

ATM Network Performance Report

June 2020



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Summary

Financial Year 2019/20 ATM Performance

ATM performance for the financial year 2019/20 can be separated into two distinct periods. The first three-quarters of the year were characterised by having high levels of airborne delay (which exceeded targets) whereas the final quarter saw a sharp decline in traffic and associated delays due to COVID-19.

The end-of-year median (0.9 minutes) and 75th percentile (4.3 minutes) performance did not meet the targets (0.6 minutes and 3.3 minutes, respectively). Despite the sharp decline in delay during the final quarter of the financial year, the delay experienced earlier in the year had a pronounced impact due to higher traffic volumes. The delay observed in each period was:

- First three quarters (July to March): 1.1 minutes (median) and 4.6 minutes (75th percentile)
- Final quarter (April to June): -1.1 minutes (median) and 0.4 minutes (75th percentile)

June Performance

Network Performance in June 2020 was mainly affected by COVID-19 related traffic reductions. Across the four major airports daily average arriving traffic in June 2020 (9,606) was down 74% with respect to June 2019 (37,297), but up 18% compared to May 2020 (8,383). Comparing the daily traffic average across the four main ports from May 2020 to June 2020 (with April to May change in parentheses):

- overall traffic was up 18% (previously down 5%),
- domestic traffic was up 25% (previously down 10%), and
- international traffic was down 8% (previously up 19%).

Due to this reduction in demand, Ground Delay Programs (GDPs) for Sydney, Brisbane and Melbourne have been suspended since March 27th. However, triggers based on demand are set, and GDPs will be activated when the criteria are met.

FIFO (fly in fly out) demand continued to be strong compared to Regular Public Transport (RPT) demand, with Perth remaining the busiest airport, Brisbane the third busiest and Adelaide the fifth busiest (in terms of aircraft movements). Each of these airports handled mostly intrastate FIFO flights. FIFO flights remained relatively stable, or increased in some cases, due to additional operations being provided to transit the workforce whilst complying with social distancing guidelines. Overall demand at Perth did decline, resulting that from May 25th GDPs for Perth were also suspended, but these have recommenced in July on days with high demand.

Melbourne was the fourth busiest airport in terms of aircraft movements this month, up from occupying the fifth place in May. However, with Melbourne re-entering a COVID-19 related lockdown from early July, a network wide traffic reduction impact is expected.

The combined 75th percentile performance in June for airborne delay across the four major airports (Sydney, Melbourne, Brisbane and Perth) was **0.4** minutes, and the median airborne delay across these airports was **-1.1** minutes. The 75th percentile and median performance met the targets of 3.3 minutes and 0.6 minutes, respectively. The median and 75th percentile decreased compared to the same period last year. There were no significant and/or notable delay events in June.

The daily 75th percentile values by airport by day are shown in **Figure 1**.

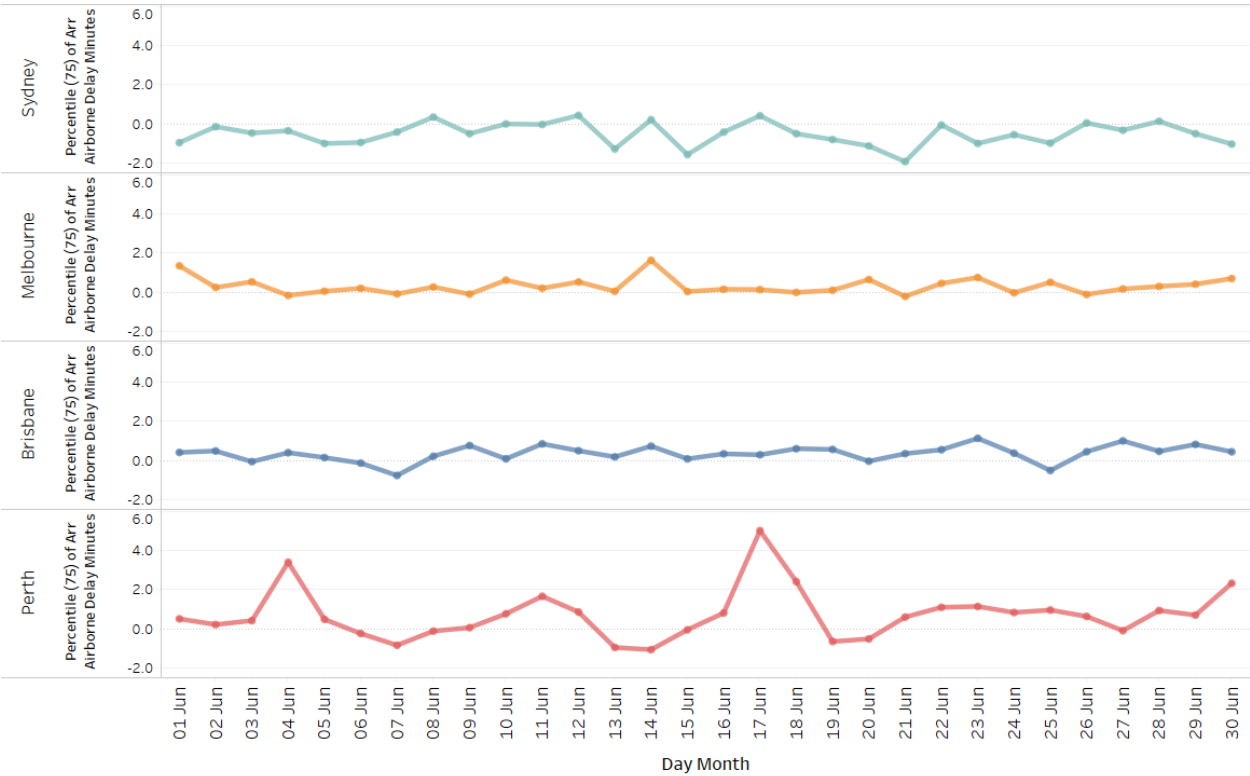


Figure 1: 75th percentile of airborne delay in minutes across each day.

Traffic levels and composition changes

Figure 2 shows traffic¹ levels and composition changes since the beginning of 2018.

Overall, domestic and international traffic decreased in all four major airports in comparison with June 2019 levels. The decrease continues from the initial downturn due to COVID-19 seen from February 2020. However, the downturn in domestic traffic from June 2019 to June 2020 is not as large.

- Overall traffic: Sydney (-80.6%), Melbourne (-84.8%), Brisbane (-70.3%), and Perth (-45.2%)
- International traffic: Sydney (-69.5%), Melbourne (-83.1%), Brisbane (-88.9%), and Perth (-88.8%).
- Domestic traffic: Sydney (-84.1%), Melbourne (-85.2%), Brisbane (-66.8%) and Perth (-36.6%).

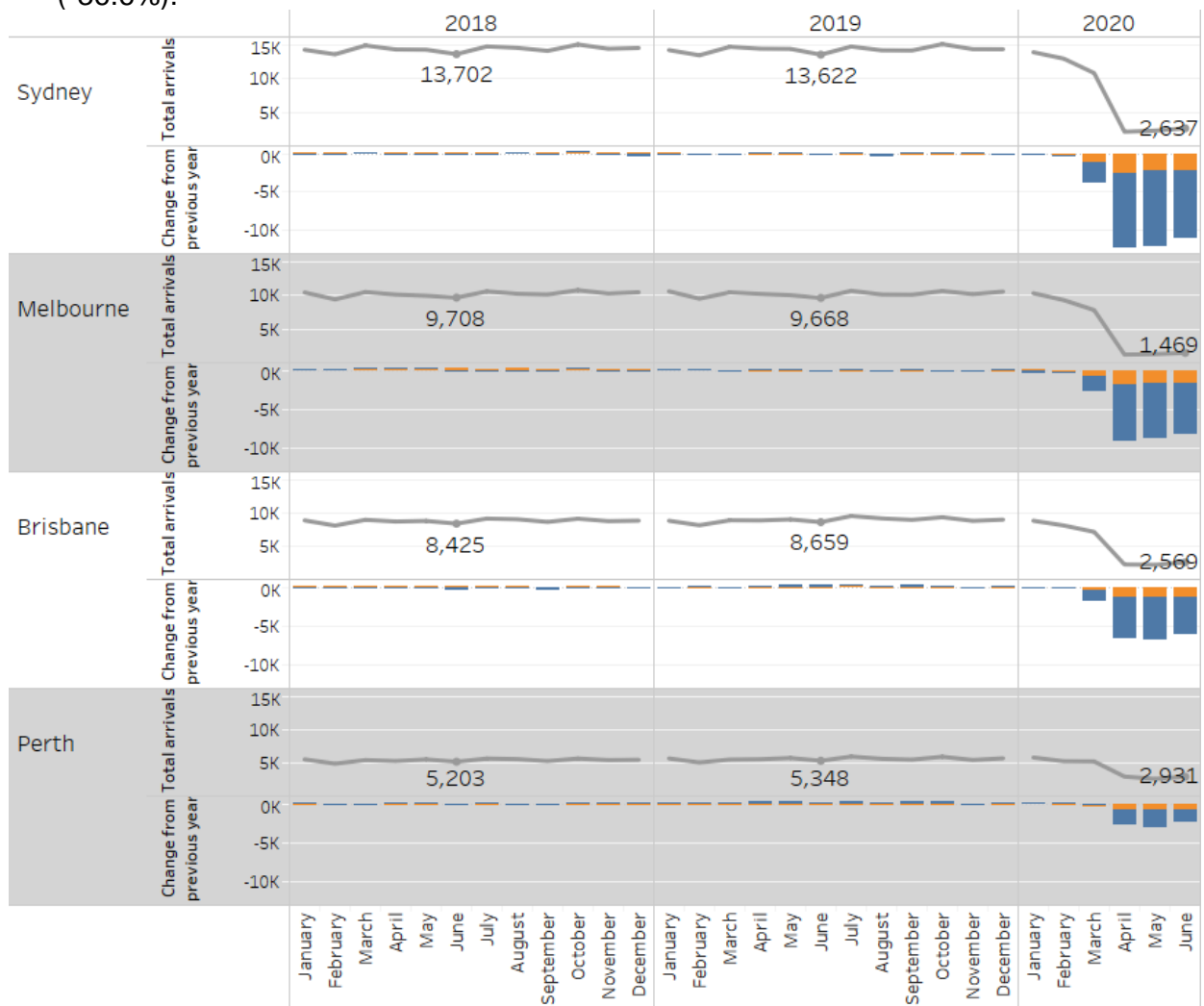


Figure 2: Traffic levels and composition change since January 2018. Grey lines show overall traffic numbers (annotated figures compare current month to same month one and two years earlier). Coloured bars show change in traffic compared to the same month the previous year for domestic (blue) and international (orange) flights.

¹ Traffic refers to instrument flight rules traffic only (visual flight rules traffic is not included)

Across the country, flights were down 54% in June 2020 with respect to June 2019. The breakdown of flights by market segment for June 2020 and June 2019 is shown in **Table 1**.

Table 1: Market segment proportions by year (June 2019/2020).

Market segment	June 2019	June 2020
Intrastate	46%	74%
Interstate	35%	17%
International	17%	7%
International overflights	2%	0%

Comparing daily average traffic numbers, the change from May to June 2020 (April to May 2020 provided for reference in parentheses) is:

- Overall: +15% (previously +5%)
 - Intrastate: +16% (previously +5%)
 - Interstate: +29% (previously +3%)
 - International: -6% (previously +15%)
 - International overflights: -9% (previously -12%)

The most common intrastate flights in June are (in descending order):

- Queensland (both 2019 and 2020)
- Western Australia (both 2019 and 2020)
- New South Wales (both 2019 and 2020)

The most common interstate flights in June are (in descending order):

- Queensland-New South Wales (both 2019 and 2020)
- New South Wales-Victoria (both 2019 and 2020)
- Queensland-Victoria (2019) and Australian Capital Territory-New South Wales (2020)

Figure 3 compares traffic density between June 2020 (top) and June 2019 (bottom). The patterns look similar to those in May 2020 and May 2019, respectively. The densities represent the average number of flights per day, with the colour variations on a log scale so that en-route traffic is more visible relative to regions around busy airports. Traffic noticeably decreases in June 2020, particularly international traffic and traffic between major Australian airports. Perth traffic to/from mining regions and intrastate flights to/from Brisbane and Adelaide appear to have remained relatively strong in June 2020. Finally, the route between Sydney and Asia appears relatively stable compared to the previous year.

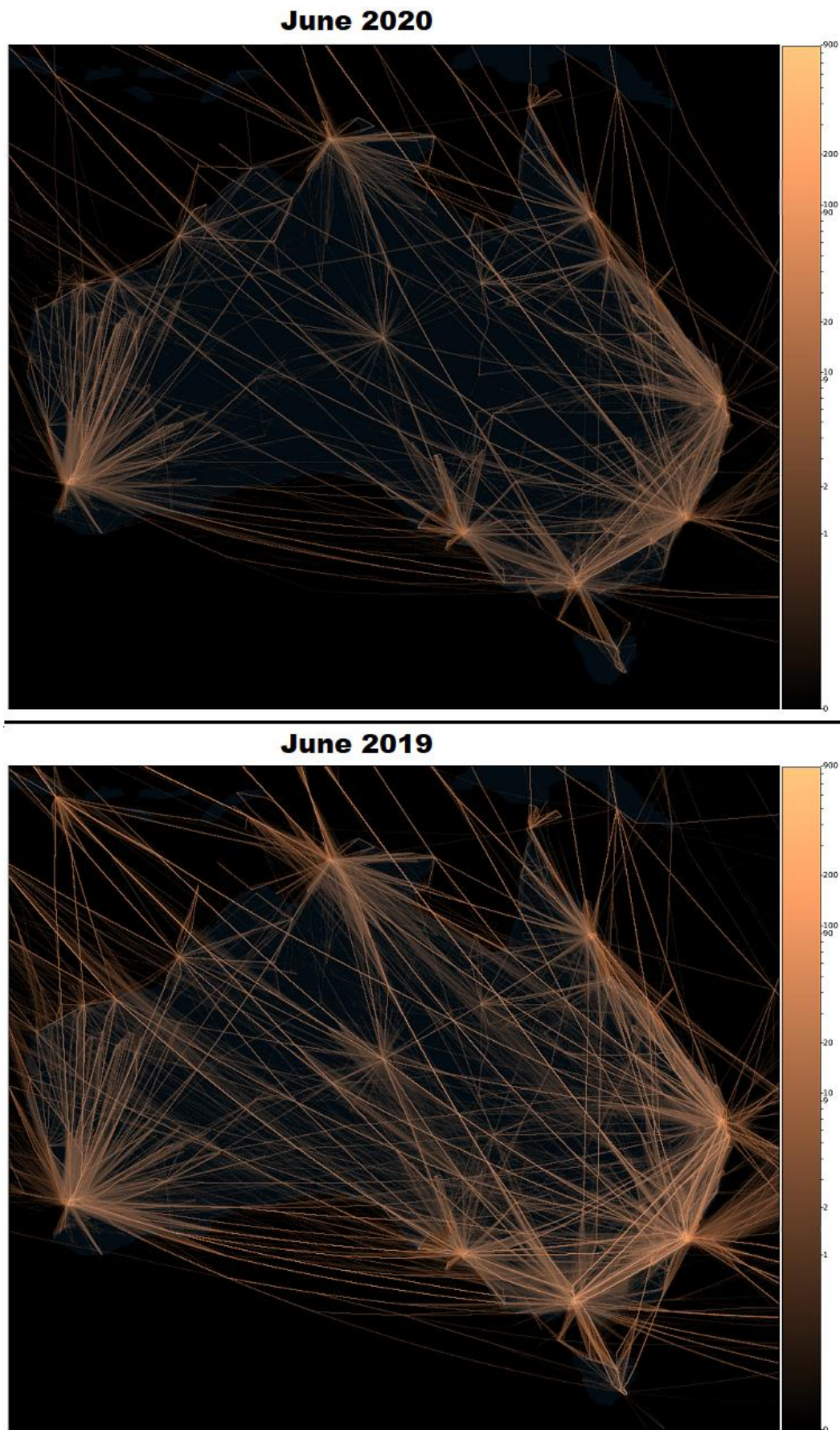


Figure 3: Traffic density comparison. June 2020 (top) and June 2019 (bottom). Flights per day are shown on a log scale to make the en-route traffic more visible relative to regions near busy airports.

Table 2 shows the twenty busiest city pairs in June 2019 with a comparison to June 2020. **Table 3** shows the inverse comparison (the twenty busiest city pairs in June 2020 with a comparison to June 2019), and a comparison to the city pair ranking from May 2020.

- Of the top 20 city pairs in June 2019, only ten remained in the top 20 in June 2020 (all of these decreasing by at least 52%).
- Of the top 20 city pairs in June 2020, only three increased since June 2019 (all of these increasing by at least 28%): Brisbane-Moranbah, Olympic Dam-Adelaide and Coondewanna-Perth.
- The number of intrastate city pairs increased from five in June 2019 to fourteen in June 2020.
- The number of international city pairs in the top twenty remained steady at two between June 2019 (Sydney-Auckland and Melbourne-Singapore) and June 2020 (with Sydney-Singapore replacing Melbourne-Singapore).
- The three busiest city pairs in June 2019 were Sydney-Melbourne, Sydney-Brisbane and Melbourne-Brisbane, respectively, by a large margin from the next busiest city pair – these remained first, and dropped to third and fourth place, respectively, in June 2020.

Table 2: Top 20 city pairs in June 2019, with comparison to June 2020 (and percent change 2019 to 2020). City pairs in bold appear in both months.

No.	City pair	Flight count (2019)	Flight count (2020)	Change (%)
1	Melbourne-Sydney	4537	754	-83.38
2	Brisbane-Sydney	2887	554	-80.81
3	Brisbane-Melbourne	2034	414	-79.65
4	Canberra-Sydney	1515	145	-90.43
5	Melbourne-Adelaide	1470	180	-87.76
6	Gold Coast-Sydney	1456	59	-95.95
7	Adelaide-Sydney	1069	137	-87.18
8	Melbourne-Perth	996	266	-73.29
9	Brisbane-Cairns	928	232	-75.00
10	Gold Coast-Melbourne	904	0	-100.00
11	Melbourne-Canberra	903	138	-84.72
12	Hobart-Melbourne	871	84	-90.36
13	Auckland-Sydney	853	240	-71.86
14	Brisbane-Rockhampton	828	354	-57.25
15	Brisbane-Townsville	818	250	-69.44
16	Perth-Sydney	716	110	-84.64
17	Launceston-Melbourne	705	145	-79.43
18	Adelaide-Port Lincoln	688	229	-66.72
19	Brisbane-Mackay	655	312	-52.37
20	Singapore-Melbourne	599	129	-78.46

Table 3: Top 20 city pairs in June 2020, with comparison to June 2019 (and percent change 2019 to 2020), and a comparison to the May 2020 ranking. City pairs in bold appear in both June 2019 and 2020.

No.	City pair	Flight count (2019)	Flight count (2020)	Change (%)	May 2020 rank
1	Melbourne-Sydney	4537	754	-83.38	2
2	Brisbane-Moranbah	336	581	72.92	1
3	Brisbane-Sydney	2887	554	-80.81	3
4	Brisbane-Melbourne	2034	414	-79.65	6
5	Olympic Dam-Adelaide	301	384	27.57	4
6	Brisbane-Rockhampton	828	354	-57.25	5
7	Brisbane-Mackay	655	312	-52.37	14
8	Newman-Perth	410	302	-26.34	9
9	Port Hedland-Perth	404	285	-29.46	10
10	Melbourne-Perth	996	266	-73.29	8
11	Brisbane-Emerald	380	260	-31.58	15 (equal)
12	Karratha-Perth	485	252	-48.04	15 (equal)
13	Cairns-Townsville	496	251	-49.40	11
14	Brisbane-Townsville	818	250	-69.44	18
15	Auckland-Sydney	853	240	-71.86	12
16	Brisbane-Cairns	928	232	-75.00	23
17	Adelaide-Port Lincoln	688	229	-66.72	30
18	Singapore-Sydney	576	224	-61.11	7
19	Coondewanna-Perth	136	220	61.76	17
20	Bathurst Island-Darwin	313	216	-30.99	44

Figure 4 shows traffic levels by month over the last 15 months broken down into various categories (operators, types of flight etc.).

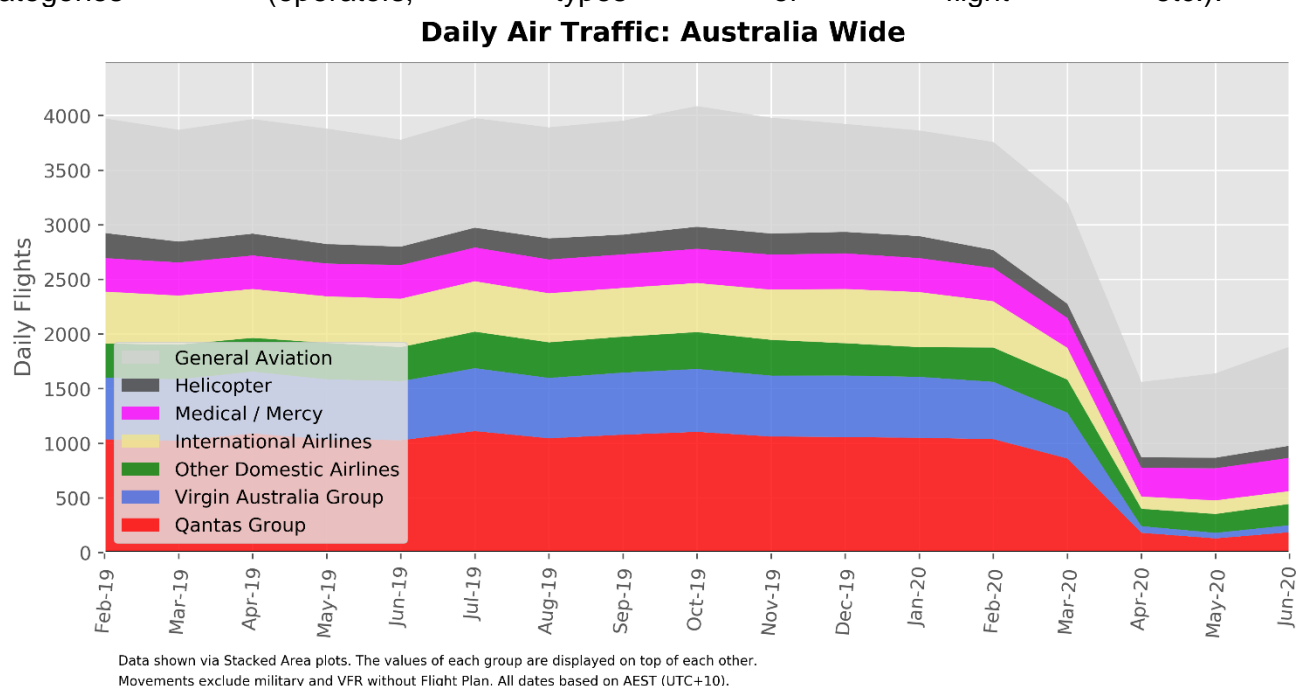


Figure 4: Traffic levels, shown as average daily flights by month, since February 2019. Flights have been categorised in various ways (e.g. major operators, general aviation, medical).

Network Wide Performance

Airborne delay

The 24-month combined median and 75th percentile airborne delay at the four major airports is indicated in **Figure 5**.

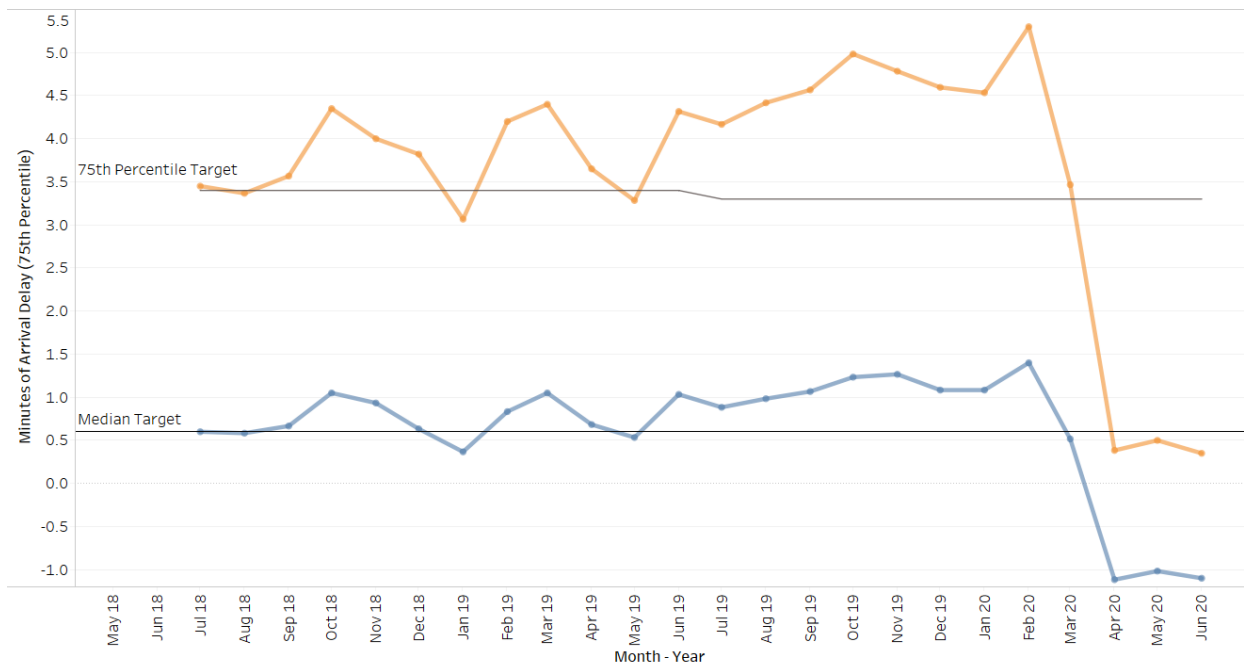


Figure 5: 24-month trend for airborne delay

The long term (48-month) trends of the 75th percentile airborne delay for each of the four major airports are depicted in **Figure 6**. More detailed analysis for each airport is presented later in this report.

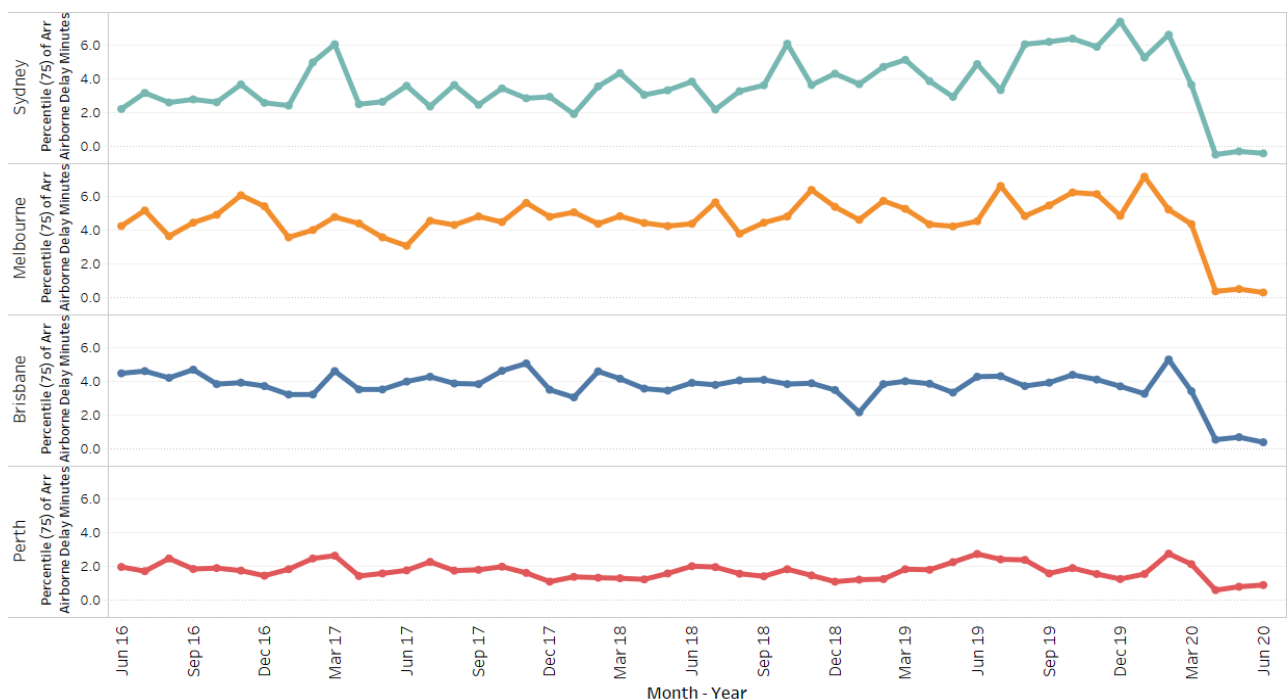


Figure 6: 48-month trend for airborne delay (75th percentile) by airport

Runway configuration

The runway configuration usage for each airport is shown in **Figure 7**. It shows the current month, the same month from the preceding year for comparison purposes, and the preceding 3 months.

Runway mode	June 2019	March 2020	April 2020	May 2020	June 2020
Sydney	34A/34D ● 32% (162)	31% (162) ●	42% (213) ●	44% (232) ●	43% (221) ●
	16A/16D ● 62% (316)	64% (337) ●	38% (194) ●	51% (267) ●	49% (249) ●
	SODPROPS (Single) ● 6% (32)	4% (20) ●	16% (81) ●	5% (26) ●	8% (40) ●
	25A/25D (Single)		3% (17) ●		
	25A/16D	0% (2) ●	1% (4) ●		
	07A/16D	1% (6) ●			
	34A/25D		0% (1) ●	0% (1) ●	
	CURFEW			0% (1) ●	
Melbourne	16A/27D ● 26% (141)	25% (138) ●	14% (78) ●	6% (33) ●	12% (64) ●
	27A - 27/34D ● 26% (142)	8% (44) ●	30% (160) ●	15% (81) ●	4% (19) ●
	34A/34D (Single) ● 25% (137)	28% (156) ●	18% (99) ●	45% (252) ●	66% (354) ●
	16A/16D (Single) ● 5% (29)	27% (150) ●	6% (32) ●	24% (135) ●	18% (95) ●
	27/34 LAHSO ● 9% (46)	1% (8) ●			
	27A/27D (Single) ● 6% (35)	5% (28) ●	23% (125) ●	8% (47) ●	1% (8) ●
	09A/09D (Single) ● 2% (10)		9% (46) ●	2% (10) ●	
	09A/16D	6% (34) ●			
Brisbane	19A/19D (Single) ● 83% (425)	64% (338) ●	62% (314) ●	84% (444) ●	87% (445) ●
	01A/01D (Single) ● 12% (61)	31% (163) ●	38% (196) ●	16% (83) ●	13% (65) ●
	01/14A 01D ● 5% (23)	5% (26) ●			
	14A/14D (Single) ● 0% (1)				
Perth	21A/21D (Single) ● 21% (100)	11% (56) ●	11% (53) ●	31% (154) ●	3% (16) ●
	03A/03D (Single) ● 59% (283)	2% (12) ●	11% (54) ●	37% (184) ●	55% (266) ●
	21/24A 21D ● 11% (53)	36% (177) ●	54% (257) ●	11% (57) ●	26% (123) ●
	03A 06/03D ● 6% (30)	15% (73) ●	24% (116) ●	13% (63) ●	13% (60) ●
	06A/06D (Single) ● 2% (11)	23% (113) ●		1% (7) ●	2% (10) ●
	24A/24D (Single) ● 1% (3)	13% (65) ●		6% (31) ●	1% (5) ●

Figure 7: June runway configuration usage (percentage of total and hours in brackets) by airport (Sydney 06-22L, Melbourne 06-23L, Brisbane 06-22L and Perth 06-21L). Single runway configurations indicated in parentheses. Note: Sydney runway mode selection takes into account the Long Term Operating Plan to manage aircraft noise.

In Sydney the use of parallel 34 runway operations increased by 36% compared to the same month last year (221 hours compared to 162 hours in June 2019). Additionally, the use of parallel 16 operations decreased by 21% (249 hours compared to 316 hours in June 2019). The overall single runway usage (runway 07/25 and SODPROPS) increased by 25% compared to the same month last year (40 hours compared to 32 hours in June 2019), SODPROPS was the only runway mode in each case. Runway 07/25 was closed and utilised for parking.

In Melbourne the use of Land and Hold Short Operations (LAHSO) decreased from 46 hours in June 2019 to zero hours in June 2020. Due to low demand the use of LAHSO (higher capacity) was not required. Single runway usage increased by 117% (457 hours compared to 211 hours in June 2019).

Brisbane had single runway operations for 95% of the time in June 2019 and 100% of the time in June 2020 with Runway 14/32 being utilised for parking. Single runway 01 operations increased by 7% compared to the same month last year (65 hours compared to 61 hours in June 2019). Single runway 19 operations increased by 5% (445 hours compared to 425 in June 2019). The use of two runways for arrivals in Brisbane decreased from 24 hours in June 2019 to zero hours in June 2020.

Perth was required to use single runway operations for 62% of the time in June 2020. Single runway operations are 25% lower compared to the same month last year (297 hours compared to 397 hours in June 2019).

Sydney

Airborne delay

The 75th percentile performance figures for airborne delay at Sydney are indicated in **Figure 8**. June performance for the median (-2.2 minutes) and the 75th percentile (-0.4 minutes) met the targets. Compared to the same month last year, there was a decrease in the airborne delay median performance (from 1.0 minutes) and in the 75th percentile performance (from 4.9 minutes).

Arrivals reduced from 13,622 in June 2019 to 2,637 in June 2020 (down 81%). Comparing average daily arrivals to May 2020, international traffic was down (7%) and domestic traffic was up (43%).

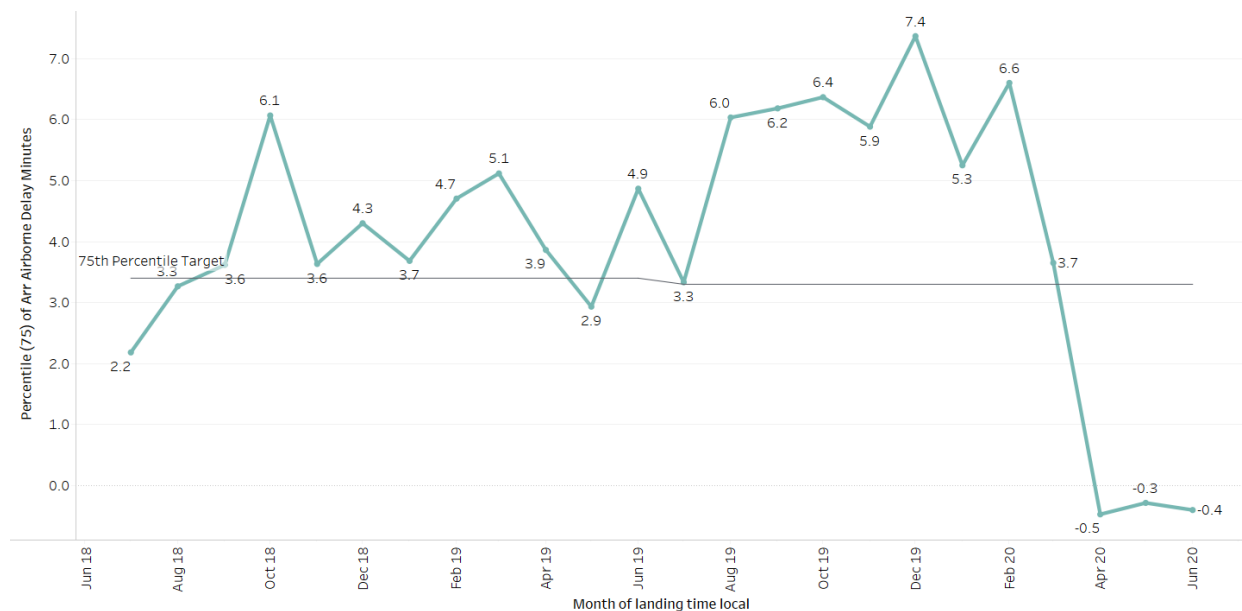


Figure 8: Sydney airborne delay 75th percentile (last 24 months)

Traffic changes by city pair

Table 4 shows the twenty busiest Sydney city pairs in June 2019 with a comparison to June 2020. **Table 5** shows the inverse comparison (the twenty busiest Sydney city pairs in June 2020 with a comparison to June 2019), and a comparison to the Sydney city pair ranking from May 2020. There were ten city pairs appearing in both June 2019 and June 2020 (shown in bold).

All of the top twenty Sydney city pairs from June 2019 decreased significantly in June 2020 (by at least 61%). Sydney-Melbourne and Sydney-Brisbane remained the two busiest city pairs. Sydney flights to/from other large Queensland cities (Gold Coast, Cairns and Sunshine Coast) dropped significantly and are no longer within the top twenty city pairs in June 2020.

International flights made up only three of the top twenty city pairs in June 2019, this increased to nine in June 2020. New South Wales flights made up seven of the top twenty city pairs in June 2019, this dropped to six in June 2020. Dubbo, Wagga Wagga and Coffs Harbour appear in both months; whereas Albury, Armidale, Tamworth and Port Macquarie only in 2019; and Williamtown, Ballina and Orange only in 2020.

Table 4: Top 20 city pairs including Sydney in June 2019, with comparison to June 2020 (and percent change 2019 to 2020). City pairs in bold appear in both months.

No.	City pair	Flight count (2019)	Flight count (2020)	Change (%)
1	Melbourne-Sydney	4537	754	-83.38
2	Brisbane-Sydney	2887	554	-80.81
3	Canberra-Sydney	1515	145	-90.43
4	Gold Coast-Sydney	1456	59	-95.95
5	Adelaide-Sydney	1069	137	-87.18
6	Auckland-Sydney	853	240	-71.86
7	Perth-Sydney	716	110	-84.64
8	Singapore-Sydney	576	224	-61.11
9	Dubbo-Sydney	529	112	-78.83
10	Sydney-Wagga Wagga	513	135	-73.68
11	Albury-Sydney	506	52	-89.72
12	Cairns-Sydney	488	4	-99.18
13	Hong Kong-Sydney	432	154	-64.35
14	Hobart-Sydney	426	3	-99.30
15	Sunshine Coast-Sydney	392	1	-99.74
16	Coffs Harbour-Sydney	380	70	-81.58
17	Armidale-Sydney	368	39	-89.40
18	Sydney-Tamworth	354	62	-82.49
19	Port Macquarie-Sydney	349	59	-83.09
20	Avalon-Sydney	317	0	-100.00

Table 5: Top 20 city pairs including Sydney in June 2020, with comparison to June 2019 (and percent change 2019 to 2020), and a comparison to the May 2020 ranking. City pairs in bold appear in both June 2019 and 2020.

No.	City pair	Flight count (2019)	Flight count (2020)	Change (%)	May 2020 rank
1	Melbourne-Sydney	4537	754	-83.38	1
2	Brisbane-Sydney	2887	554	-80.81	2
3	Auckland-Sydney	853	240	-71.86	4
4	Singapore-Sydney	576	224	-61.11	3
5	Hong Kong-Sydney	432	154	-64.35	5
6	Canberra-Sydney	1515	145	-90.43	11
7	Sydney-Shanghai	166	139	-16.27	6
8	Adelaide-Sydney	1069	137	-87.18	7
9	Sydney-Wagga Wagga	513	135	-73.68	8
10	Sydney-Williamtown	199	113	-43.22	10
11	Dubbo-Sydney	529	112	-78.83	13 (equal)
12	Perth-Sydney	716	110	-84.64	19
13	Los Angeles-Sydney	259	91	-64.86	16
14	San Francisco-Sydney	110	90	-18.18	13 (equal)
15	Taoyuan-Sydney	87	88	1.15	18
16	Sydney-Guangzhou	141	82	-41.84	9
17	Ballina-Sydney	249	79	-68.27	31 (equal)
18	Orange-Sydney	288	72	-75.00	17
19	Coffs Harbour-Sydney	380	70	-81.58	28 (equal)
19	Honolulu-Sydney	225	70	-68.89	20

Melbourne

Airborne delay

The 75th percentile performance figures for airborne delay at Melbourne are indicated in **Figure 9**. June performance for the median (-0.7 minutes) and the 75th percentile (0.3 minutes) met the targets. Compared to the same month last year, there was a decrease in the airborne delay median performance (1.2 minutes), and in the 75th percentile performance (from 4.5 minutes).

Arrivals reduced from 9,668 in June 2019 to 1,469 in June 2020 (down 85%). Comparing average daily arrivals to May 2020, international traffic was down (16%) and domestic traffic was up (35%).

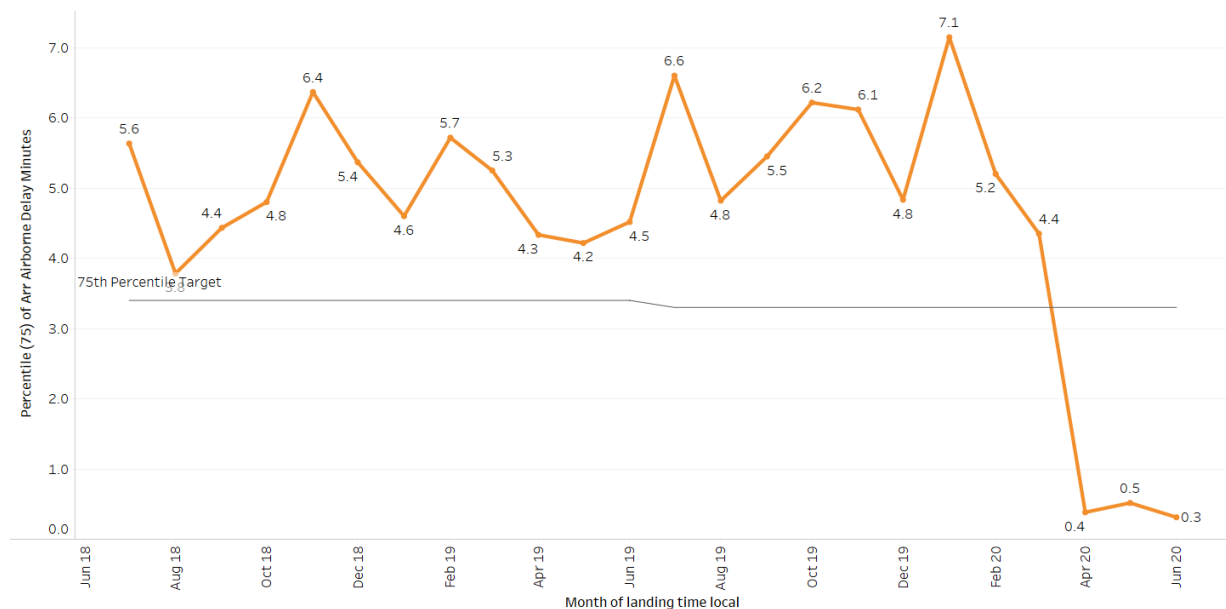


Figure 9: Melbourne airborne delay 75th percentile (last 24 months)

Traffic changes by city pair

Table 6 shows the twenty busiest Melbourne city pairs in June 2019 with a comparison to June 2020. **Table 7** shows the inverse comparison (the twenty busiest Melbourne city pairs in June 2020 with a comparison to June 2019), and a comparison to the Melbourne city pair ranking from May 2020. There were eleven city pairs appearing in both June 2019 and June 2020 (shown in bold).

All of the top twenty Melbourne city pairs from June 2019 decreased significantly in June 2020 (by at least 73%). There was one change to the top ten city pairs between June 2019 and June 2020, with Melbourne-GoldCoast (2019) being replaced by Melbourne-Dubai (2020) – with some reshuffling of order between the other nine city pairs. Melbourne-Sydney and Melbourne-Brisbane remained the two busiest city pairs. Melbourne flights to/from other large Queensland cities (Gold Coast, Cairns and Sunshine Coast) dropped significantly and are no longer within the top twenty city pairs in June 2020.

International flights made up only five of the top twenty city pairs in June 2019, this increased to ten in June 2020. Doha remained steady between 2019 and 2020 – unlike other recent months where it gained a significant number of flights.

Table 6: Top 20 city pairs including Melbourne in June 2019, with comparison to June 2020 (and percent change 2019 to 2020). City pairs in bold appear in both months.

No.	City pair	Flight count (2019)	Flight count (2020)	Change (%)
1	Melbourne-Sydney	4537	754	-83.38
2	Brisbane-Melbourne	2034	414	-79.65
3	Melbourne-Adelaide	1470	180	-87.76
4	Melbourne-Perth	996	266	-73.29
5	Gold Coast-Melbourne	904	0	-100.00
6	Melbourne-Canberra	903	138	-84.72
7	Hobart-Melbourne	871	84	-90.36
8	Launceston-Melbourne	705	145	-79.43
9	Singapore-Melbourne	599	129	-78.46
10	Auckland-Melbourne	556	120	-78.42
11	Cairns-Melbourne	396	1	-99.75
12	Mildura-Melbourne	389	51	-86.89
13	Bali-Melbourne	309	0	-100.00
14	Hong Kong-Melbourne	294	74	-74.83
15	Melbourne-Williamstown	272	14	-94.85
16	Sunshine Coast-Melbourne	251	0	-100.00
17	Melbourne-Wynyard	228	14	-93.86
18	Devonport-Melbourne	224	0	-100.00
19	Melbourne-Darwin	189	1	-99.47
20	Los Angeles-Melbourne	174	11	-93.68

Table 7: Top 20 city pairs including Melbourne in June 2020, with comparison to June 2019 (and percent change 2019 to 2020), and a comparison to the May 2020 ranking. City pairs in bold appear in both June 2019 and 2020.

No.	City pair	Flight count (2019)	Flight count (2020)	Change (%)	May 2020 rank
1	Melbourne-Sydney	4537	754	-83.38	1
2	Brisbane-Melbourne	2034	414	-79.65	2
3	Melbourne-Perth	996	266	-73.29	3
4	Melbourne-Adelaide	1470	180	-87.76	4
5	Launceston-Melbourne	705	145	-79.43	5
6	Melbourne-Canberra	903	138	-84.72	10 (equal)
7	Singapore-Melbourne	599	129	-78.46	8
8	Auckland-Melbourne	556	120	-78.42	6
9	Hobart-Melbourne	871	84	-90.36	10 (equal)
10	Dubai-Melbourne	122	80	-34.43	12
11	Hong Kong-Melbourne	294	74	-74.83	9
12	Doha-Melbourne	61	60	-1.64	7
13	Melbourne-Bankstown	60	55	-8.33	14
14	Mildura-Melbourne	389	51	-86.89	17
15	Abu Dhabi-Melbourne	122	40	-67.21	16
16	Melbourne-Guangzhou	110	36	-67.27	13
17	Kuala Lumpur-Melbourne	124	30	-75.81	15
18	Albury-Melbourne	117	28	-76.07	18 (equal)
19	Melbourne-Shanghai	86	26	-69.77	18 (equal)
20	Brunei-Melbourne	61	18	-70.49	21

Brisbane

Airborne delay

The 75th percentile performance figures for airborne delay at Brisbane are indicated in **Figure 10**. June performance for the median (-0.8 minutes) and the 75th percentile (0.4 minutes) met the targets. Compared to the same month last year, there was a decrease in the airborne delay median performance (from 1.4 minutes) and the 75th percentile (from 4.3 minutes).

Arrivals reduced from 8,659 in June 2019 to 2,569 in June 2020 (down 70%). Comparing average daily arrivals to May 2020, international traffic was down (1%) and domestic traffic was up (22%).

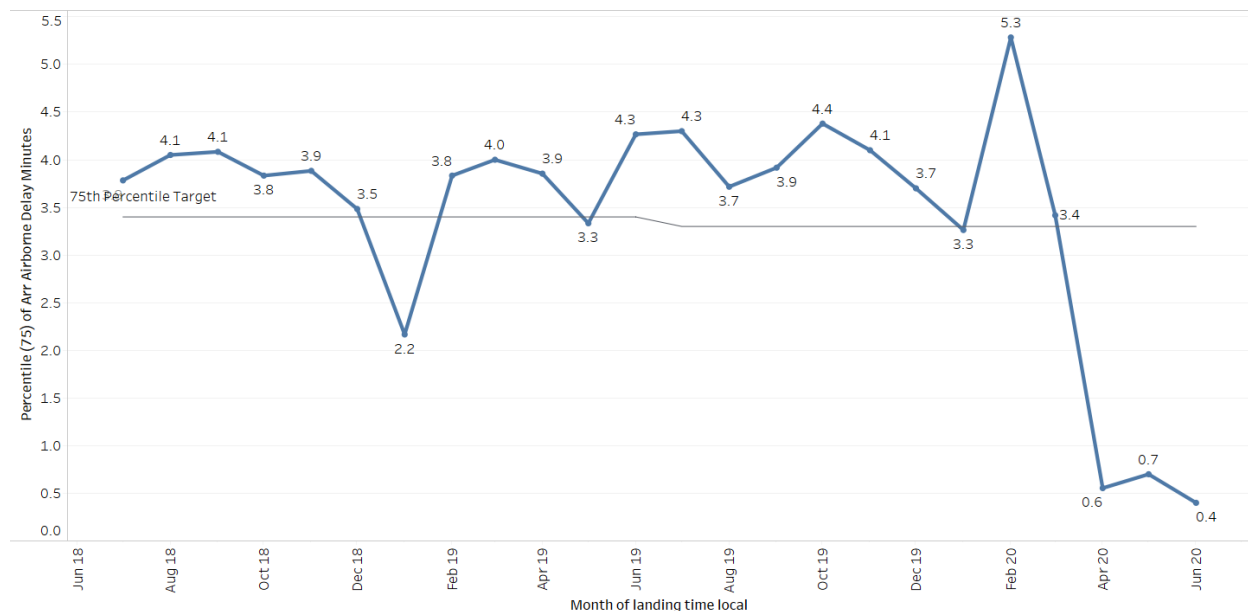


Figure 10: Brisbane airborne delay 75th percentile (last 24 months)

Traffic changes by city pair

Table 8 shows the twenty busiest Brisbane city pairs in June 2019 with a comparison to June 2020. **Table 9** shows the inverse comparison (the twenty busiest Brisbane city pairs in June 2020 with a comparison to June 2019), and a comparison to the Brisbane city pair ranking from May 2020. There were fifteen city pairs appearing in both June 2019 and June 2020 (shown in bold).

All of the top twenty Brisbane city pairs from June 2019 decreased significantly in June 2020 (by at least 32%) except Brisbane-Moranbah which increased by 73%. Brisbane-Moranbah dropped to the second busiest city pair in Australia behind Sydney-Melbourne (it was the busiest city pair in Australia in April and May 2020). Brisbane-Sydney and Brisbane-Melbourne remained the two busiest city pairs for locations outside Queensland, but they dropped from first and second overall, to second and third, respectively.

International flights made up only three of the top twenty city pairs in June 2019, this decreased to one in June 2020. Queensland flights made up ten of the top twenty city pairs in June 2019, this increased to fifteen in June 2020.

Table 8: Top 20 city pairs including Brisbane in June 2019, with comparison to June 2020 (and percent change 2019 to 2020). City pairs in bold appear in both months.

No.	City pair	Flight count (2019)	Flight count (2020)	Change (%)
1	Brisbane-Sydney	2887	554	-80.81
2	Brisbane-Melbourne	2034	414	-79.65
3	Brisbane-Cairns	928	232	-75.00
4	Brisbane-Rockhampton	828	354	-57.25
5	Brisbane-Townsville	818	250	-69.44
6	Brisbane-Mackay	655	312	-52.37
7	Brisbane-Canberra	538	92	-82.90
8	Brisbane-Adelaide	520	36	-93.08
9	Brisbane-Perth	493	37	-92.49
10	Brisbane-Gladstone	474	91	-80.80
11	Brisbane-Williamstown	465	12	-97.42
12	Auckland-Brisbane	428	49	-88.55
13	Brisbane-Bundaberg	405	149	-63.21
14	Brisbane-Emerald	380	260	-31.58
15	Singapore-Brisbane	360	34	-90.56
16	Brisbane-Moranbah	336	581	72.92
17	Brisbane-Hervey Bay	278	91	-67.27
18	Brisbane-Darwin	247	49	-80.16
19	Brisbane-Roma	216	145	-32.87
20	Bali-Brisbane	174	0	-100.00

Table 9: Top 20 city pairs including Brisbane in June 2020, with comparison to June 2019 (and percent change 2019 to 2020), and a comparison to the May 2020 ranking. City pairs in bold appear in both June 2019 and 2020.

No.	City pair	Flight count (2019)	Flight count (2020)	Change (%)	May 2020 rank
1	Brisbane-Moranbah	336	581	72.92	1
2	Brisbane-Sydney	2887	554	-80.81	2
3	Brisbane-Melbourne	2034	414	-79.65	4
4	Brisbane-Rockhampton	828	354	-57.25	3
5	Brisbane-Mackay	655	312	-52.37	5
6	Brisbane-Emerald	380	260	-31.58	6
7	Brisbane-Townsville	818	250	-69.44	7
8	Brisbane-Cairns	928	232	-75.00	8
9	Brisbane-Bundaberg	405	149	-63.21	10
10	Brisbane-Roma	216	145	-32.87	9
11	Brisbane-Canberra	538	92	-82.90	16 (equal)
12	Brisbane-Gladstone	474	91	-80.80	13
12	Brisbane-Hervey Bay	278	91	-67.27	12
14	Brisbane-Sunshine Coast	66	83	25.76	11
15	Brisbane-West Wellcamp	73	71	-2.74	14
16	Brisbane-Miles	59	67	13.56	15
17	Brisbane-Mount Isa	144	55	-61.81	21
18	Auckland-Brisbane	428	49	-88.55	24
18	Brisbane-Darwin	247	49	-80.16	20
20	Brisbane-Maryborough (Qld)	43	47	9.30	22

Perth

Airborne delay

The 75th percentile performance figures for airborne delay at Perth are indicated in **Figure 11**. June performance for the median (-1.0 minutes) and the 75th percentile (0.9 minutes) met the targets. Compared to the same month last year, there was a decrease in the airborne delay median performance (from 0.2 minutes) and the 75th percentile (from 2.7 minutes).

Arrivals reduced from 5,348 in June 2019 to 2,931 in June 2020 (down 45%). Comparing average daily arrivals to May 2020, international traffic was up (4%) and domestic traffic was up (16%).

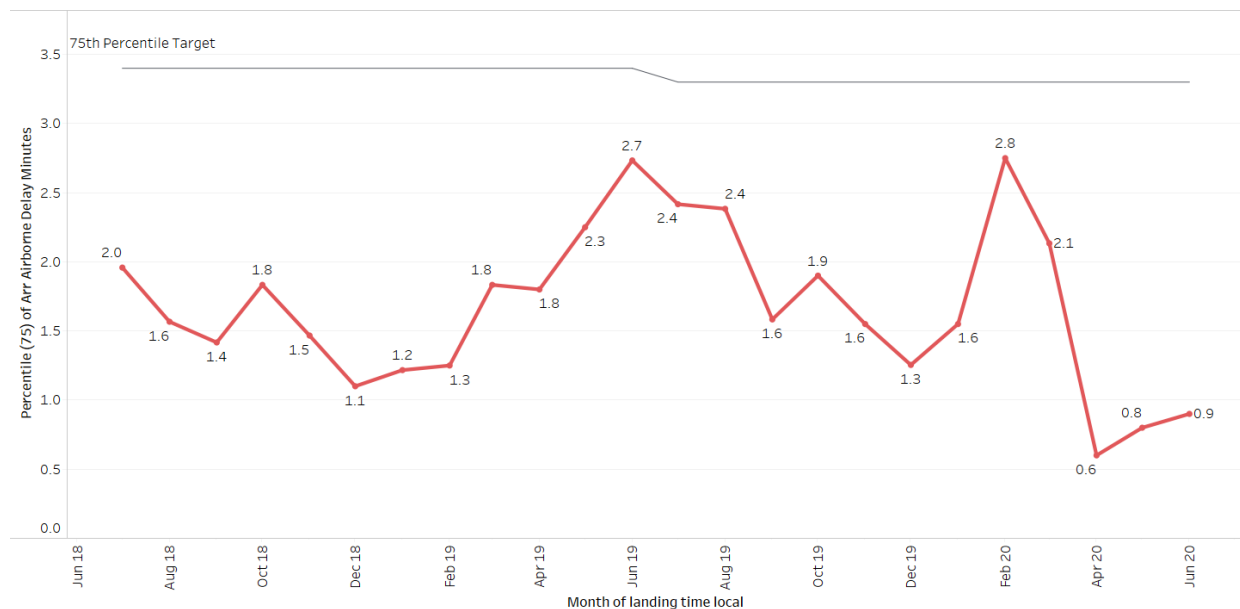


Figure 11: Perth airborne delay 75th percentile (last 24 months)

Traffic changes by city pair

Table 10 shows the twenty busiest Perth city pairs in June 2019 with a comparison to June 2020. **Table 11** shows the inverse comparison (the twenty busiest Perth city pairs in June 2020 with a comparison to June 2019), and a comparison to the Perth city pair ranking from May 2020. There were twelve city pairs appearing in both June 2019 and June 2020 (shown in bold).

All of the top twenty Perth city pairs from June 2019 decreased in June 2020 (by at least 13%) except Perth-Leinster and Perth-Coondewanna which increased by 5% and 62%, respectively. Nine of the top twenty city pairs in June 2020 had increased since June 2019. Perth-Melbourne and Perth-Sydney dropped from first and second respectively in 2019, to third and equal thirteenth in 2020.

International flights made up only three of the top twenty city pairs in June 2019, this decreased to none in June 2020. Western Australia flights made up thirteen of the top twenty city pairs in June 2019, this increased to eighteen in June 2020.

Table 10: Top 20 city pairs including Perth in June 2019, with comparison to June 2020 (and percent change 2019 to 2020). City pairs in bold appear in both months.

No.	City pair	Flight count (2019)	Flight count (2020)	Change (%)
1	Melbourne-Perth	996	266	-73.29
2	Perth-Sydney	716	110	-84.64
3	Bali-Perth	496	4	-99.19
4	Brisbane-Perth	493	37	-92.49
5	Karratha-Perth	485	252	-48.04
6	Adelaide-Perth	442	32	-92.76
7	Newman-Perth	410	302	-26.34
8	Port Hedland-Perth	404	285	-29.46
9	Singapore-Perth	380	78	-79.47
10	Kalgoorlie/Boulder-Perth	365	188	-48.49
11	Broome-Perth	334	149	-55.39
12	Kuala Lumpur-Perth	287	20	-93.03
13	Albany-Perth	208	61	-70.67
14	Paraburdoo-Perth	192	160	-16.67
15	Golden Grove-Perth	185	158	-14.59
16	Geraldton-Perth	179	75	-58.10
17	Esperance-Perth	156	46	-70.51
18	Leinster-Perth	151	159	5.30
19	Coondewanna-Perth	136	220	61.76
20	Barimunya-Perth	134	117	-12.69

Table 11: Top 20 city pairs including Perth in June 2020, with comparison to June 2019 (and percent change 2019 to 2020), and a comparison to the May 2020 ranking. City pairs in bold appear in both June 2019 and 2020.

No.	City pair	Flight count (2019)	Flight count (2020)	Change (%)	May 2020 rank
1	Newman-Perth	410	302	-26.34	2
2	Port Hedland-Perth	404	285	-29.46	3
3	Melbourne-Perth	996	266	-73.29	1
4	Karratha-Perth	485	252	-48.04	4
5	Coondewanna-Perth	136	220	61.76	5
6	West Angelas-Perth	110	200	81.82	11 (equal)
7	Kalgoorlie/Boulder-Perth	365	188	-48.49	6
8	Paraburdoo-Perth	192	160	-16.67	8 (equal)
9	Leinster-Perth	151	159	5.30	10
10	Golden Grove-Perth	185	158	-14.59	8 (equal)
11	Broome-Perth	334	149	-55.39	15
12	Barimunya-Perth	134	117	-12.69	7
13	Cape Preston-Perth	88	110	25.00	17
13	Perth-Sydney	716	110	-84.64	23
15	Mount Magnet-Perth	64	109	70.31	11 (equal)
16	Boolgeeda-Perth	104	103	-0.96	19
17	Perth-Solomon	98	100	2.04	14
18	Mount Keith-Perth	80	94	17.50	16
19	Leonora-Perth	88	92	4.55	18
20	Ginbata-Perth	68	85	25.00	39 (equal)

Appendix A

Definitions

The following terms are used to categorise delay events in this report:

1. **Significant event:** prolonged and moderately elevated airborne delay for the entire day (i.e. 75th percentile greater than 7 minutes across the entire day). In contrast to previous months, not all of these events are included under each of the airport sections. Only those categorised under the “distinctive event” terminology are included.
2. **Notable event:** shorter and more intense periods of elevated airborne delay (i.e. two or more consecutive hours where the 75th percentile was over 10 minutes). These are considered so comparisons to previous months can be made, and counts are included in the Arrival Airborne Delay KPI commentary. In contrast to previous months, not all of these events are included under each of the airport sections. Only those categorised under the “distinctive event” terminology are included.

Corporate Plan Key Performance Indicator Profile: Arrival airborne delay

Corporate Plan Description:

The median (and 75th percentile) excess time incurred during the arrival airborne phase of flight in reference to the estimated time of arrival for high-volume operations. (High volume operating environments defined as Brisbane, Melbourne, Perth and Sydney).

Corporate Plan Targets:

Year	18/19	19/20	20/21	21/22
75%	3.4	3.3	3.2	3.1
Median	0.6	0.6	0.6	0.6

What is it: Excess time incurred during the arrival phase of flight.

What is measured: It is measured by comparing the estimated flight time and actual flight time for the portion of the flight within 250 NM of the destination aerodrome.

Why 250NM: The 250NM threshold has been identified as the distance from the aerodrome at which tactical arrival demand/capacity balancing measures start taking effect. It is a true reflection of the tactical arrival management of the flight, and is not skewed by other non-related issues such as congestion at the departure aerodrome.

Why measure Median rather than Average/Mean: In some cases, the actual flight time within 250NM of the destination aerodrome will be less than the estimated flight time (e.g.: ATC has provide track shortening). In the dataset, this translates into a 'negative' value for that particular flight.

The Median shows the mid-point of the data set and allows us to demonstrate our impact on all flights, not just the ones that were delayed. Additionally, over short timeframes and small datasets (such as a daily report), Median measurement is more resilient to data errors and small groups of outliers which may skew the average.

Why measure the 75th percentile: This supplements the Median and is valuable to demonstrate how effectively we have managed the arrival of most of the fleet.

The last 25th percentile can typically contain arrival data from flights that were impacted by non-routine events, such as Medical priority traffic or aircraft in an emergency or diversion.

How do we measure:

Uses the high-fidelity Dalí aircraft trajectory model. For Sydney, some assumptions are built in to calculations as the actual flight path is unique for each flight (open STARs).