ATM Network Performance Report

May 2020

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Summary

May Performance

Network Performance in May 2020 was mainly affected by COVID-19 related traffic reductions. Across the four major airports arriving traffic in May 2020 (8,383) was down 79% from May 2019 (39,372), and down 5% compared to April 2020 (8,549) when comparing daily average traffic levels. April daily traffic levels were down 78% from March (39,745). Comparing daily average international traffic there was a 19% increase from April to May 2020 across the four major airports.

Due to this reduction in demand, Ground Delay Programs (GDPs) for Sydney, Brisbane and Melbourne have been suspended since March 27th.

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 fourth busiest (in terms of aircraft movements). Each of these airports handled many FIFO flights operating within their respective states. FIFO flights remained relatively stable, or increased in some cases, due to additional operations being provided to transit the workforce while complying with social distancing guidelines. Overall demand at Perth did decline, resulting that from May 25th GDPs for Perth have also been suspended.

The combined 75th percentile performance during May for airborne delay across the four major airports (Sydney, Melbourne, Brisbane and Perth) was **0.6** minutes, and the median airborne delay across these airports was **-1.0** 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 May.

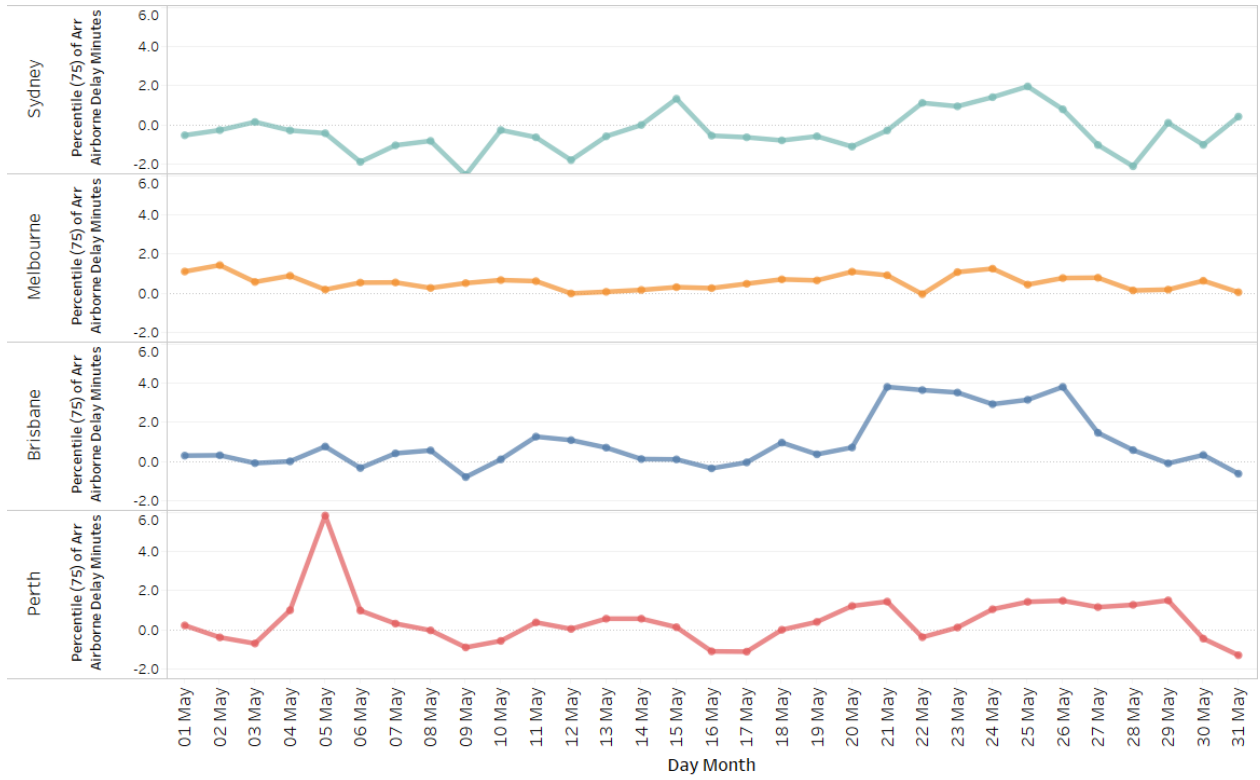The daily 75th percentile values by airport by day are shown in **Figure** 1.

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

Traffic levels and composition changes

Figure 2 shows traffic[1] levels and composition changes since the beginning of 2018.

Overall, domestic and international traffic decreased in all four major airports in comparison with May 2019 levels. The decrease continues from the initial downturn due to COVID-19 seen in February, with the drop seen in both domestic and international traffic this month being similar to the drop seen between April 2019 and 2020.

- Overall traffic: Sydney (-84.2%), Melbourne (-87.3%), Brisbane (-75.7%), and Perth (-54.6%)

- International traffic: Sydney (-67.2%), Melbourne (-78.8%), Brisbane (-88.3%), and Perth (-88.6%).

- Domestic traffic: Sydney (-89.3%), Melbourne (-89.3%), Brisbane (-73.4%) and Perth (-48.7%).
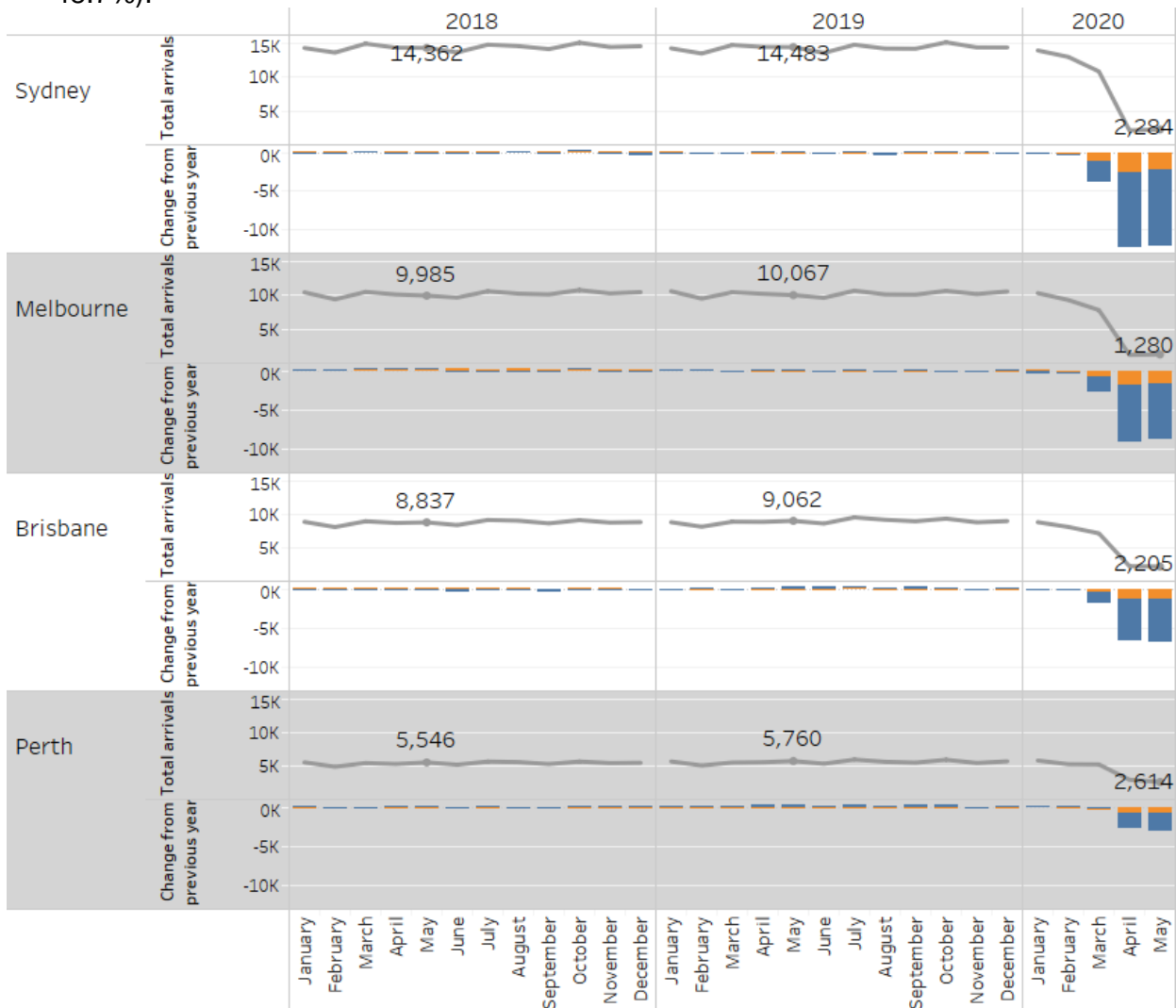
Figure 2: Traffic levels and composition change since January 2018. Grey lines show overall traffic numbers (annotated figures compare current month to same month one and two years earlier). Coloured bars show change in traffic compared to the same month the previous year for domestic (blue) and international (orange) flights.

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

Across the country flights were down 61% in May 2020 (from May 2019), the breakdown of flights by proportion of total flights is shown in **Table 1**. Comparing daily average traffic numbers, the change from April to May 2020 is:

- Overall: +5%
  - Intrastate: +5%
  - Interstate: +3%
  - International: +15%
  - International overflights: -12%

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

Market segment	May 2019	May 2020
Intrastate	47%	74%
Interstate	35%	15%
International	16%	9%
International overflights	2%	1%

The most common intrastate flights in May are (in 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 May are (in order):

- Queensland-New South Wales (both 2019 and 2020)
- New South Wales-Victoria (both 2019 and 2020)
- Queensland-Victoria (2019) and Victoria-Tasmania (2020)

Figure 3 compares traffic density between May 2020 (top) and May 2019 (bottom), which look similar to April 2020 and April 2019, respectively. The densities represent the average number of flights per day, with in the colour variations on a log scale so that enroute traffic is more visible relative to regions around busy airports. Traffic noticeably decreases in May 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 May 2020. As a result, Adelaide became the fourth busiest airport in April 2020, surpassing Melbourne, and keeps this ranking in May. Finally, the route between Sydney and Asia appears relatively stable compared to the previous year.

Table 2 shows the twenty busiest city pairs in May 2019 with a comparison to May 2020. **Table 3** shows the twenty busiest city pairs in May 2020 with a comparison to May 2019, and a comparison to the city pair ranking from April 2020. Of the top 20 city pairs in May 2019 only nine remained in the top 20 in May 2020 (all of these decreasing by at least 50%). Of the top 20 city pairs in May 2020 only three increased since May 2019 (all of these increasing by at least 29%), these were Brisbane-Moranbah, Olympic Dam-Adelaide and Coondewanna-Perth. The number of intrastate city pairs increased from five in May 2019 to thirteen in May 2020. The number of international city pairs in the top twenty increased from two in May 2019 (Sydney-Auckland and Sydney-Singapore) to three in May 2020 (with the addition of Sydney-Hong Kong). The three busiest city pairs in May 2019 were Sydney-Melbourne, Sydney-Brisbane and Melbourne-Brisbane, respectively, by a large margin from the next busiest city pair – these dropped to second, third and sixth place, respectively, in May 2020.

Figure 4 shows traffic levels by month over the last 15 months broken down into various categories (operators, types of flight etc.).
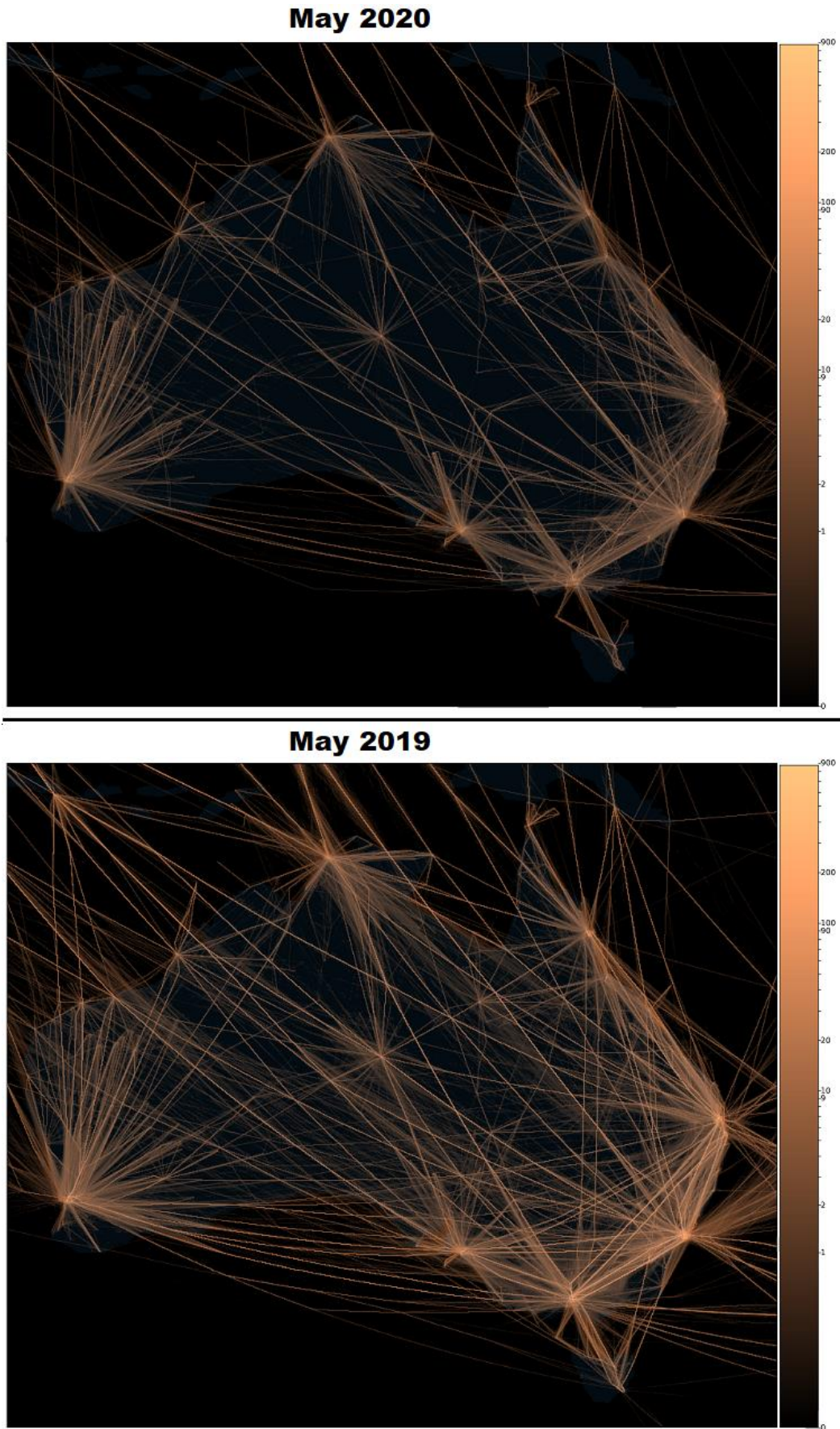
Figure 3: Traffic density comparison. May 2020 (top) and May 2019 (bottom). Flights per day are shown on a log scale to make the enroute traffic more visible relative to regions near busy airports.
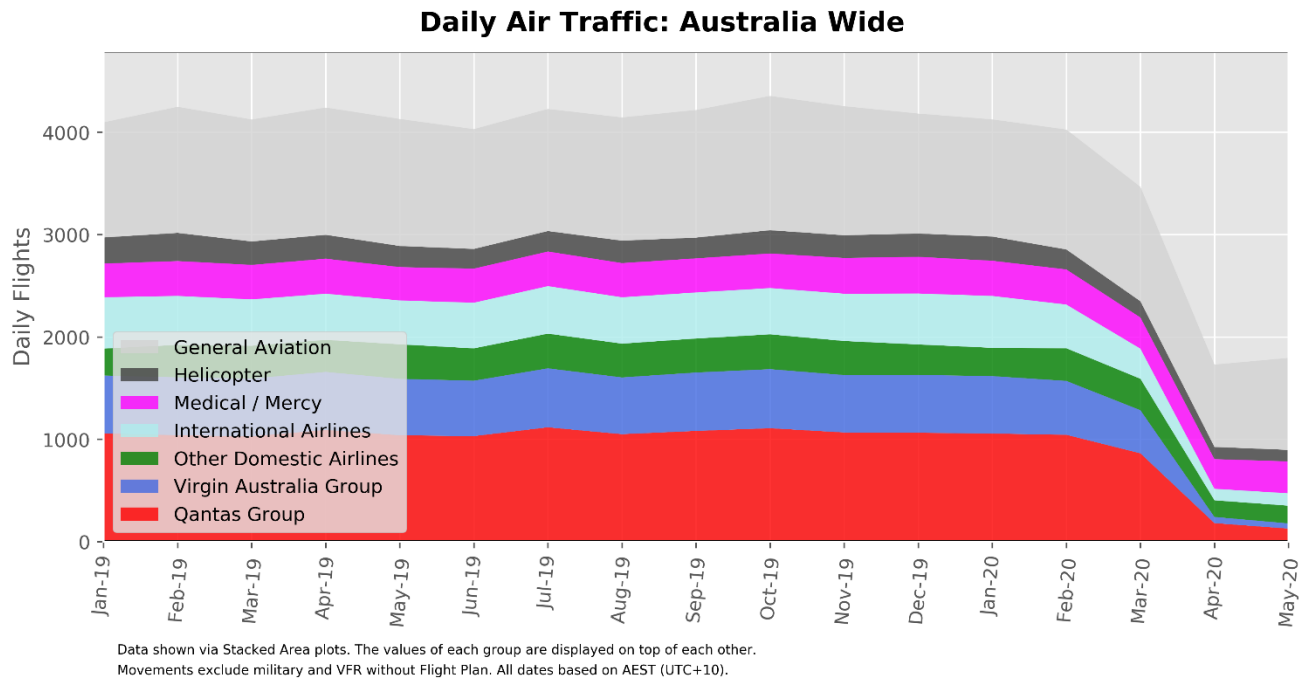
Table 2: Top 20 city pairs in May 2019, with comparison to May 2020 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Melbourne-Sydney	4908	389	-92.07
Brisbane-Sydney	3085	381	-87.65
Brisbane-Melbourne	2078	304	-85.37
Canberra-Sydney	1581	95	-93.99
Melbourne-Adelaide	1548	170	-89.02
Gold Coast-Sydney	1504	33	-97.81
Adelaide-Sydney	1106	133	-87.97
Melbourne-Perth	1041	282	-72.91
Melbourne-Canberra	983	88	-91.05
Brisbane-Cairns	954	161	-83.12
Gold Coast-Melbourne	903	0	-100.00
Auckland-Sydney	895	240	-73.18
Brisbane-Rockhampton	877	325	-62.94
Hobart-Melbourne	865	88	-89.83
Brisbane-Townsville	849	197	-76.80
Perth-Sydney	754	68	-90.98
Adelaide-Port Lincoln	748	141	-81.15
Launceston-Melbourne	728	127	-82.55
Brisbane-Mackay	706	234	-66.86
Singapore-Sydney	591	294	-50.25

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

City pair	Flight count (2019)	Flight count (2020)	Change (%)	April 2020 rank
Brisbane-Moranbah	345	535	55.07	1
Melbourne-Sydney	4908	389	-92.07	3
Brisbane-Sydney	3085	381	-87.65	2
Olympic Dam-Adelaide	288	372	29.17	4
Brisbane-Rockhampton	877	325	-62.94	7
Brisbane-Melbourne	2078	304	-85.37	9
Singapore-Sydney	591	294	-50.25	17
Melbourne-Perth	1041	282	-72.91	11
Newman-Perth	396	271	-31.57	6
Port Hedland-Perth	449	260	-42.09	5
Cairns-Townsville	531	259	-51.22	13
Auckland-Sydney	895	240	-73.18	23
Hong Kong-Sydney	425	236	-44.47	16
Brisbane-Mackay	706	234	-66.86	8
Brisbane-Emerald	395	220	-44.30	12
Karratha-Perth	525	220	-58.10	10
Coondewanna-Perth	163	217	33.13	14
Brisbane-Townsville	849	197	-76.80	21
Adelaide-Port Augusta	260	182	-30.00	15
Kalgoorlie/Boulder-Perth	430	171	-60.23	19

Daily Air Traffic: Australia Wide

Data shown via Stacked Area plots. The values of each group are displayed on top of each other.
Movements exclude military and VFR without Flight Plan. All dates based on AEST (UTC+10).

Figure 4: Traffic levels, shown as average daily flights by month, since January 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**.
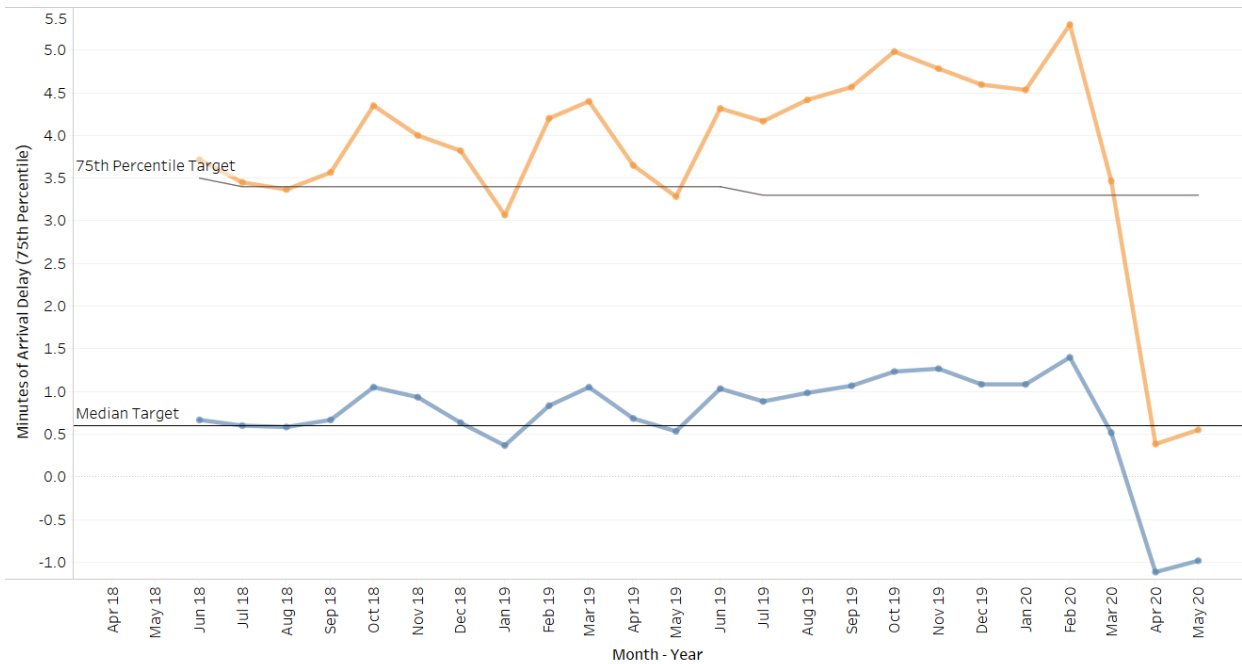
Figure 5: 24-month trend for airborne delay

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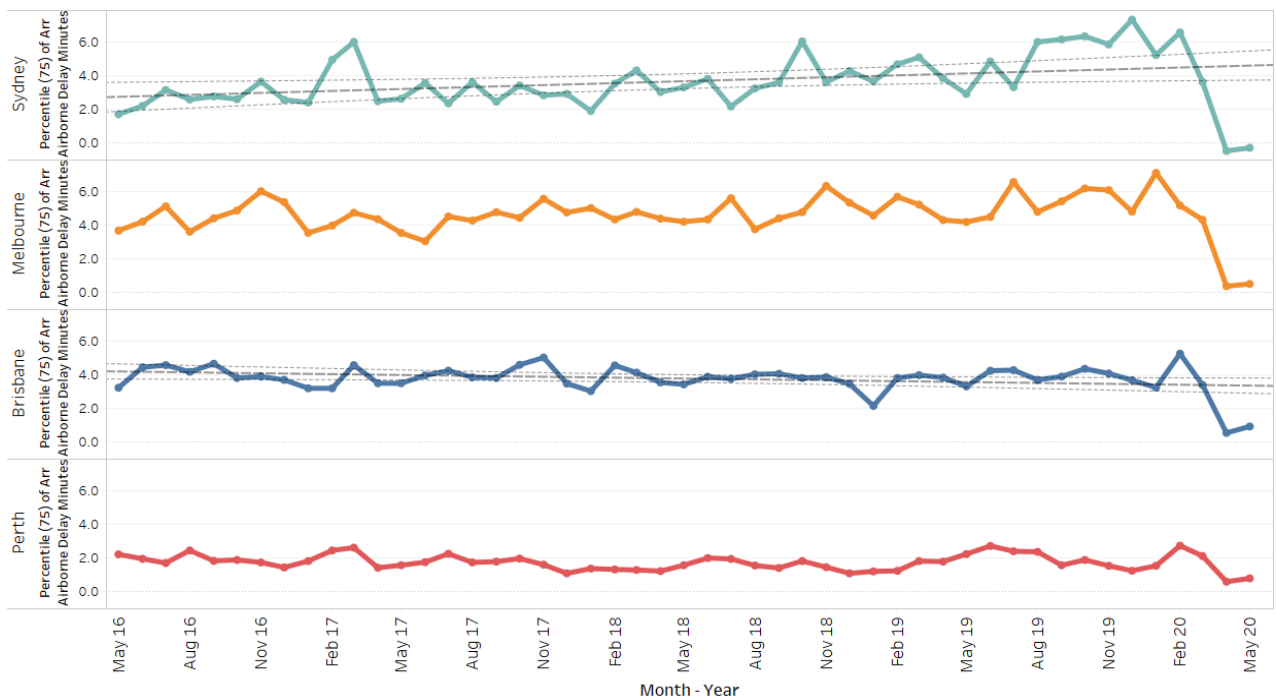
Figure 6: 48-month trend for airborne delay (75th percentile) by airport

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	May 2019	February 2020	March 2020	April 2020	May 2020
Sydney	34A/34D	57% (302)	42% (206)	31% (162)	42% (213)	44% (232)
	16A/16D	30% (159)	56% (275)	64% (337)	38% (194)	51% (267)
	SODPROPS (Single)	6% (33)	1% (4)	4% (20)	16% (81)	5% (26)
	25A/25D (Single)	4% (23)			3% (17)	
	25A/16D	2% (10)		0% (2)	1% (4)	
	07A/16D			1% (6)		
	34A/25D				0% (1)	0% (1)
	07A/07D (Single)		2% (8)			
	CURFEW					0% (1)
Melbourne	16A/27D	26% (145)	47% (246)	25% (138)	14% (78)	6% (33)
	27A - 27/34D	28% (159)	6% (33)	8% (44)	30% (160)	15% (81)
	34A/34D (Single)	25% (142)	4% (19)	28% (156)	18% (99)	45% (252)
	16A/16D (Single)	1% (5)	17% (91)	27% (150)	6% (32)	24% (135)
	27/34 LAHSO	11% (60)	3% (17)	1% (8)		
	27A/27D (Single)	8% (47)	5% (24)	5% (28)	23% (125)	8% (47)
	09A/09D (Single)		0% (2)		9% (46)	2% (10)
	09A/16D		17% (90)	6% (34)		
Brisbane	19A/19D (Single)	72% (382)	44% (219)	64% (338)	62% (314)	84% (444)
	01A/01D (Single)	17% (90)	51% (251)	31% (163)	38% (196)	16% (83)
	01/14A 01D	9% (48)	4% (20)	5% (26)		
	01/32A 01D	1% (7)	1% (3)			
Perth	21A/21D (Single)	49% (229)	16% (75)	11% (56)	11% (53)	31% (154)
	03A/03D (Single)	51% (235)	5% (25)	2% (12)	11% (54)	37% (184)
	21/24A 21D		30% (140)	36% (177)	54% (257)	11% (57)
	03A 06/03D		43% (200)	15% (73)	24% (116)	13% (63)
	06A/06D (Single)		4% (18)	23% (113)		1% (7)
	24A/24D (Single)		1% (6)	13% (65)		6% (31)

Figure 7: May 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 decreased by 23% compared to the same month last year (232 hours compared to 302 hours in May 2019). Additionally, the use of parallel 16 operations increased by 68% (267 hours compared to 159 hours in May 2019). The overall single runway usage (runway 07/25 and SODPROPS) decreased by 54% compared to the same month last year (26 hours compared to 56 hours in May 2019), SODPROPS was the predominate 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 60 hours in May 2019 to zero hours in May 2020. Due to low demand the use of LAHSO (higher capacity) was not required. Single runway usage increased by 129% (444 hours compared to 194 hours in May 2019).

Brisbane had single runway operations for 90% of the time in May 2019 and 100% of the time in May 2020 with Runway 14/32 being utilised for parking. Single runway 01 operations decreased by 8% compared to the same month last year (83 hours compared to 90 hours in May 2019). Single runway 19 operations increased by 16% (444 hours compared to 382 in May 2019). The use of two runways for arrivals in Brisbane decreased from 55 hours in May 2019 to zero hours in May 2020.

Perth was required to use single runway operations for 76% of the time in May 2020. Single runway operations are 19% lower compared to the same month last year (376 hours compared to 464 hours in May 2019). Changes to reporting at Perth now capture weekend operating configurations. This can make comparisons of year-on-year differences difficult (May 2019 had 464 hours, compared to May 2020 having 496 hours of recorded runway usage). However, typically weekends at Perth have low traffic volumes which favour single runway configurations.
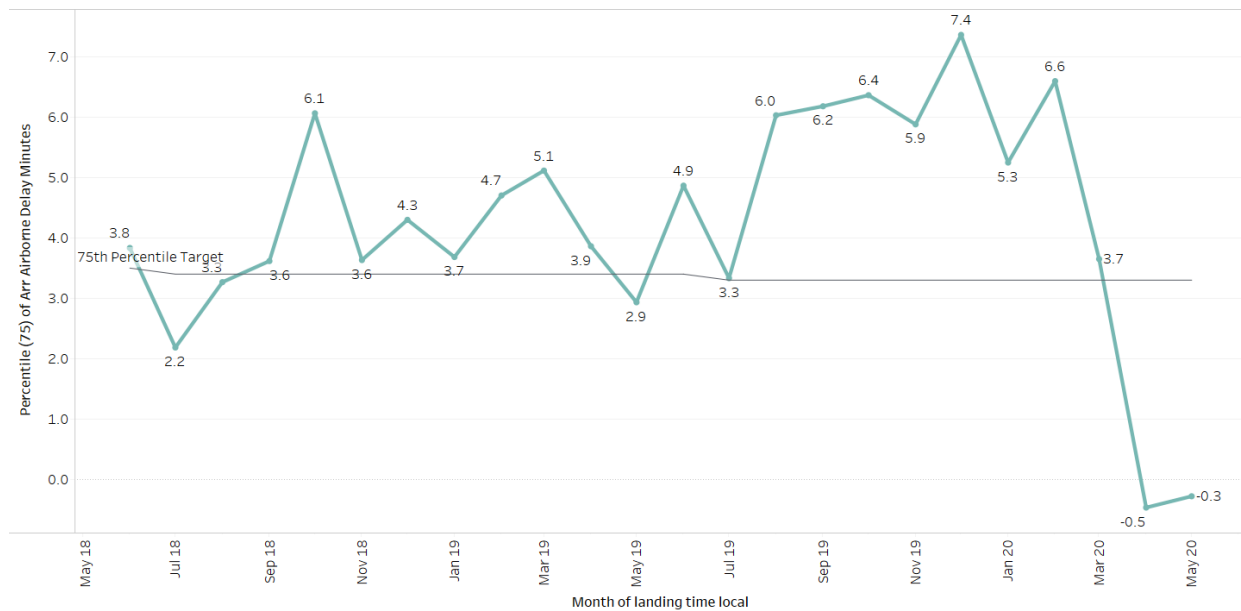
Sydney

Airborne delay

The 75th percentile performance figures for airborne delay at Sydney are indicated in **Figure 8.** May performance for the median (-2.2 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 (from 0.2 minutes) and in the 75th percentile performance (from 2.9 minutes).

Arrivals reduced from 14,483 in May 2019 to 2,284 in May 2020 (down 84%).

The long-term (48-month) trend for airborne delay at Sydney is upwards.

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 May 2019 with a comparison to May 2020. **Table 5** shows the twenty busiest Sydney city pairs in May 2020 with a comparison to May 2019, and a comparison to the Sydney city pair ranking from April 2020.

All of the top twenty Sydney city pairs from May 2019 decreased significantly in May 2020 (all by at least 44%). Sydney-Melbourne and Sydney-Brisbane remained the two busiest city pairs, respectively. Sydney flights to/from other large Queensland cities (Gold Coast, Cairns and Sunshine Coast) dropped more significantly and are no longer within the top twenty city pairs in May 2020.

International flights made up only three of the top twenty city pairs in May 2019, this increased to eleven in May 2020. New South Wales flights made up seven of the top twenty city pairs in May 2019, this dropped to four in May 2020. With Dubbo and Wagga Wagga appearing in both months; Tamworth, Albury, Coffs Harbour, Armidale and Port Macquarie only in 2019; and Williamtown and Orange only in 2020.

Table 4: Top 20 city pairs including Sydney in May 2019, with comparison to May 2020 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Melbourne-Sydney	4908	389	-92.07
Brisbane-Sydney	3085	381	-87.65
Canberra-Sydney	1581	95	-93.99
Gold Coast-Sydney	1504	33	-97.81
Adelaide-Sydney	1106	133	-87.97
Auckland-Sydney	895	240	-73.18
Perth-Sydney	754	68	-90.98
Singapore-Sydney	591	294	-50.25
Dubbo-Sydney	569	87	-84.71
Albury-Sydney	557	44	-92.10
Sydney-Wagga Wagga	534	130	-75.66
Cairns-Sydney	491	8	-98.37
Hong Kong-Sydney	425	236	-44.47
Armidale-Sydney	420	39	-90.71
Coffs Harbour-Sydney	413	44	-89.35
Hobart-Sydney	411	2	-99.51
Sunshine Coast-Sydney	409	2	-99.51
Sydney-Tamworth	397	49	-87.66
Port Macquarie-Sydney	381	40	-89.50
Avalon-Sydney	334	0	-100.00

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

City pair	Flight count (2019)	Flight count (2020)	Change (%)	April 2020 rank
Melbourne-Sydney	4908	389	-92.07	2
Brisbane-Sydney	3085	381	-87.65	1
Singapore-Sydney	591	294	-50.25	4
Auckland-Sydney	895	240	-73.18	5
Hong Kong-Sydney	425	236	-44.47	3
Sydney-Shanghai	169	160	-5.33	9
Adelaide-Sydney	1106	133	-87.97	6
Sydney-Wagga Wagga	534	130	-75.66	8
Sydney-Guangzhou	134	100	-25.37	13 (equal)
Sydney-Williamtown	239	96	-59.83	16
Canberra-Sydney	1581	95	-93.99	7
Doha-Sydney	127	91	-28.35	11
San Francisco-Sydney	113	87	-23.01	15
Dubbo-Sydney	569	87	-84.71	12
Kuala Lumpur-Sydney	201	87	-56.72	10
Los Angeles-Sydney	275	86	-68.73	21
Orange-Sydney	293	85	-70.99	19
Taoyuan-Sydney	64	72	12.50	27
Perth-Sydney	754	68	-90.98	13 (equal)
Honolulu-Sydney	237	64	-73.00	17

Melbourne

Airborne delay

The 75th percentile performance figures for airborne delay at Melbourne are indicated in **Figure 9.** April performance for the median (-0.6 minutes) and the 75th percentile (0.5 minutes) met the targets. Compared to the same month last year, there was a decrease in the airborne delay median performance (1.1 minutes), and in the 75th percentile performance (from 4.2 minutes).

Arrivals reduced from 10,067 in May 2019 to 1,280 in May 2020 (down 87%).
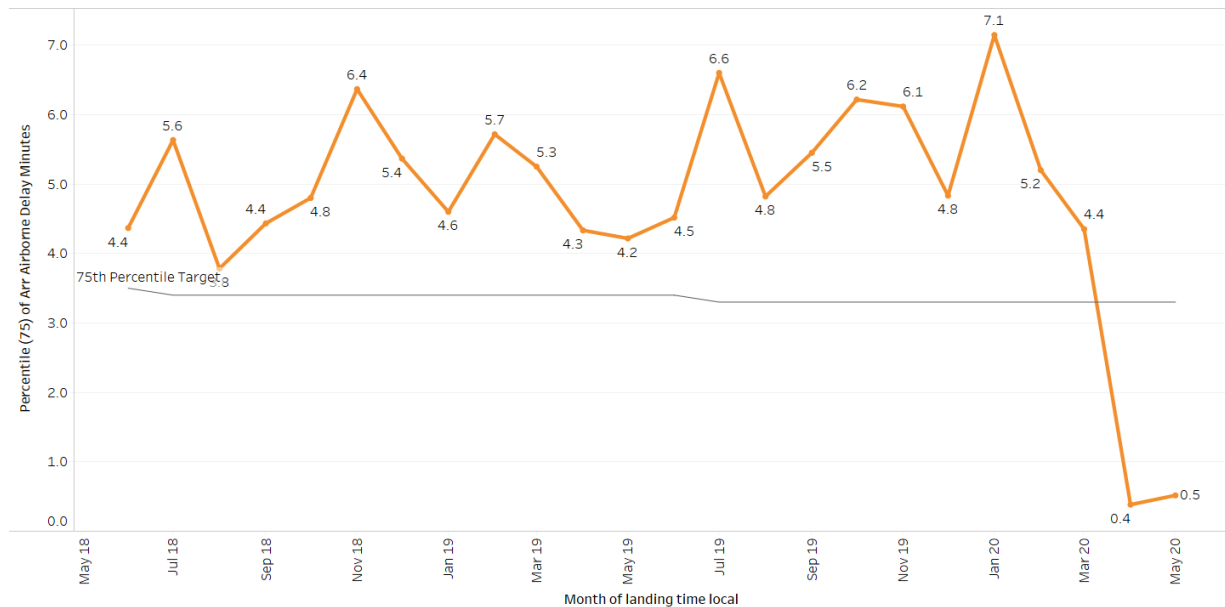
Figure 9: Melbourne airborne delay 75th percentile (last 24 months)

Traffic changes by city pair

Table 6 shows the twenty busiest Melbourne city pairs in May 2019 with a comparison to May 2020. **Table 7** shows the twenty busiest Melbourne city pairs in May 2020 with a comparison to May 2019, and a comparison to the Melbourne city pair ranking from April 2020.

All of the top twenty Melbourne city pairs from May 2019 decreased significantly in May 2020 (all by at least 68%). There were two changes to the top eleven city pairs between May 2019 and May 2020, with Melbourne-Gold Coast and Melbourne-Mildura (2019) being replaced by Melbourne-Doha and Melbourne-Hong Kong (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 more significantly and are no longer within the top twenty city pairs in May 2020.

International flights made up only five of the top twenty city pairs in May 2019, this increased to ten in May 2020. Doha was the only one of these international city pairs to gain flights between 2019 and 2020 – it was outside the top twenty in May 2019 and was the seventh busiest city pair for Melbourne in May 2020.

Table 6: Top 20 city pairs including Melbourne in May 2019, with comparison to May 2020 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Melbourne-Sydney	4908	389	-92.07
Brisbane-Melbourne	2078	304	-85.37
Melbourne-Adelaide	1548	170	-89.02
Melbourne-Perth	1041	282	-72.91
Melbourne-Canberra	983	88	-91.05
Gold Coast-Melbourne	903	0	-100.00
Hobart-Melbourne	865	88	-89.83
Launceston-Melbourne	728	127	-82.55
Auckland-Melbourne	589	115	-80.48
Singapore-Melbourne	546	99	-81.87
Mildura-Melbourne	430	36	-91.63
Cairns-Melbourne	377	2	-99.47
Bali-Melbourne	309	10	-96.76
Hong Kong-Melbourne	306	98	-67.97
Melbourne-Williamtown	263	0	-100.00
Sunshine Coast-Melbourne	249	0	-100.00
Melbourne-Wynyard	243	15	-93.83
Devonport-Melbourne	228	1	-99.56
Los Angeles-Melbourne	178	12	-93.26
Melbourne-Darwin	174	2	-98.85

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

| City pair	Flight count (2019)	Flight count (2020)	Change (%)	April 2020 rank
Melbourne-Sydney	4908	389	-92.07	1
Brisbane-Melbourne	2078	304	-85.37	2
Melbourne-Perth	1041	282	-72.91	3
Melbourne-Adelaide	1548	170	-89.02	4
Launceston-Melbourne	728	127	-82.55	5
Auckland-Melbourne	589	115	-80.48	13
Doha-Melbourne	64	107	67.19	7
Singapore-Melbourne	546	99	-81.87	11
Hong Kong-Melbourne	306	98	-67.97	9
Melbourne-Canberra	983	88	-91.05	6
Hobart-Melbourne	865	88	-89.83	8
Dubai-Melbourne	128	86	-32.81	14 (equal)
Melbourne-Guangzhou	117	71	-39.32	12
Melbourne-Bankstown	75	67	-10.67	10
Kuala Lumpur-Melbourne	126	64	-49.21	17
Abu Dhabi-Melbourne	126	47	-62.70	18
Mildura-Melbourne	430	36	-91.63	16
Albury-Melbourne	148	26	-82.43	24
Melbourne-Shanghai	90	26	-71.11	14 (equal)
Melbourne-Shenzhen	22	18	-18.18	28

Brisbane

Airborne delay

The 75th percentile performance figures for airborne delay at Brisbane are indicated in **Figure 10**. May performance for the median (-0.5 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 0.9 minutes) and the 75th percentile (from 3.3 minutes).

Arrivals reduced from 9,062 in May 2019 to 2,205 in May 2020 (down 76%).
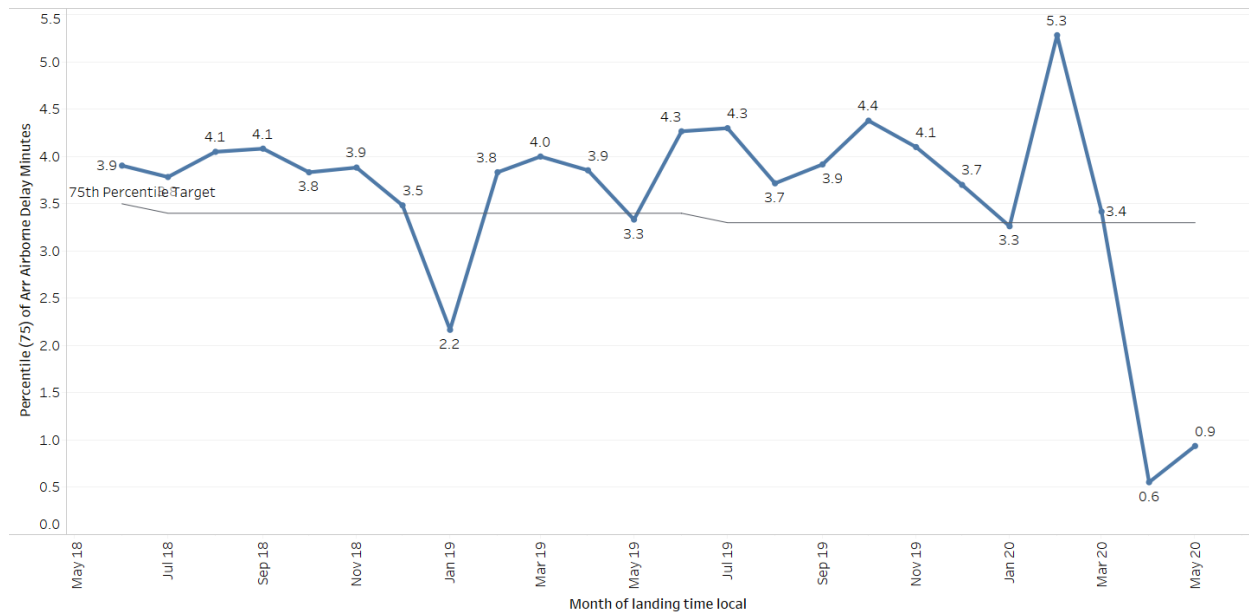
Figure 10: Brisbane airborne delay 75th percentile (last 24 months)

Traffic changes by city pair

Table 8 shows the twenty busiest Brisbane city pairs in May 2019 with a comparison to May 2020. **Table 9** shows the twenty busiest Brisbane city pairs in May 2020 with a comparison to May 2019, and a comparison to the Brisbane city pair ranking from April 2020.

All of the top twenty Brisbane city pairs from May 2019 decreased significantly in May 2020 (all by at least 35%) except Brisbane-Moranbah which increased by 55% to remain the busiest city pair in Australia (the position it claimed in April 2020). Brisbane-Sydney and Brisbane-Melbourne remained the two busiest city pairs for locations outside Queensland, but they dropped from first and second overall, respectively, to second and fourth, respectively.

International flights made up only three of the top twenty city pairs in May 2019, this decreased to two in May 2020. Queensland flights made up ten of the top twenty city pairs in May 2019, this increased to thirteen in May 2020 (all in the top fifteen).

Table 8: Top 20 city pairs including Brisbane in May 2019, with comparison to May 2020 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Brisbane-Sydney	3085	381	-87.65
Brisbane-Melbourne	2078	304	-85.37
Brisbane-Cairns	954	161	-83.12
Brisbane-Rockhampton	877	325	-62.94
Brisbane-Townsville	849	197	-76.80
Brisbane-Mackay	706	234	-66.86
Brisbane-Canberra	564	57	-89.89
Brisbane-Adelaide	547	24	-95.61
Brisbane-Perth	529	2	-99.62
Brisbane-Williamtown	494	5	-98.99
Brisbane-Gladstone	476	76	-84.03
Auckland-Brisbane	443	37	-91.65
Brisbane-Bundaberg	404	126	-68.81
Brisbane-Emerald	395	220	-44.30
Singapore-Brisbane	373	16	-95.71
Brisbane-Moranbah	345	535	55.07
Brisbane-Hervey Bay	277	83	-70.04
Brisbane-Darwin	236	46	-80.51
Brisbane-Roma	227	147	-35.24
Bali-Brisbane	188	0	-100.00

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

City pair	Flight count (2019)	Flight count (2020)	Change (%)	April 2020 rank
Brisbane-Moranbah	345	535	55.07	1
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Brisbane-Rockhampton	877	325	-62.94	3
Brisbane-Melbourne	2078	304	-85.37	5
Brisbane-Mackay	706	234	-66.86	4
Brisbane-Emerald	395	220	-44.30	6
Brisbane-Townsville	849	197	-76.80	7
Brisbane-Cairns	954	161	-83.12	9
Brisbane-Roma	227	147	-35.24	11
Brisbane-Bundaberg	404	126	-68.81	8
Brisbane-Sunshine Coast	66	88	33.33	13
Brisbane-Hervey Bay	277	83	-70.04	12
Brisbane-Gladstone	476	76	-84.03	10
Brisbane-West Wellcamp	84	66	-21.43	19
Brisbane-Miles	60	63	5.00	14
Brisbane-Bankstown	43	57	32.56	20
Brisbane-Canberra	564	57	-89.89	21 (equal)
Port Moresby-Brisbane	181	54	-70.17	18
Hong Kong-Brisbane	114	47	-58.77	25
Brisbane-Darwin	236	46	-80.51	17

Perth

Airborne delay

The 75th percentile performance figures for airborne delay at Perth are indicated in **Figure 11**. May performance for the median (-0.9 minutes) and the 75th percentile (0.8 minutes) met the targets. Compared to the same month last year, there was a decrease in the airborne delay median performance (from -0.1 minutes) and the 75th percentile (from 2.3 minutes).

Arrivals reduced from 5,760 in May 2019 to 2,614 in May 2020 (down 55%).
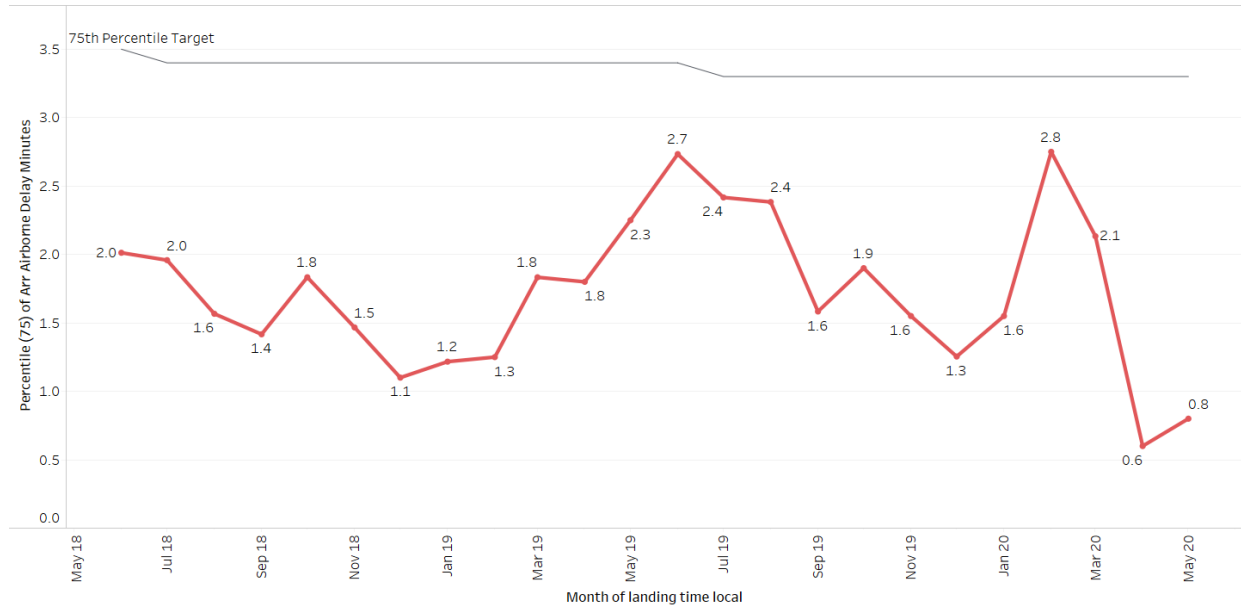
Figure 11: Perth airborne delay 75th percentile (last 24 months)

Traffic changes by city pair

Table 10 shows the twenty busiest Perth city pairs in May 2019 with a comparison to May 2020. **Table 11** shows the twenty busiest Perth city pairs in May 2020 with a comparison to May 2019, and a comparison to the Perth city pair ranking from April 2020.

All of the top twenty Perth city pairs from May 2019 decreased significantly in May 2020 (all by at least 30%) except Perth-Golden Grove and Perth-Leinster which only decreased by 23% and 11%, respectively, and Perth-Barimunya and Perth-Coondewanna which increased by 4% and 33%, respectively. Five of the top twenty city pairs in May 2020 had increased since May 2019. Perth-Melbourne remained the busiest city pair, but only by eleven flights.

International flights made up only three of the top twenty city pairs in May 2019, this decreased to one in May 2020. Western Australia flights made up thirteen of the top twenty city pairs in May 2019, this increased to eighteen in May 2020.

Table 10: Top 20 city pairs including Perth in May 2019, with comparison to May 2020 (and percent change 2019 to 2020).

City pair	Flight count (2019)	Flight count (2020)	Change (%)
Melbourne-Perth	1041	282	-72.91
Perth-Sydney	754	68	-90.98
Brisbane-Perth	529	2	-99.62
Karratha-Perth	525	220	-58.10
Bali-Perth	504	4	-99.21
Adelaide-Perth	461	14	-96.96
Port Hedland-Perth	449	260	-42.09
Kalgoorlie/Boulder-Perth	430	171	-60.23
Newman-Perth	396	271	-31.57
Singapore-Perth	379	75	-80.21
Broome-Perth	345	110	-68.12
Kuala Lumpur-Perth	278	21	-92.45
Albany-Perth	240	60	-75.00
Paraburdoo-Perth	216	151	-30.09
Geraldton-Perth	200	61	-69.50
Golden Grove-Perth	196	151	-22.96
Esperance-Perth	173	36	-79.19
Coondewanna-Perth	163	217	33.13
Barimunya-Perth	161	167	3.73
Leinster-Perth	157	140	-10.83

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

City pair	Flight count (2019)	Flight count (2020)	Change (%)	April 2020 rank
Melbourne-Perth	1041	282	-72.91	4
Newman-Perth	396	271	-31.57	2
Port Hedland-Perth	449	260	-42.09	1
Karratha-Perth	525	220	-58.10	3
Coondewanna-Perth	163	217	33.13	5
Kalgoorlie/Boulder-Perth	430	171	-60.23	6
Barimunya-Perth	161	167	3.73	10
Paraburdoo-Perth	216	151	-30.09	8
Golden Grove-Perth	196	151	-22.96	7
Leinster-Perth	157	140	-10.83	9
West Angelas-Perth	118	116	-1.69	15
Mount Magnet-Perth	72	116	61.11	14
Perth-Telfer	87	115	32.18	30
Perth-Solomon	118	111	-5.93	16
Broome-Perth	345	110	-68.12	11
Mount Keith-Perth	84	102	21.43	12
Cape Preston-Perth	104	90	-13.46	13
Leonora-Perth	96	81	-15.63	21
Boolgeeda-Perth	128	80	-37.50	17
Singapore-Perth	379	75	-80.21	28 (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).