	46.08	2.90
Rocklea	-0.24	8.56	18.14	2.12
Seven Hills	16.38	9.23	13.32	1.41
Sherwood	8.99	7.66	9.49	1.24
Stafford	12.48	8.17	10.84	1.33
Tarragindi	2.86	8.21	9.86	1.20
Teneriffe	13.55	14.15	32.06	2.27
The Gap	5.47	7.41	10.83	1.46
Tingalpa	5.21	7.55	14.35	1.90
Toowong	-9.32	9.13	21.80	2.39
Virginia	18.53	8.39	10.37	1.28
Woolloongabba	14.79	9.03	13.05	1.44
Woolloowin	8.63	8.37	13.00	1.55
Wynnum	-1.28	7.88	11.49	1.46

