

Sydney Basin

Aircraft Noise Information Report

Quarter 1 2016 (January to March)

Version Control

Version Number	Detail	Prepared by	Date
1	-	Environment	June 2016

© Airservices Australia. All rights reserved.

This report contains a summary of data collected over the specified period and is intended to convey the best information available from the NFPMS at the time. The system databases are to some extent dependent upon external sources and errors may occur. All care is taken in preparation of the report but its complete accuracy cannot be guaranteed. Airservices Australia does not accept any legal liability for any losses arising from reliance upon data in this report which may be found to be inaccurate.

Sydney Basin - Aircraft Noise Information Report

Contents

1	Purpose	4
1.1	Sydney Airport	4
1.2	Bankstown Airport	4
1.3	Camden Airport	4
1.4	Aircraft noise monitoring in Sydney	4
2	Flight patterns	6
2.1	Jet aircraft	6
2.2	Non jet aircraft	7
3	Aircraft Movements and Altitude	8
3.1	Jet Arrivals / Departures by Altitude	8
3.2	Non-Jet Arrival / Departures by Altitudes	10
3.3	Track density plots	11
4	Airport Statistics and Noise Events	13
4.1	Sydney Airport	13
4.2	Noise Monitoring	17
4.3	Historic Sydney Runway Statistics	24
4.4	Curfew Movements	27
4.5	Bankstown Airport	29
4.6	Camden Airport	30
5	Complaints data	31
5.1	NCIS Complainants by suburb	31
6	Airservices update	36
6.1	Community Aviation Consultation Groups	36
6.2	Noise improvements	36
7	Contact us	37
Appendix 1	Airservices update	38

1 Purpose

This report summarises data for Quarter 1 of 2016 (January to March) from Airservices Noise and Flight Path Monitoring System (NFPMS) and Noise Complaints and Information Service (NCIS) for the Sydney area (including Sydney, Bankstown and Camden airports) as well as some other sources (such as the Flight Charging System).

1.1 Sydney Airport

Sydney Airport is located on the northern shoreline of Botany Bay, 9km from the central business precinct (see Figure 1). The majority of operations at Sydney Airport are international and domestic regular passenger services, mostly medium to large jets. During Quarter 1 of 2016 there were over 84,100 movements at Sydney Airport. More information about Sydney Airport is available from the Airservices website at www.airservicesaustralia.com/aircraftnoise/airport-information/.

1.2 Bankstown Airport

Located 22km from the central business precinct (see Figure 1), Bankstown Airport is a major flight training airport. A large proportion of its operations involve circuit training¹. The airport is home to over 170 businesses and features a small passenger terminal. More information about Bankstown Airport is available from the Airservices website at www.airservicesaustralia.com/aircraftnoise/airport-information/.

1.3 Camden Airport

Camden Airport is used primarily for flight training and glider operations. The airport is located 60km from the central business precinct (see Figure 1). More information about Camden Airport is available from the Airservices website at www.airservicesaustralia.com/aircraftnoise/airport-information/.

1.4 Aircraft noise monitoring in Sydney

Airservices NFPMS captures and stores radar, flight plan and noise data. The NFPMS covers eight city regions around Australia. For the Sydney region, noise data is captured by 12 noise monitors - also known as Environmental Monitoring Units (EMUs) – located around Sydney Airport at: threshold of runway 34L at Sydney Airport, Penshurst, Bexley, East Lakes, Coogee, Sydenham, Kurnell, Annandale, St Peters, Croydon, Hunters Hill and Leichhardt.

¹ A factsheet about circuit training is available at www.airservicesaustralia.com/aircraftnoise/factsheets/

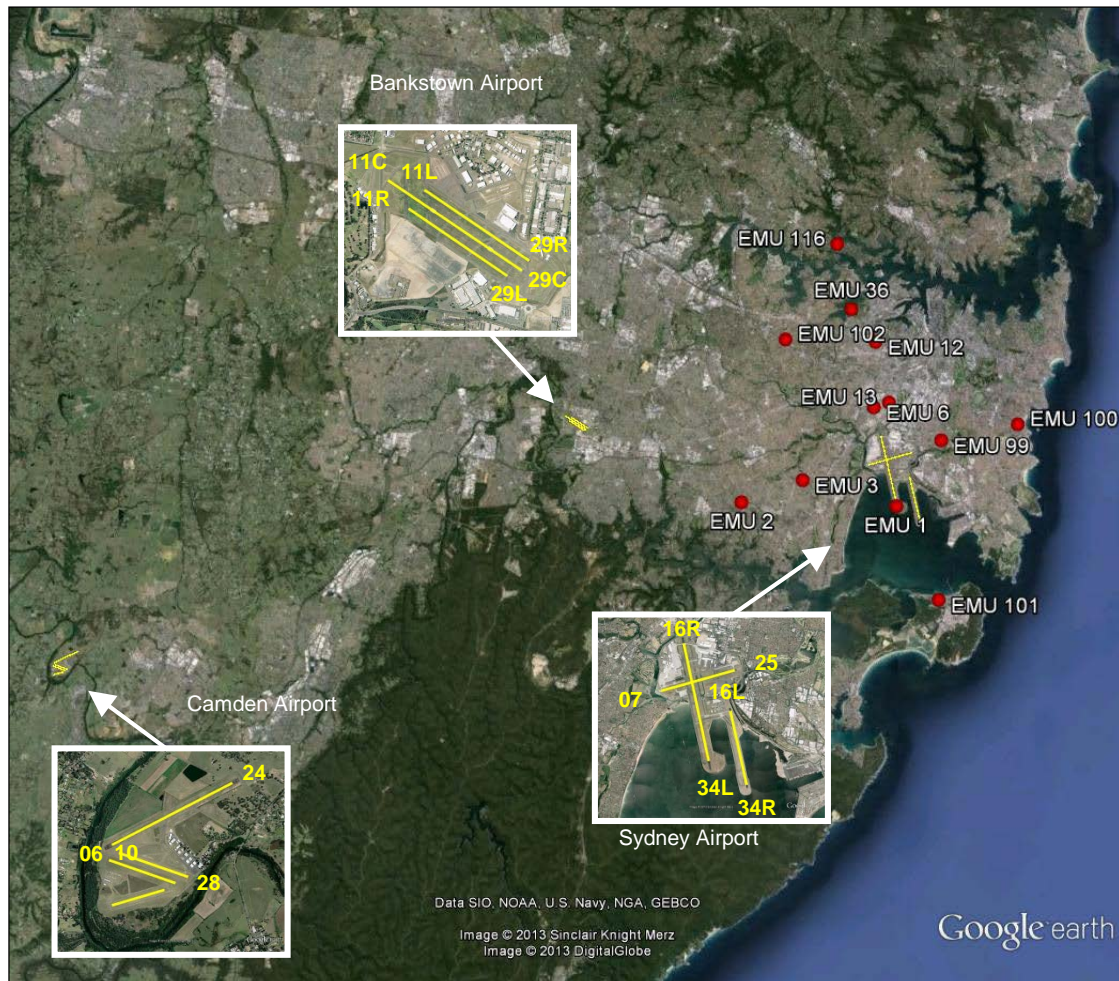


Figure 1: Location of Sydney, Bankstown and Camden airports. (Runway orientation at airports is shown in the inserts. Noise monitoring sites are shown as red dots).

Figure 1 shows runway configurations at Sydney Airport, Bankstown Airport and Camden Airport.

The main runway at Sydney Airport, 16R/34L, is 3.9 km long. There is a shorter 2.4 km long parallel runway, 16L/34R. There is also a cross runway, 07/25, 2.5km long, orientated approximately east to west.

At Bankstown Airport there is one set of three parallel runways, 11L/29R - 11C/29C - 11R/29L oriented approximately south east to north west.

Camden Airport has one long paved runway, 06/24, and a shorter grass runway, 10/28. There are also two dedicated glider strips to the south of the aerodrome.

Information about runway selection is available on the Airservices website at www.airservicesaustralia.com/aircraftnoise/factsheets/.

2 Flight patterns

Note: In Figures 2 and 3 (a) arriving aircraft are shown as red lines and departing aircraft as green lines (b) only a small number of aircraft are depicted and these flight paths are therefore much wider than those shown.

2.1 Jet aircraft

Figure 2 show typical jet aircraft track plots for arrivals and departures at Sydney Airport. Noise monitors (EMUs) are shown as blue circles.

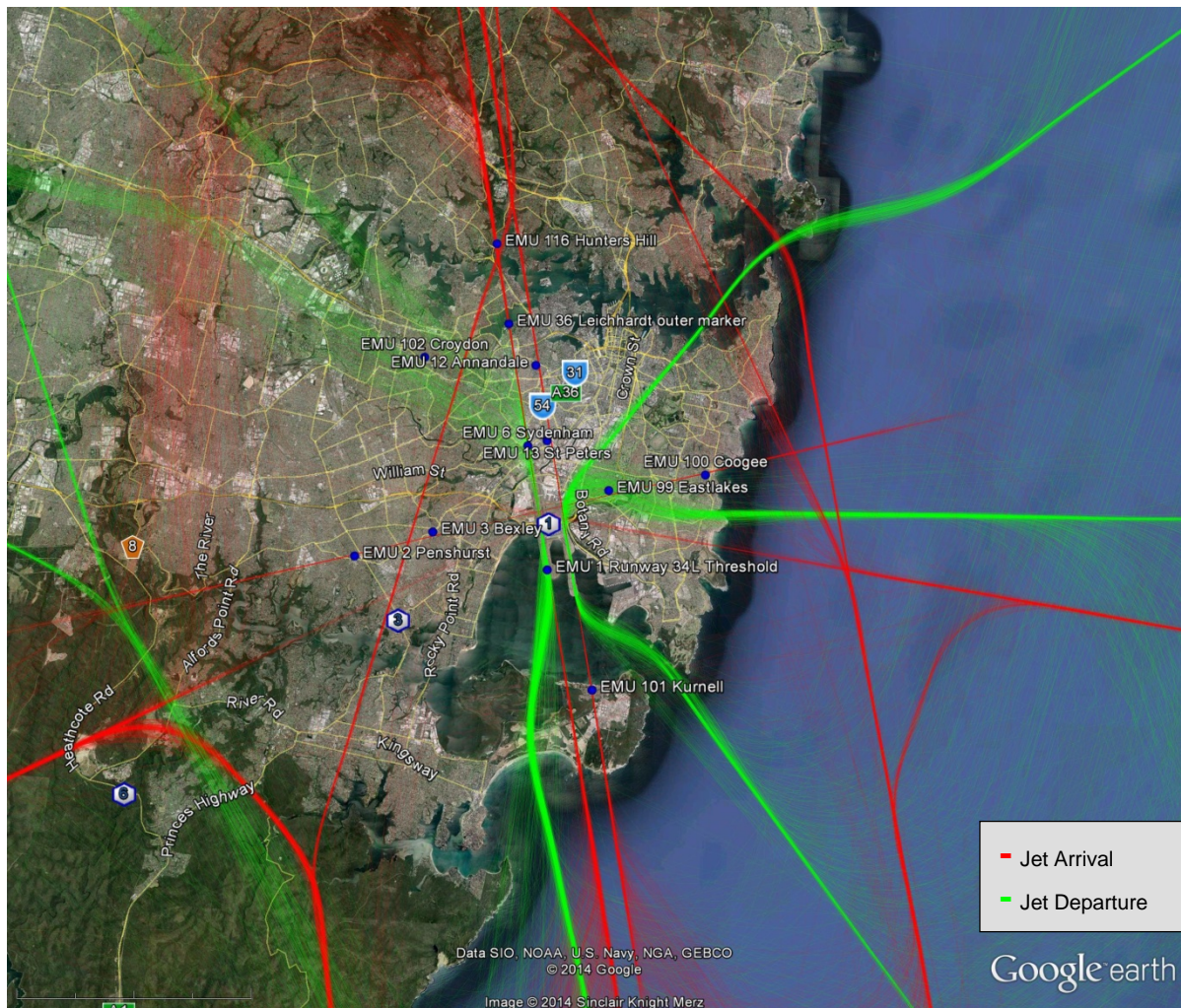


Figure 2: Jet flight paths for the Sydney region

- Over the course of an average year, a little over half of all jets approach from the south, over the ocean, with the remainder approaching from the north over residential areas.
- Jets tend to approach the runway in a straight line from around 20km out from Sydney Airport. The arrival flight paths to the south east and south west of the map turn onto a straight approach south of the area of the map.
- Over the course of an average year, jet departures are split fairly evenly between those taking off to the north over residential areas, and those taking off to the south over the ocean.
- Jets taking off from Runway 34R tend to head to the east of north-east relatively quickly after taking off.
- Jets taking off from Runway 34L tend to turn to the north-west, though the flight paths are well spread.

2.2 Non jet aircraft

Figure 3 shows non-jet tracks (arrivals and departures) at Sydney Airport. Noise monitors (EMUs) are shown as blue circles.



3 Aircraft Movements and Altitude

3.1 Jet Arrivals / Departures by Altitude

Figure 4 and Figure 5 show typical jet aircraft track plots for arrivals and departures at Sydney Airport, Bankstown Airport and Camden Airport coloured by altitude. Noise monitors (EMUs) are shown as grey circles.

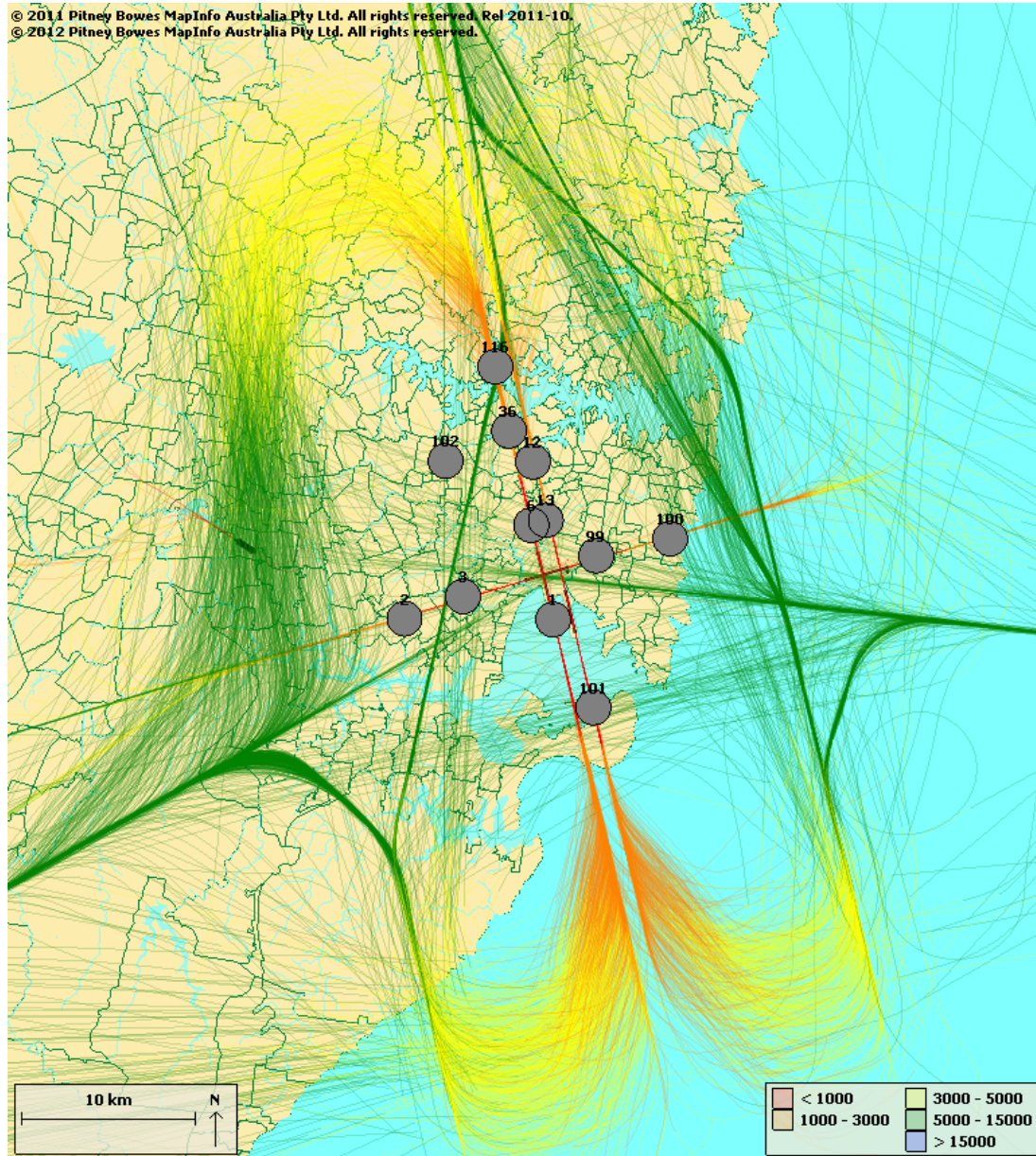


Figure 4: Jet arrivals displayed by altitude

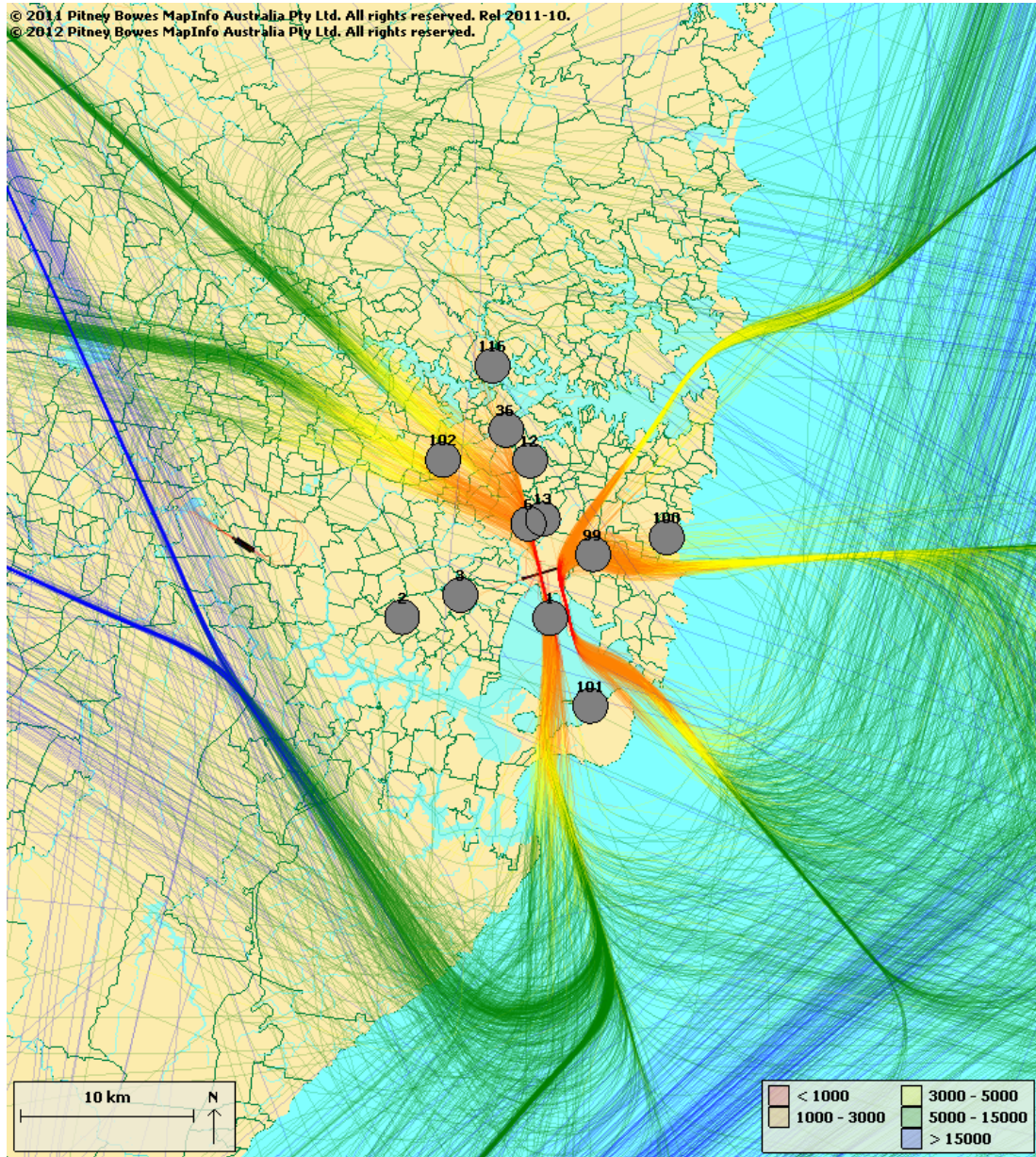


Figure 5: Jet departures displayed by altitude

Key points shown in
Figure 4 and Figure 5 are:

- Suburbs within 10km of Sydney Airport are regularly over flown by departing jets at altitudes below 5 000 feet.
- Suburbs to the north west of Sydney airport, in particular, are over flown by arriving jets below 5 000 feet.

3.2 Non-Jet Arrival / Departures by Altitudes

Figure 6 shows non-jet tracks (arrivals and departures) at Sydney and Bankstown airports coloured by altitude. Noise monitors (EMUs) are shown as grey circles.

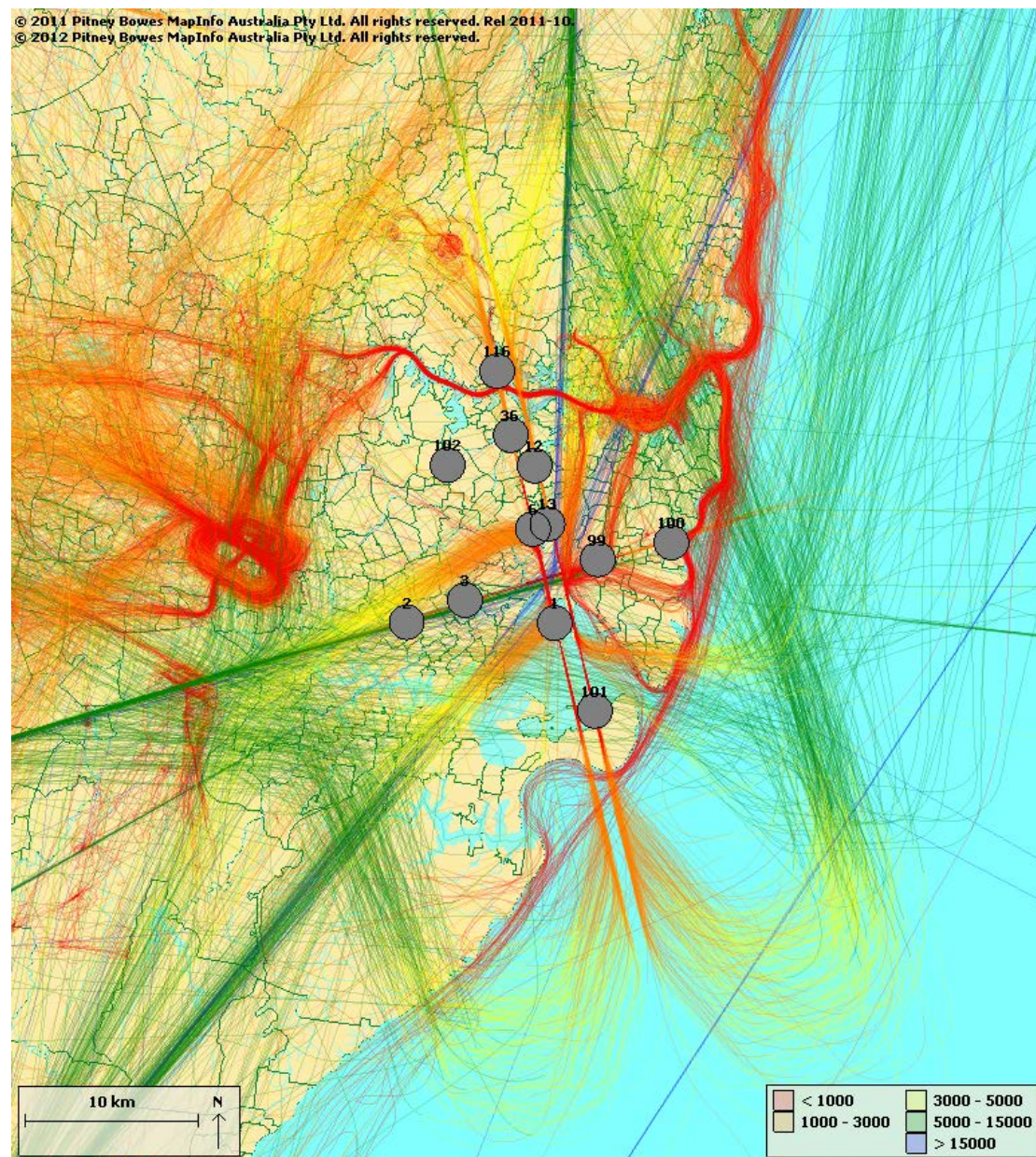


Figure 6: Non-jet operations displayed by altitude

Key points shown in Figure 6 are:

- Flights below 3 000 feet tend to be operations to and from Bankstown Airport. Propeller aircraft operating out of Sydney Airport tend to be higher, above 5 000 feet as the majority of Bankstown and Camden operations are required to stay below Sydney Airport's controlled airspace.
- Circuit (training) flights at Bankstown Airport are shown as a red-orange oval.
- The coastal route is clearly visible as a red line following the coast. Aircraft using this route are mostly general aviation aircraft flying at an altitude of around 500 feet, including coastguard and shark patrol operations.
- The red path following the Parramatta River to Sydney Harbour is flown mainly by helicopters at approximately 500 feet. This flight path was established to allow helicopters to reach the city without flying over many residential areas.

3.3 Track density plots

The track plots above show that residents living up to 15km from the airports and in line with Sydney Airport's runways are regularly over flown by jet aircraft below 5 000ft. However, beyond this the regularity of flight path use is not discernible from the track plot display. A track density plot can be useful in showing the underlying track patterns.

A track density plot is a map which displays the pattern of aircraft flight tracks passing over the region around the airport. The region is divided into a set of small grid elements and the number of flights passing over each grid element is summed. Each grid element is coloured according to the number of over flights.

Figure 7 shows a track density plot for all movements over the Sydney Basin for Quarter 1 of 2016. The grid size adopted is 200m x 200m. The colour coding from green to red represents the range two flight tracks per day to 20 (182 to 1820 flight tracks for the quarter). If any grid element is not colour coded, the number of aircraft flight tracks passing over that element during the quarter was less than two per day on average. The absence of a colour for a grid element does not mean the grid element is free of aircraft over flights. The grey circles show the location of each noise monitor (EMU).

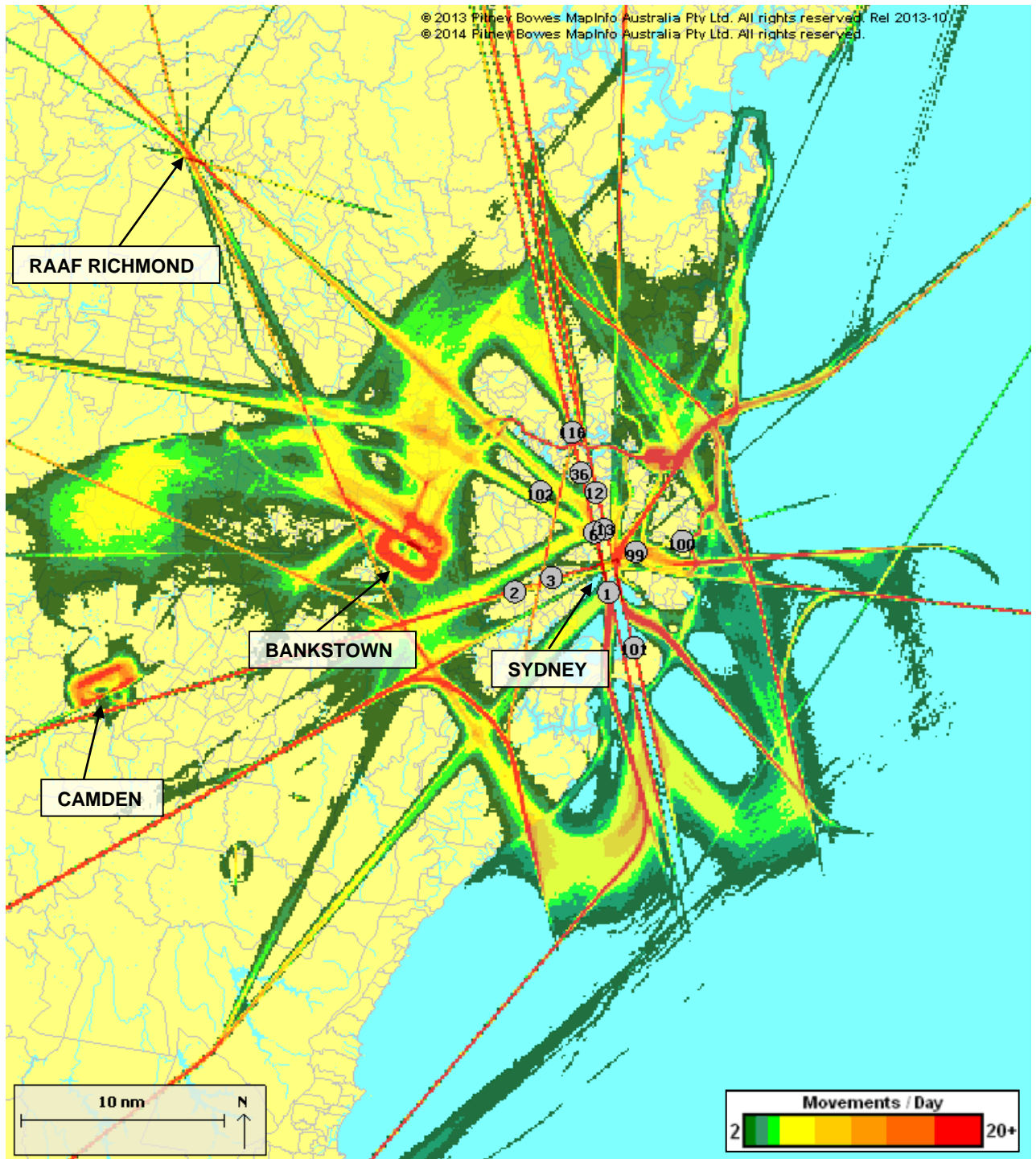


Figure 7 Track density plot for the Sydney region, Quarter 1 of 2016

Key points shown in Figure 7 are:

- There are distinct flight patterns that are regularly used to and from Sydney, Bankstown and Camden airports.
- The flight paths to and from Sydney Airport have been designed to avoid, where possible, residential areas and share the noise equitably as far as practicable. The latter has resulted in fairly equally spaced flight paths into and out of the airport.
- Circuit patterns at Bankstown and Camden airports are clearly visible, along with entry and exit lanes into the circuits.

4 Airport Statistics and Noise Events

4.1 Sydney Airport

Figure 8 shows aircraft movements at Sydney Airport for the 12 month period to the end of Quarter 1 of 2016 (including three-year average per month).

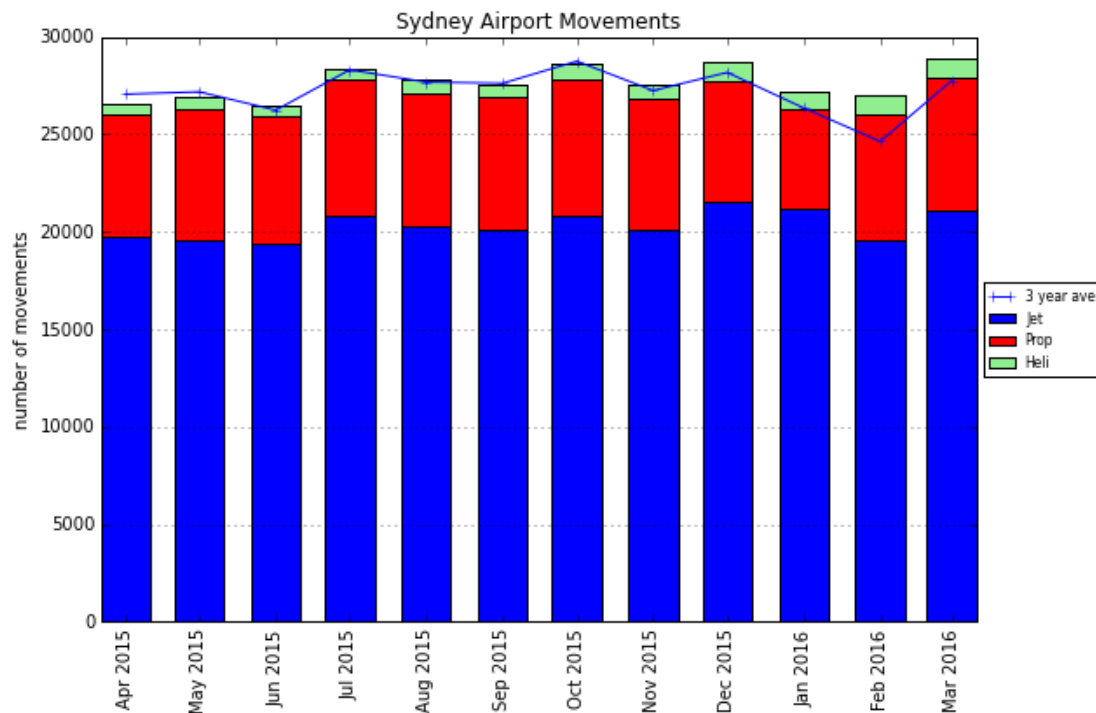


Figure 8: Aircraft movements at Sydney Airport from April 2015 to March 2016 (including three-year average per month)

Key points shown in Figure 8 are:

- Jet numbers continue to average around 20 000 movements per month for the last 12 months. Propeller aircraft numbers have remained constant at approximately 6 000 to 7 000 movements per month over the same period.
- The total number of movements in Quarter 1 of 2016 was slightly higher than the three year average.
- There are very few helicopter movements at Sydney Airport.

4.1.1 Runway Usage

Figure 9, Figure 10 and Figure 11 show runway usage for arrivals and departures at Sydney Airport for the year up to the end of Quarter 1 of 2016 (and three-year average per month). Figure 24 to Figure 27 show runway usage over a four-year period for the busiest runways at the airport.

Runway selection is based on weather conditions, traffic volume and noise abatement procedures. As the wind changes, the runway in use may change as aircraft primarily take off and land into the wind for safety and performance reasons.

A Long Term Operating Plan has been operational at Sydney airport since 1996. The aim of the Plan is to operate as many flight paths over water or non-residential land as practicable and where this is not possible, to share the noise burden of aircraft over residential land as equitably as possible.

Accordingly, the targets of the Plan are to have the majority of aircraft movements (55 per cent) to the south over water, with 17 per cent of movements to the north, 15 per cent to the west and 13 per cent to the east. More information on the Long Term Operating Plan can be found in the [LTOP Report](#).

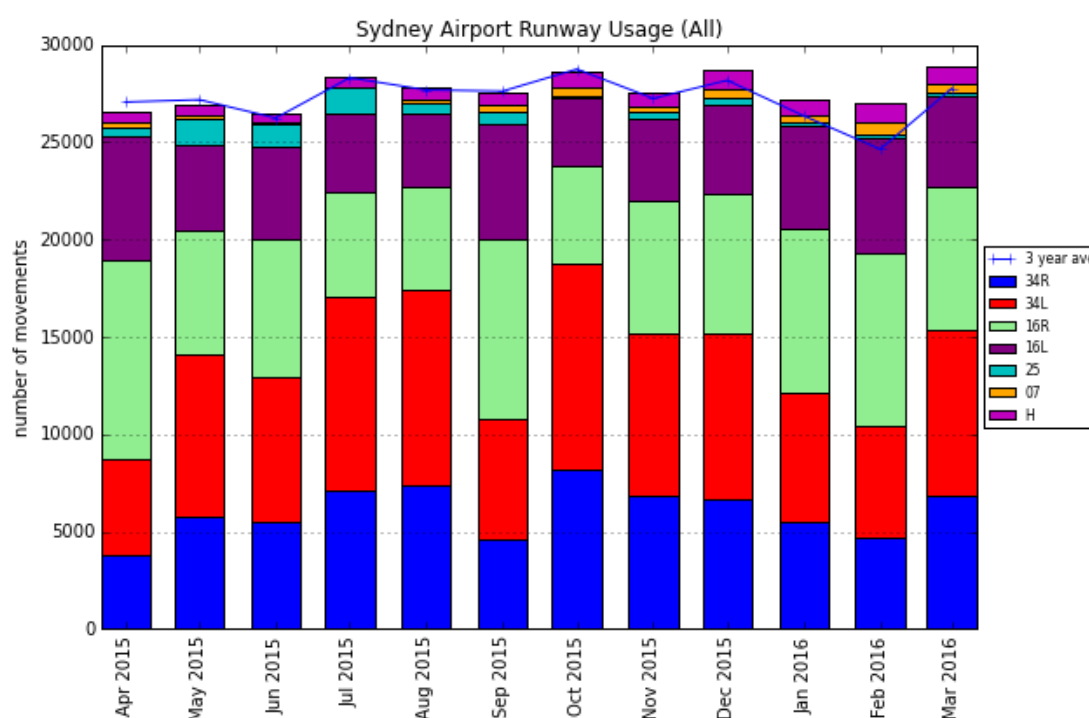


Figure 9: Runway usage (All) at Sydney Airport from April 2015 to March 2016 (including three-year average per month)

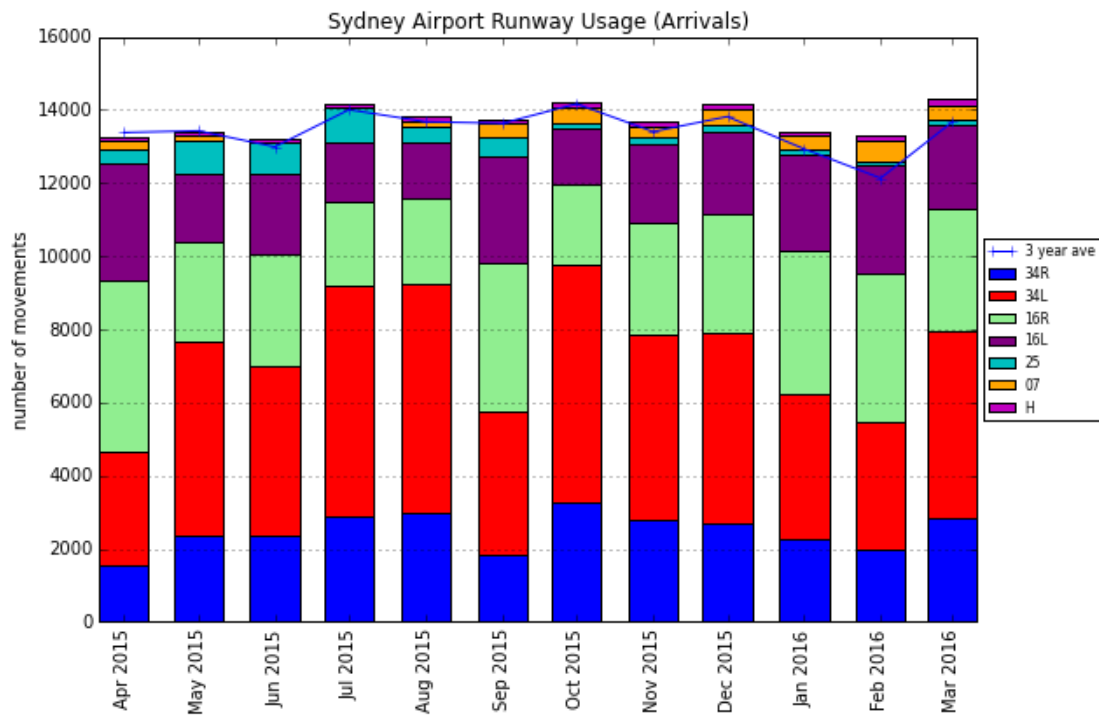


Figure 10: Runway usage (arrivals) at Sydney Airport from April 2015 to March 2016 (including three-year average per month)

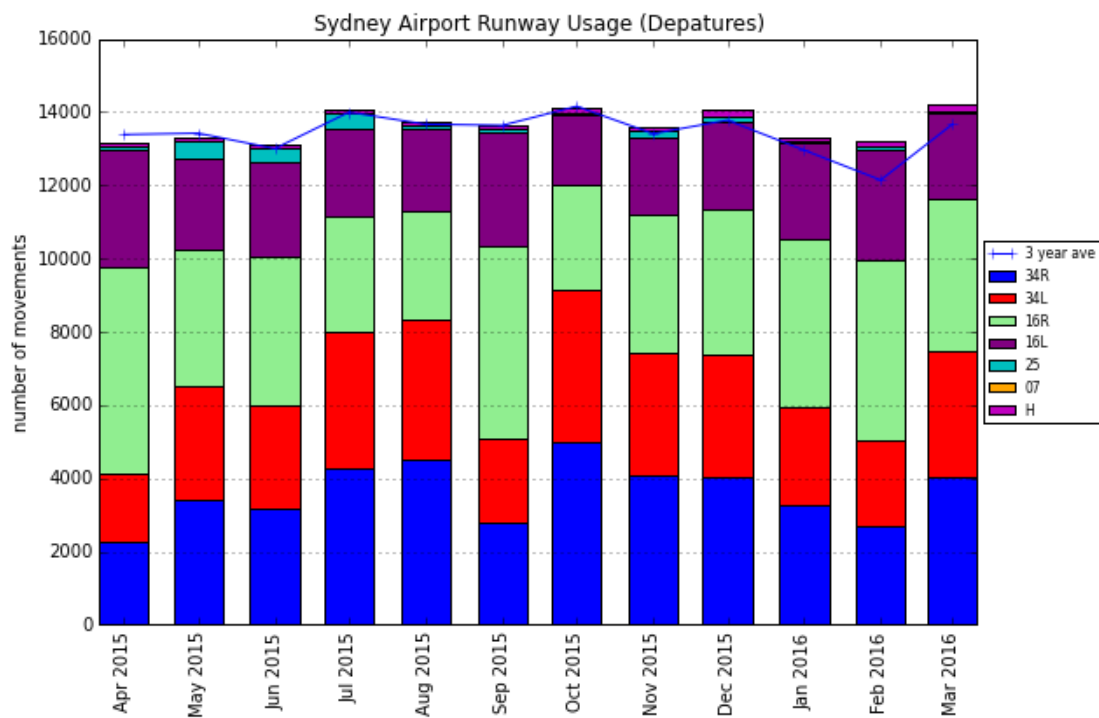


Figure 11: Runway usage (departures) at Sydney Airport from April 2015 to March 2016 (including three-year average per month)

Key points shown in Figure 8 to Figure 11 are:

- During Quarter 1 of 2016, use of the 16 direction (mainly Runway 16R) was higher than in previous quarters. This means that aircraft departed over water to the south and arrived from the north.
- The cross runway (07-25) was used for a small number of arrivals and departures during Quarter 1 2016.
- Overall, the main runway (16R-34L) was used more than the other runways.

4.2 Noise Monitoring

Airservices collects noise and operational data from noise monitors (EMUs) around Sydney Airport. This data can be expressed in a number of ways, to show average noise during a period, background noise levels and number of noise 'events' over a certain threshold.

Sound is measured on a logarithmic scale with the decibel (dBA) as the unit of measure. The sound level of typical daytime urban-based activities can vary between 40 dBA and 80 dBA.

Figure 12 to Figure 23 shows data from the 12 Sydney EMUs for the last 15 months (see Figure 1 for the location of EMUs). The term *N65* refers to the average number of daily noise events caused by aircraft that are over 65 dBA. Similarly, figures for *N70*, *N80* and *N90* are also provided.

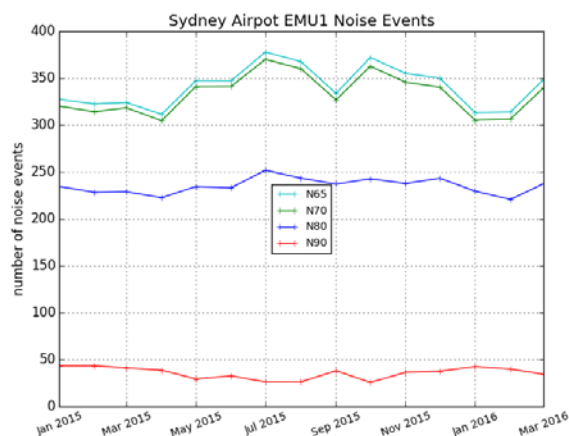


Figure 12: Average daily noise events at EMU 1 (left) and EMU location and representation of flight paths captured by EMU (right)

The key points shown are:

- Captures departures from 16R and 16L.
- Captures arrivals to 34L and 34R.
- The number of aircraft noise events captured by EMU 1 reflects the pattern of use of Runway 34 L, with more events generally recorded in winter than in summer.

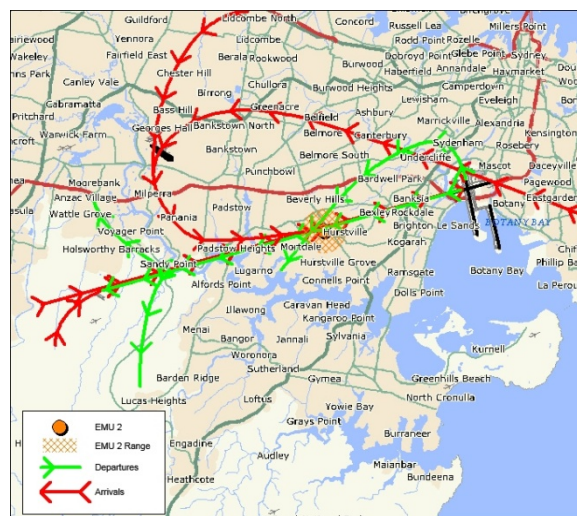
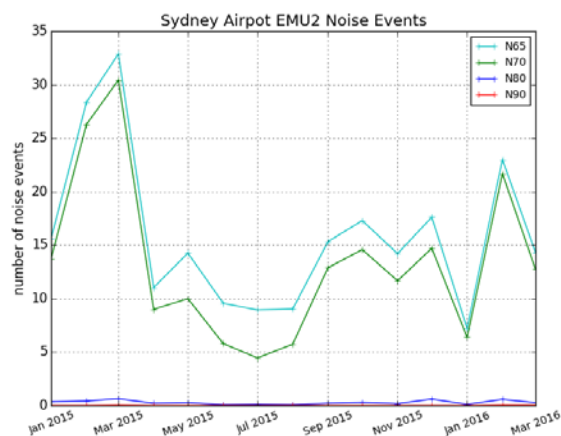


Figure 13: Average daily noise events at EMU 2 (left) and EMU location and representation of flight paths captured by EMU (right)

The key points shown are:

- Captures arrivals to Runway 07 and departures off Runway 25.
- Historically at Sydney Airport there are less departures off Runway 25 than the other Runways.
- The rise in noise events recorded at this monitor from November 2014 to March 2015 reflects the increased number of arrivals to Runway 07 during those months.

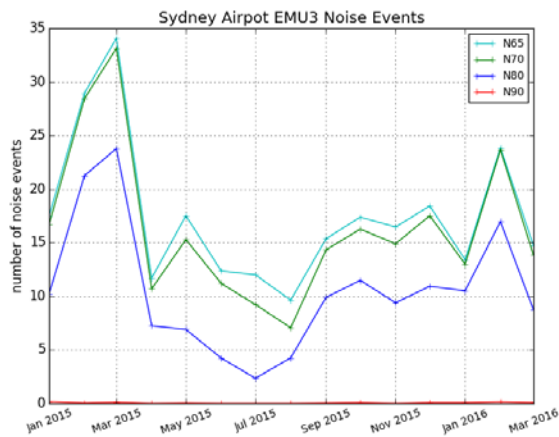


Figure 14: Average daily noise events at EMU 3 (left) and EMU location and representation of flight paths captured by EMU (right)

The key points shown are:

- Captures arrivals to Runway 07 and departures off Runway 25.
- EMU 3 is in line with the same runway as EMU 2 (Penshurst). It is closer to the airport and therefore records more aircraft noise events, displaying the same trends as EMU 2.
- The rise in noise events recorded at this monitor from November 2014 to March 2015 reflects the increased number of arrivals to Runway 07 during those months.

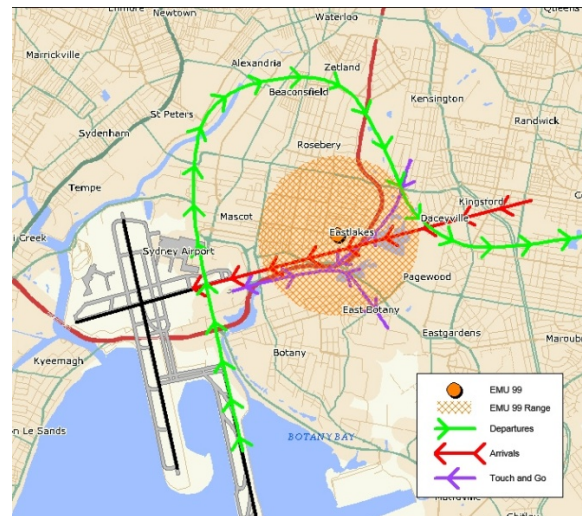
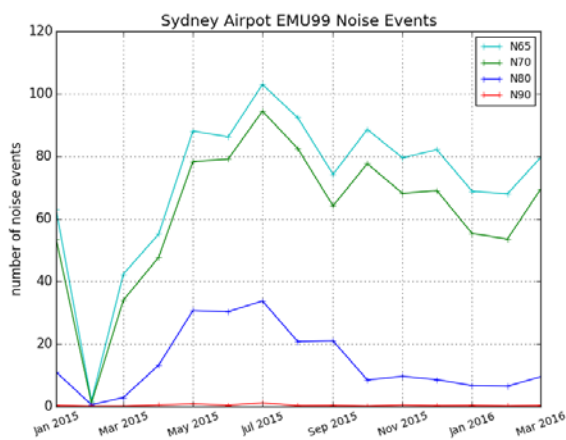


Figure 15: Average daily noise events at EMU 99 (left) and EMU location and representation of flight paths captured by EMU (right)

The key points shown are:

- Captures arrivals to Runway 25, departures from Runway 07 and departures from Runway 34R.
- The pattern of aircraft noise events recorded by EMU 99 reflects the seasonal use of Runway 34R, with more movements in winter than in summer.
- This monitor experienced a power outage during the month of February 2015. This is reflected above in the chart.

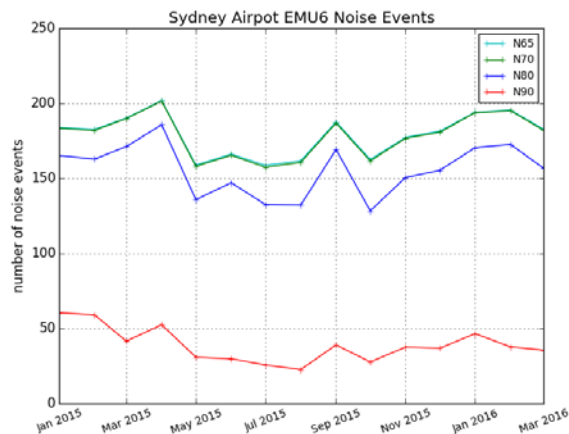


Figure 16: Average daily noise events at EMU 6 (left) and EMU location and representation of flight paths captured by EMU (right)

The key points shown are:

- Captures arrivals to Runway 16R and departures from Runway 34L.
- EMU 6 is the monitor that is closest to the threshold of Runway 16R/34L. The consistently high values in both graphs reflect the high level of use of the main runway throughout the year.

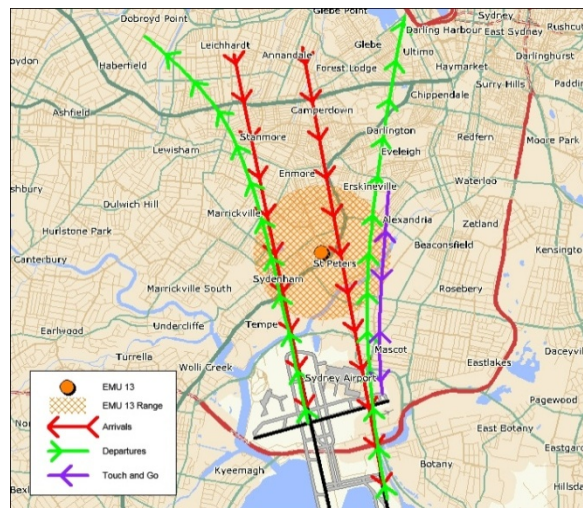
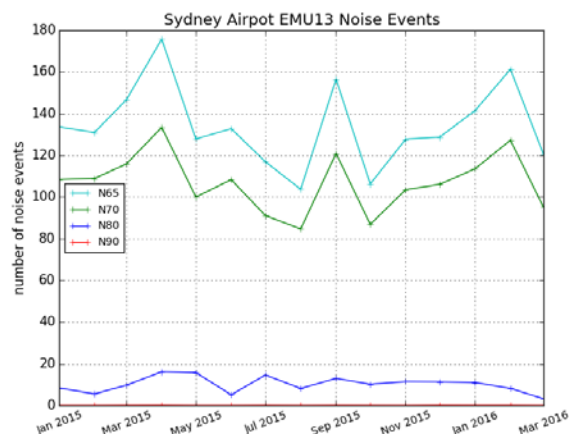


Figure 17: Average daily noise events at EMU 13 (left) and EMU location and representation of flight paths captured by EMU (right)

The key points shown are:

- Main purpose is to capture arrivals to Runway 16L, however can capture movements from runway 16R/34L and departures from 34R.
- EMU 13 captures many of the same operations as EMU 12 (Annandale) and it demonstrates the same seasonal pattern. However, being closer to the runway than EMU 12, EMU 13 captures more aircraft noise events.

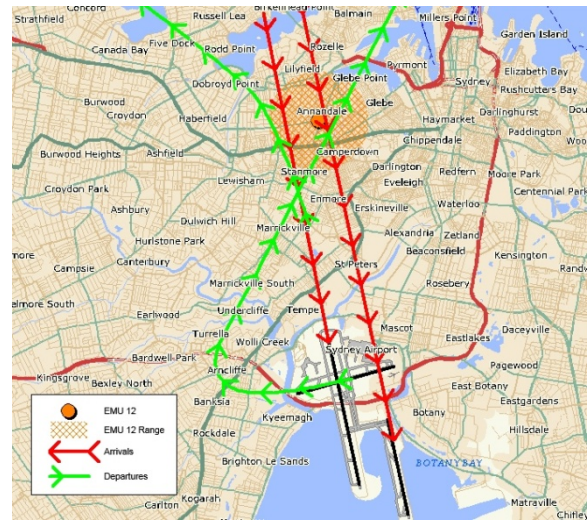
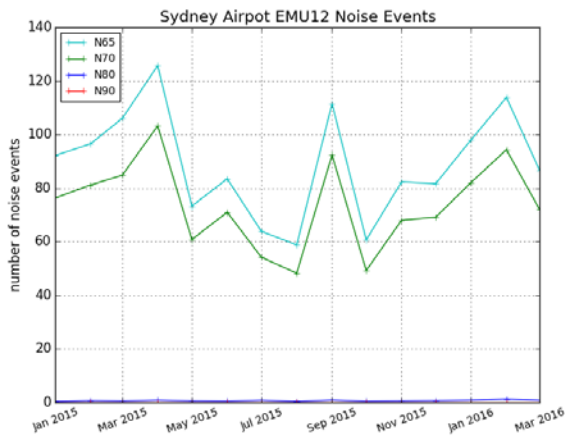


Figure 18: Average daily noise events at EMU 12 (left) and EMU location and representation of flight paths captured by EMU (right)

The key points shown are:

- Main purpose is to capture arrivals to Runway 16L, however can capture movements from runway 16R/34L and departures from 34R.
- The pattern of aircraft noise events recorded by EMU 12 reflects the seasonal pattern of use of Runway 16R, with generally more events recorded in summer than in winter.
- An above average increase in the number of arrivals to Runway 16 L/R in August 2014 is reflected in the table.

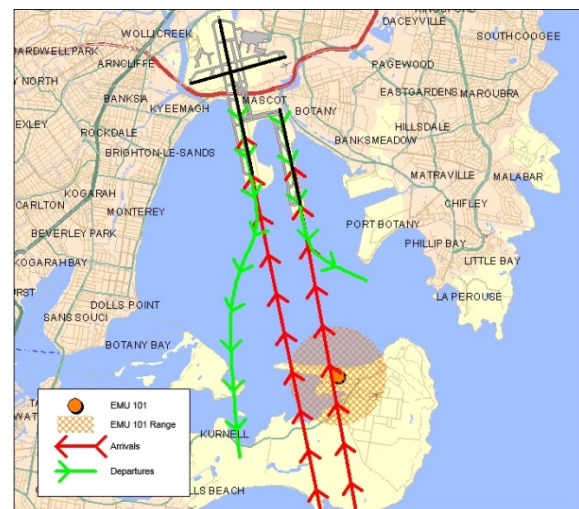
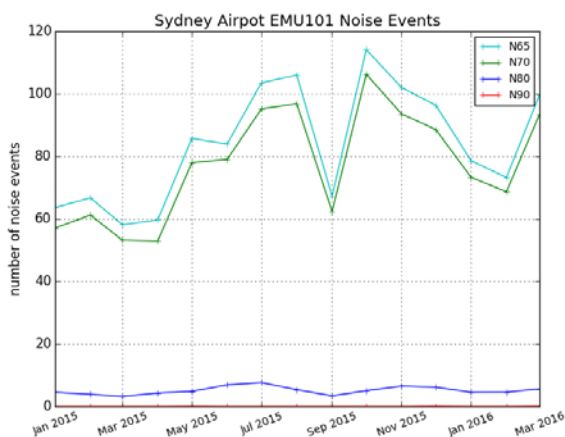


Figure 19: Average daily noise events at EMU 101 (left) and EMU location and representation of flight paths captured by EMU (right)

The key points shown are:

- Captures arrivals to Runway 34R and some arrivals onto Runway 34L.
- EMU 101 is located to the south of the airport and captures arrivals to Runway 34R.



Figure 20: Average daily noise events at EMU 100 (left) and EMU location and representation of flight paths captured by EMU (right)

The key points shown are:

- Captures arrivals to Runway 25, departures from Runway 07 and departures from runway 34R heading to the east or south.
- EMU 100 records noise from similar operations to that of EMU 99 (Eastlakes). However, being further east from the airport, the number of aircraft noise events recorded by EMU 100 is smaller than those recorded by EMU 99, though the seasonal pattern is the same.

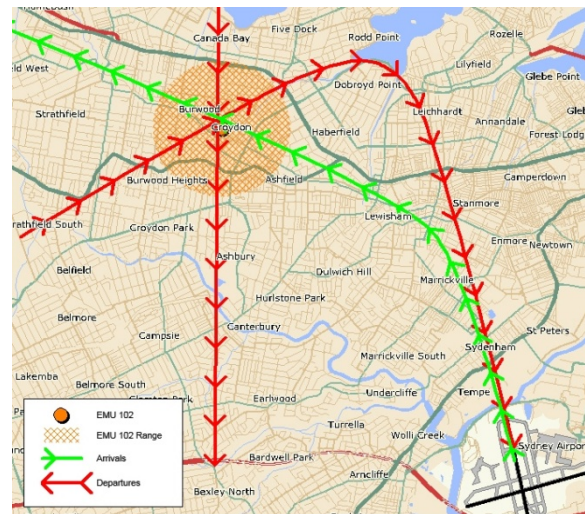


Figure 21: Average daily noise events at EMU 102 (left) and EMU location and representation of flight paths captured by EMU (right)

The key points shown are:

- Captures departures of Runway 34L.
- The number of noise events recorded by EMU 102 reflects the seasonal pattern of use of Runway 34L with more aircraft noise events captured in winter than in summer.

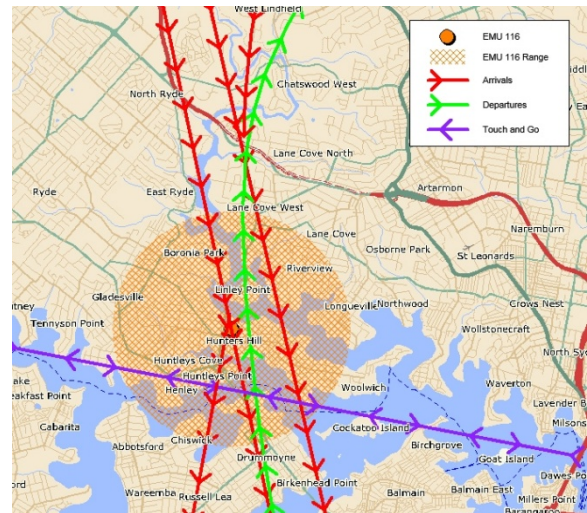
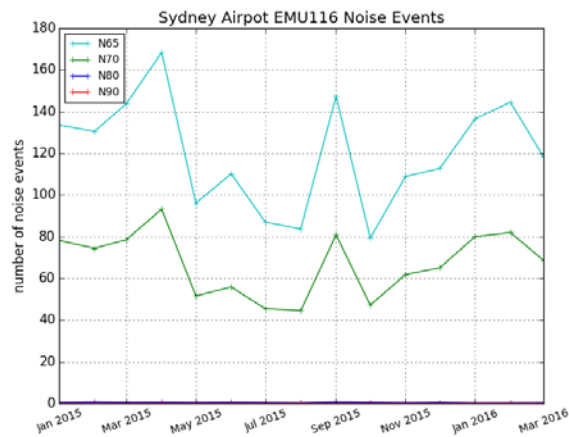


Figure 22: Average daily noise events at EMU 116 (left) and EMU location and representation of flight paths captured by EMU (right)

The key points shown are:

- Captures arrivals to Runway 16R
- The number of aircraft noise events recorded by EMU 116 reflects the seasonal pattern of use of Runway 16R, with more events captured in summer than in winter.

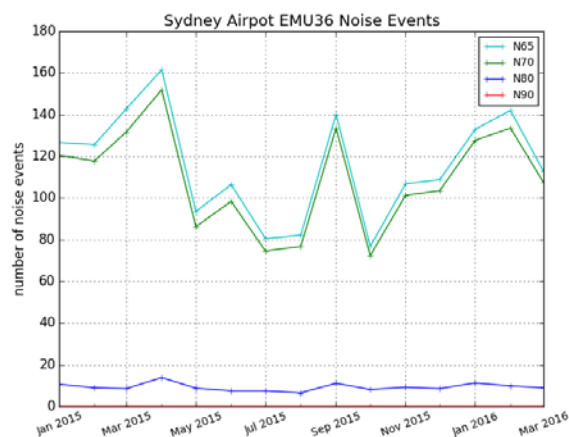


Figure 23: Average daily noise events at EMU 36 (left) and EMU location and representation of flight paths captured by EMU (right)

The key points shown are:

- Captures arrivals to Runway 16R.
- This monitor is affected by the same operations as EMU 116 (Hunters Hill) and it displays the same trends.

4.3 Historic Sydney Runway Statistics

Historic movement data over a four-year period is given below for the most frequently used runways at Sydney Airport.

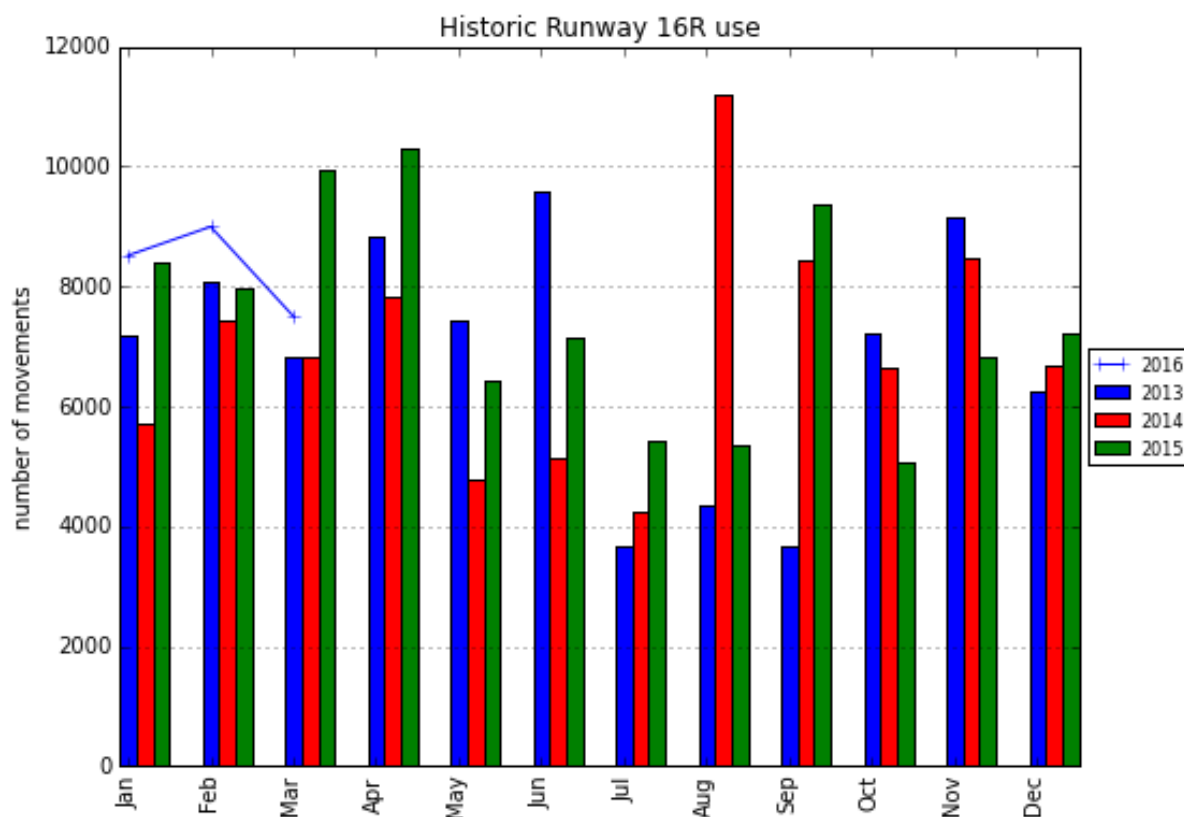


Figure 24: Runway 16R usage at Sydney Airport 2013 to 2016

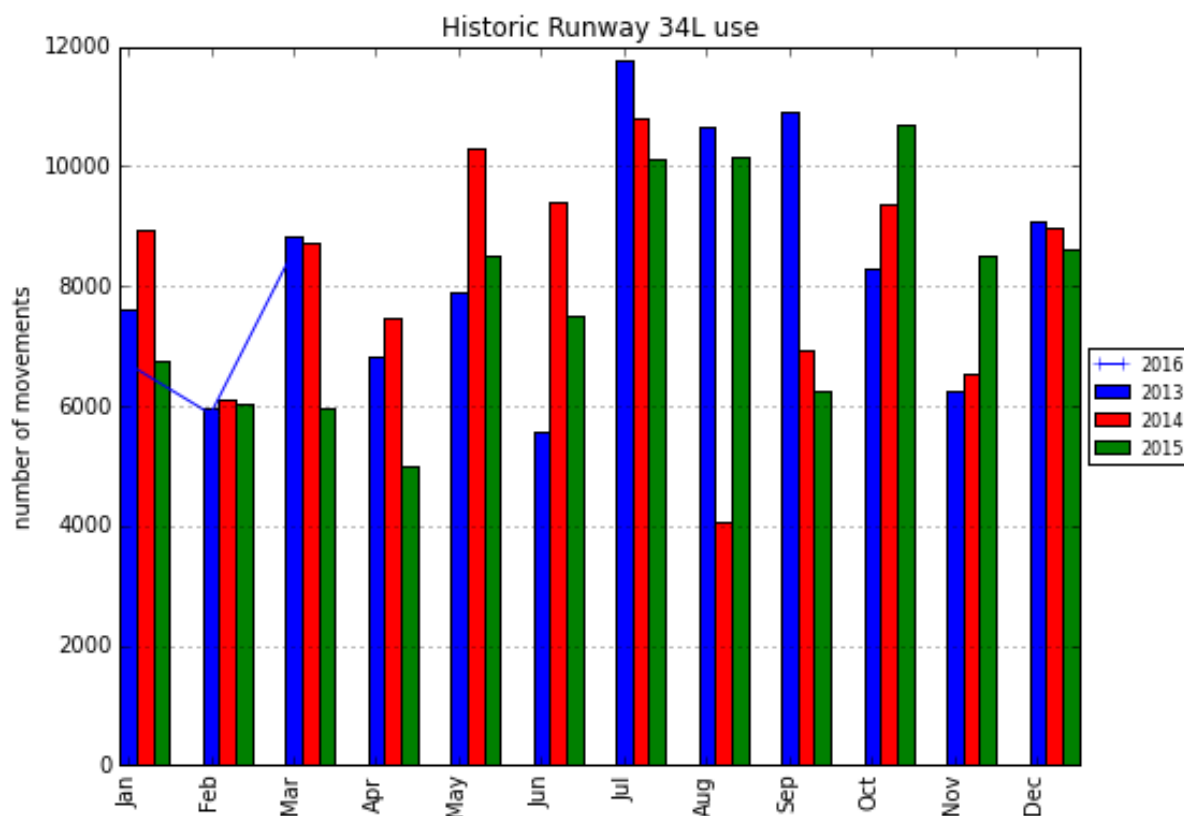


Figure 25: Runway 34L usage at Sydney Airport 2013 to 2016

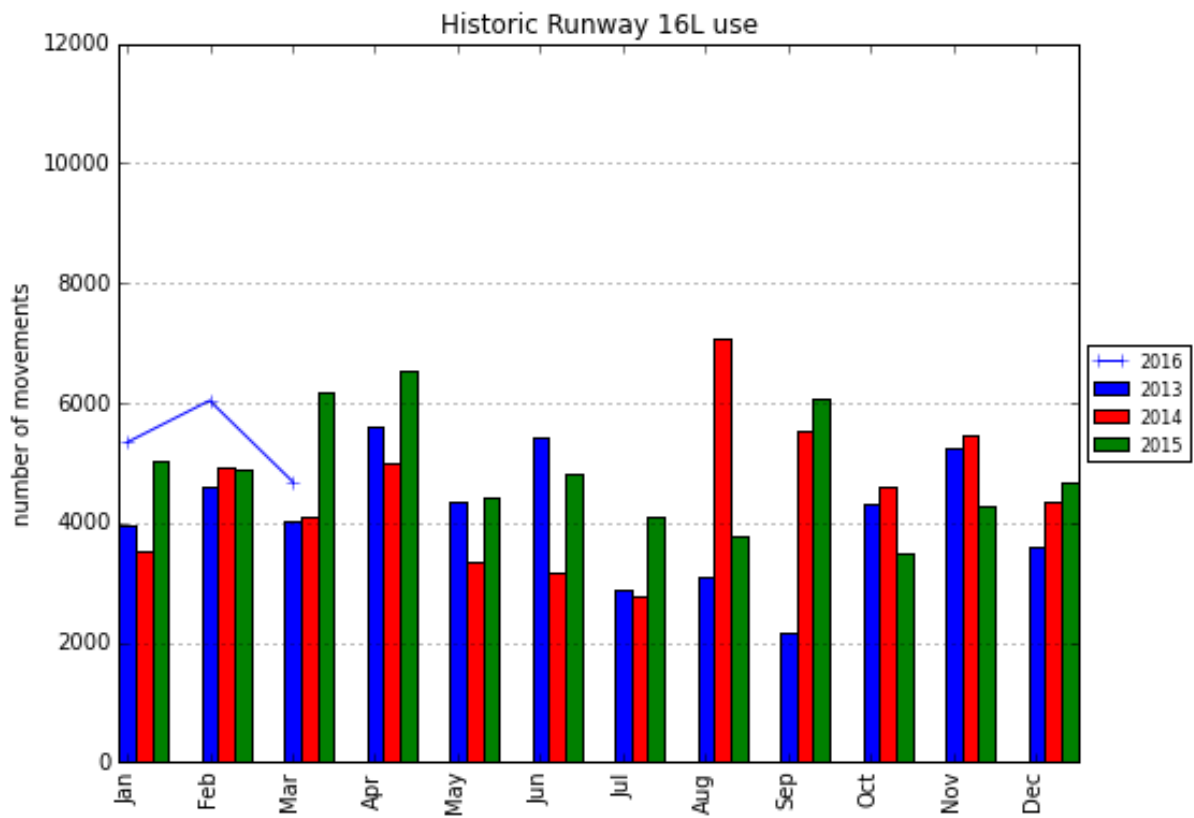


Figure 26: Runway 16L usage at Sydney Airport 2013 to 2016

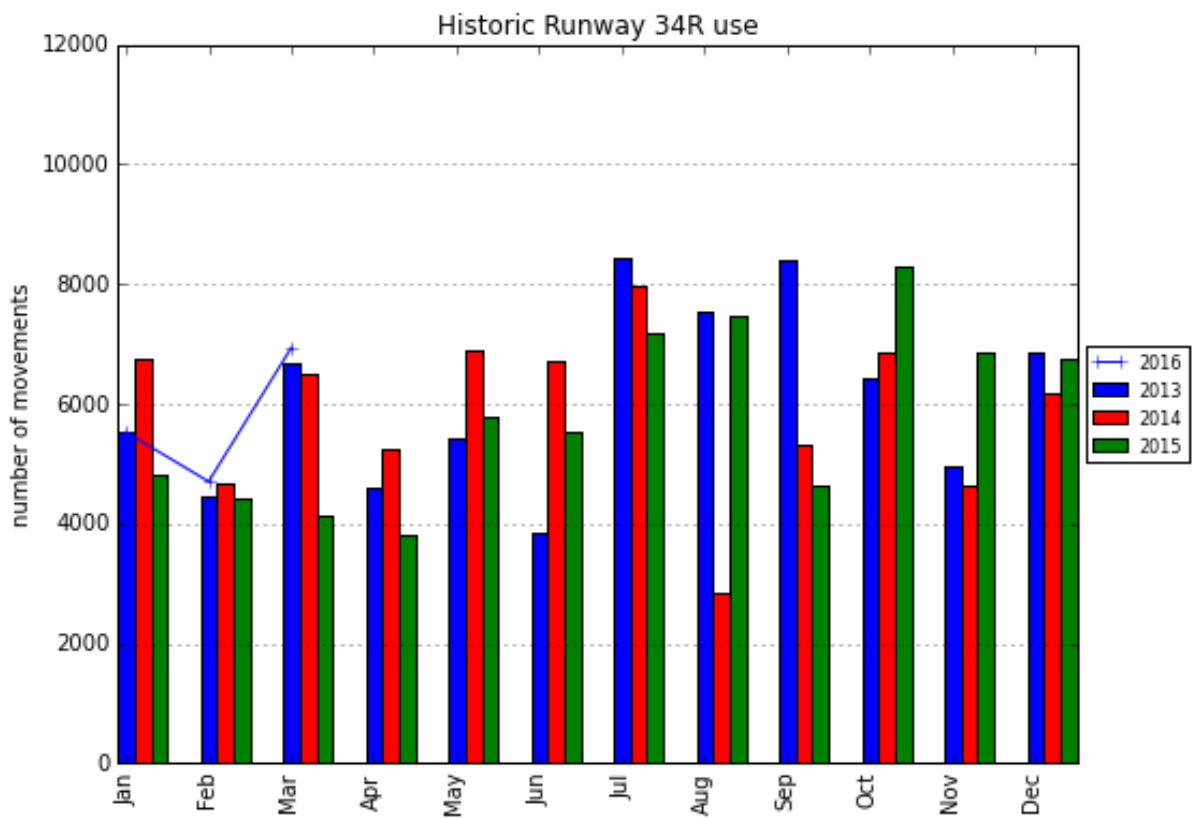


Figure 27: Runway 34R usage at Sydney Airport 2013 to 2016

Key points shown in Figure 24 to Figure 27 are:

- Use of the 16 and 34 directions is fairly even throughout the year, except in the winter months, when due to prevailing winds, Runway 34 is used more. This means that in winter, aircraft tend to take off over residential areas to the north and land from the south, over water.
- Use of the 16 direction was more frequent during Quarter 1 2016, than in previous years this means that aircraft departed to the south over water and landed over residential areas to the north.
- In the summer months there are often strong winds from the north east. This means that strong tailwinds on Runway 25 (the crossing runway) often prevent its use which is an additional constraint to noise sharing as set out in the Long Term Operating Plan (LTOP).

4.4 Curfew Movements

Sydney Airport has a curfew that restricts both aircraft type and runway usage between the hours of 11.00pm and 6.00am. The rules for the curfew at Sydney Airport are outlined in the Sydney Airport Curfew Act 1995. The principal categories of permitted operations are as follows:

- Small (less than 34,000kg) noise certificated propeller driven aircraft and 'low noise' jets (mostly business and 'small' freight jets) – shown as 'approved aircraft' below.
- A small number of 'medium size' freight BAe146 jets that meet strict noise standards.
- Departing aircraft that had commenced their taxiing before the start of the curfew but got airborne just after. Typically these depart within the first 5 minutes of the curfew.
- A small number of 'shoulder' movements for international passenger jets that meet noise standards, between the hours of 11.00pm and midnight and 5.00am and 6.00am – shown as 'international quota' below.

The curfew restrictions do not apply in cases of emergency. In some circumstances the Minister may grant dispensations for aircraft to operate when they would not otherwise be allowed to do so.

More detail on curfew restrictions is available on the website of the Department for Infrastructure and Transport at <http://www.infrastructure.gov.au/aviation/environmental/curfews/SydneyAirport/SydneyCurfewBrief.aspx>.

Figure 28 shows aircraft movements at Sydney Airport during curfew hours (11.00pm to 06.00am).

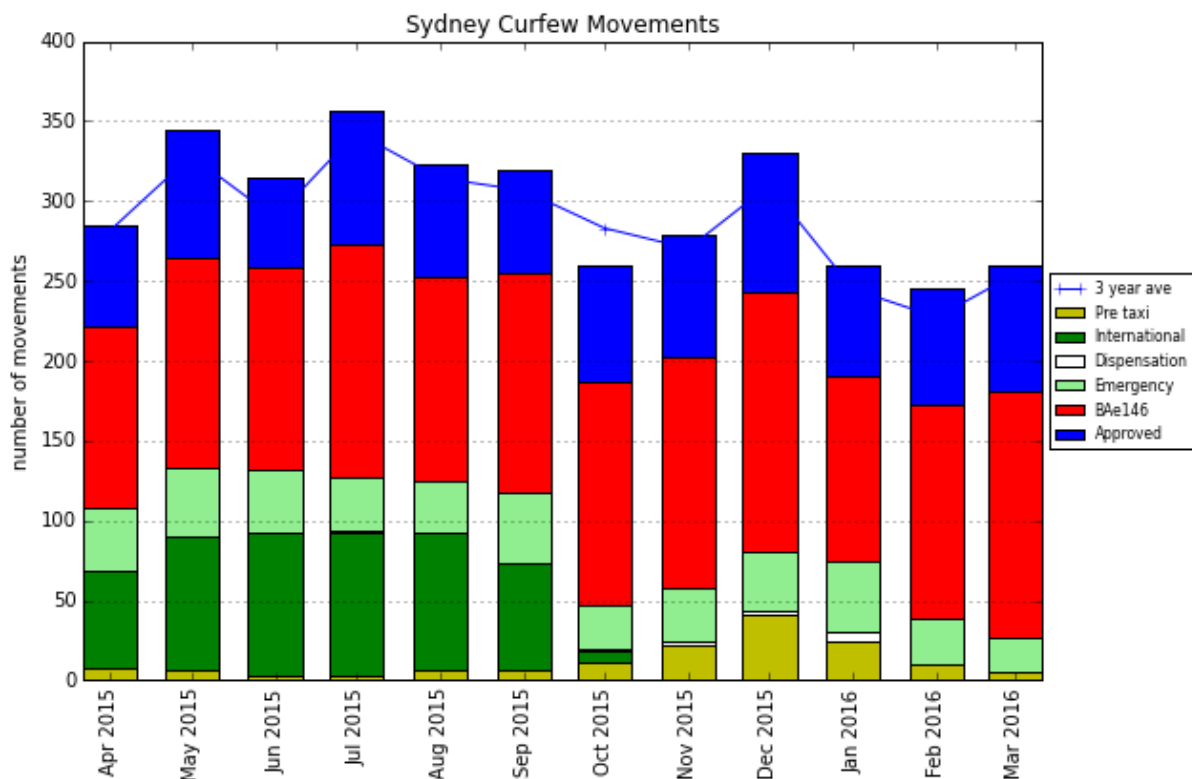


Figure 28: Curfew movements at Sydney Airport to Quarter 1 of 2016 (including three-year average per month)

Key points shown in Figure 28 are:

- In Quarter 1 of 2016, on average there were around eight movements per night during curfew hours. This is generally in line with the three year average.
- The category with the highest number of curfew movements in Quarter 1 of 2016 was freighter aircraft (BAe146), with between 120 and 150 movements per month (four to five movements per night).
- During the northern hemisphere daylight saving period international aircraft arrive an hour earlier. The curfew allows for a limited number of approved international aircraft to operate into Sydney Airport between 5:00 am and 6:00 am. During the northern hemisphere autumn and winter (October to March) there are no international quota movements.

During the curfew, aircraft are required to operate over Botany Bay – that is arriving on Runway 34L and depart from Runway 16R. On Saturdays and Sundays the preferred arrangement is for aircraft to operate over Botany Bay in the hour before and after the curfew, provided the weather and traffic conditions allow this to take place safely.

Between 10.45pm and 11.00pm, aircraft must take off over Botany Bay, unless the aircraft has received a dispensation, has an emergency or is involved in emergency operations (e.g. search and rescue). Even if the aircraft has started to taxi before 10.45pm, it must still take off over Botany Bay after 10.45pm.

There are no runway restrictions for emergency operations during the curfew period.

Figure 29 shows curfew runway usage for Sydney Airport from April 2015 to March 2016.

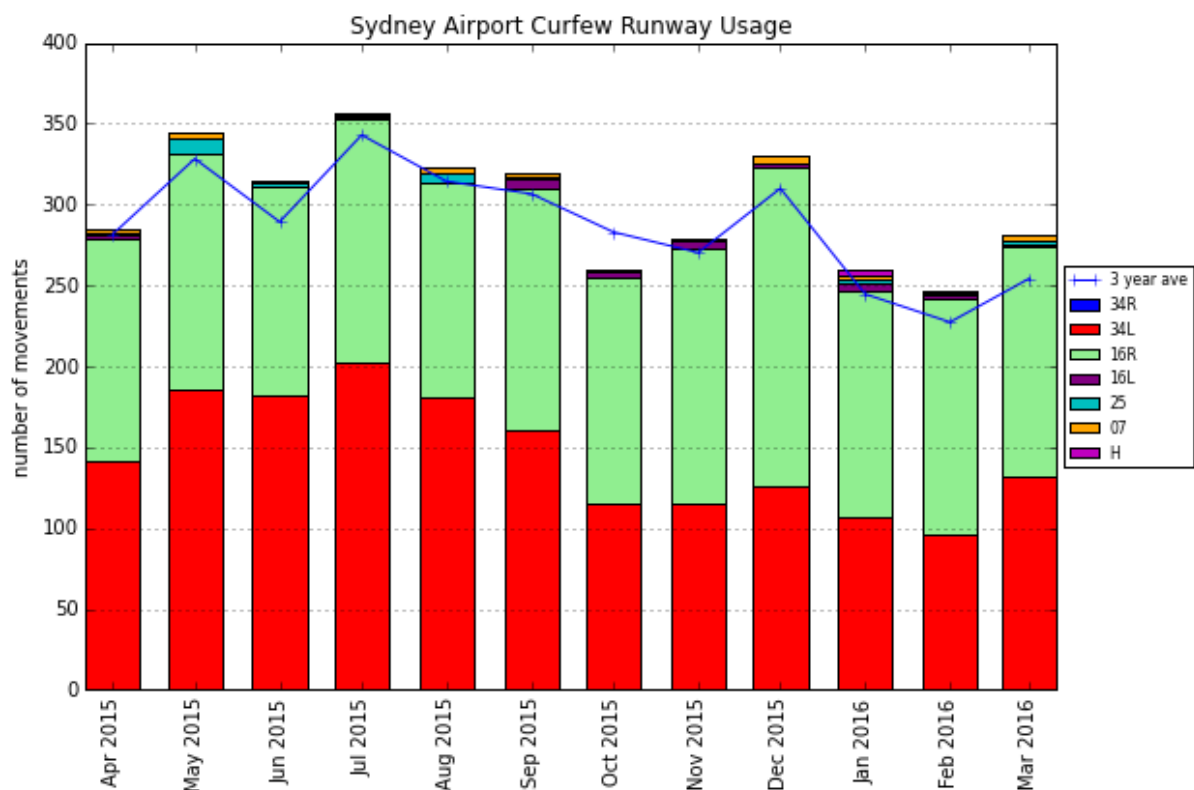


Figure 29: Curfew runway usage for Sydney Airport to Quarter 1 of 2016 (including three-year average per month)

4.5 Bankstown Airport

Figure 30 shows aircraft arrival/departure movements at Bankstown Airport for the 12-month period to the end of Quarter 1 of 2016 (and three-year average per month). The data point for March 2016 is temporarily removed due to uncompleted data entry process at the report preparation time.

The movements in the graph are based on arrival/departures at the airport and have excluded circuits. This is due to the difficulty in accurately reporting on the number of circuits at the airport. Circuits are usually performed by small General Aviation aircraft.

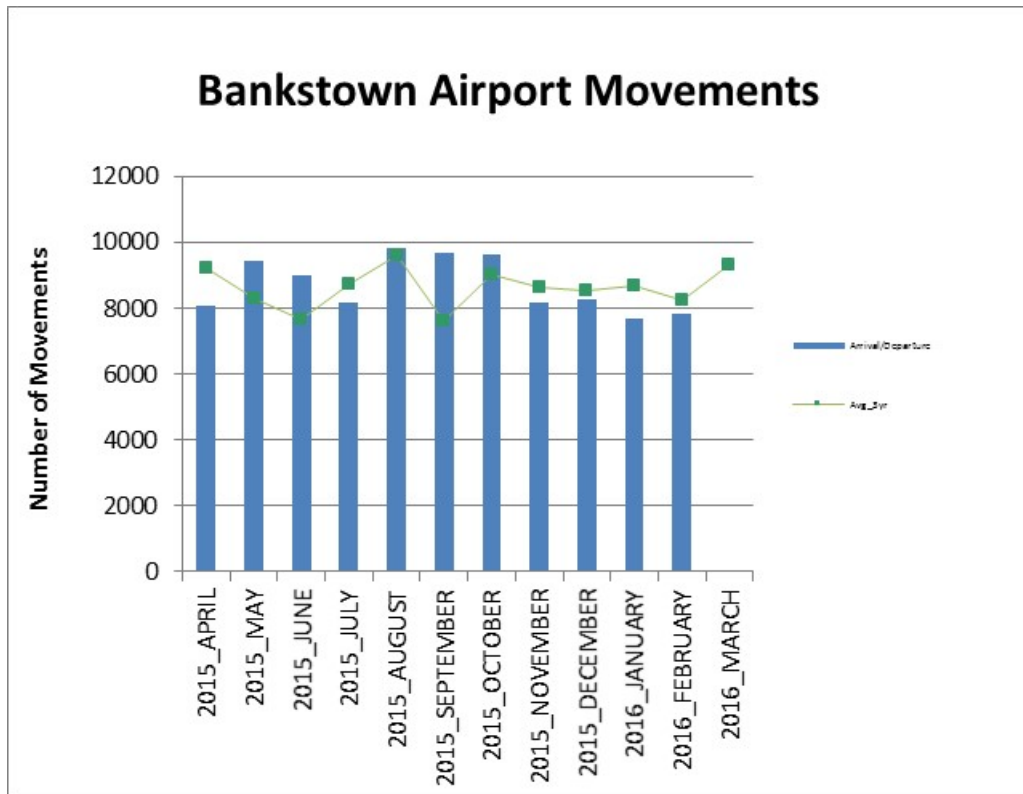


Figure 30: Aircraft movements in Bankstown Airport to Quarter 1 of 2016 (including three-year average per month)

Key points shown in Figure 30 are:

- The overall number of movements in Quarter 1 of 2016 was slightly below the three-year average.

4.6 Camden Airport

Figure 31 shows aircraft arrival/departure movements at Camden Airport for the 12-month period to the end of Quarter 1 of 2016 (and three-year average per month). The data point for March 2016 is temporarily removed due to uncompleted data entry process at the report preparation time.

The movements in the graph are based on arrival/departures at the airport and have excluded circuits. This is due to the difficulty in accurately reporting on the number of circuits at the airport. Circuits are usually performed by small General Aviation aircraft.

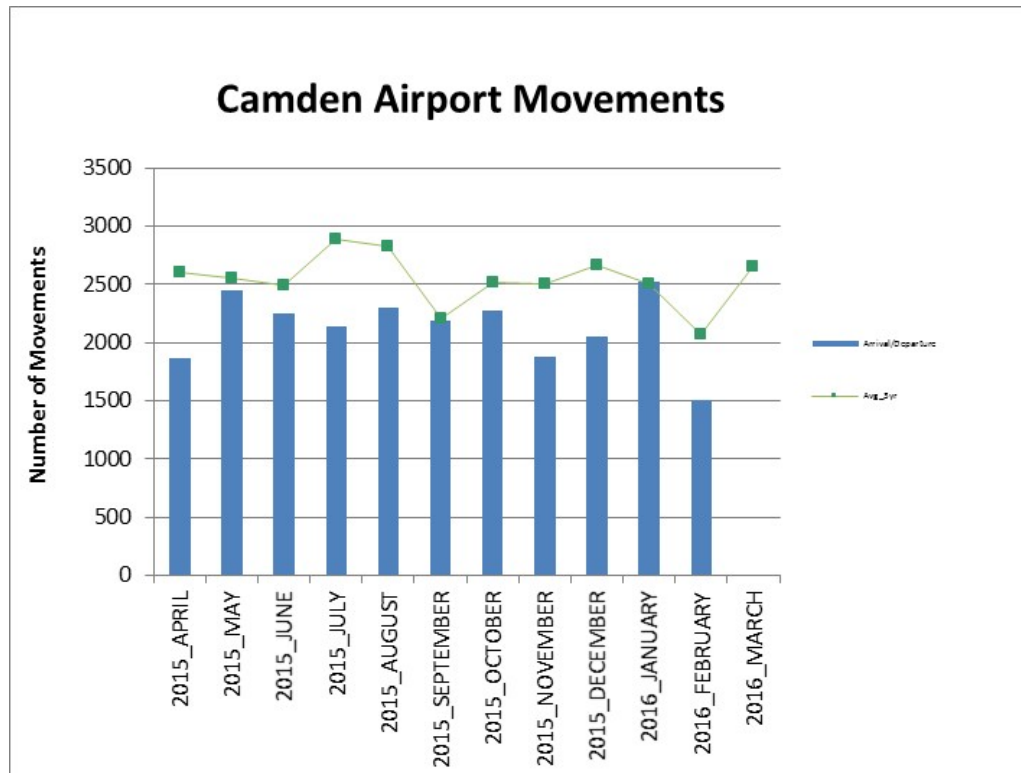


Figure 31: Aircraft movements at Camden Airport to Quarter 1 of 2016 (including three-year average per month)

Key points shown in Figure 31 are:

- Aircraft movements for the last 12 months were generally below the three-year average. Except for June 2015 and January 2016 which were in line with the three-year average.
- The trend in movements at Camden is largely dependent on the training schedule of flying schools.

5 Complaints data

Airservices manages complaints and enquiries about aircraft noise and operations through its Noise Complaints and Information Service (NCIS). Complaints, enquiries and requests for information about aircraft operations received by the NCIS are collected and stored in a database for the purpose of complaint management, analysis of issues and identification of causal factors. Each complaint, enquiry or request for information is referred to as a contact and each person who makes contact with the NCIS is referred to as a complainant. For this report, only complainants making complaints have been included.

5.1 NCIS Complainants by suburb

The NCIS received contacts from 438 complainants from Sydney Airport, Bankstown Airport and Camden Airport during Quarter 1 of 2016. Complainant density maps are used to show the number of complainants from each suburb, with suburbs coloured according to how many complainants had contacted the NCIS. The data does not include complainants who contacted other organisations (e.g. airports).

Table 1 to Table 3 (below) provides a breakdown of suburbs for Quarter 1 of 2016 with five or more complainants, showing Sydney Airport, Bankstown Airport and Camden Airport separately.

Figure 32 shows complainant density with flight tracks overlaid for Sydney Airport, Bankstown Airport and Camden Airport for Quarter 1 of 2016.

Figure 33 focuses on circuit training at Bankstown Airport, which is the main subject of complaints at the airport. It shows complainant density with flight tracks inclusive of circuit training for the period 1 to 3 March 2016.

The following data is derived from a dynamic database and is correct as at 15 April 2016 and may change without notification.

Table 1: Recorded Sydney Airport Complainants by Suburb for the last 4 Quarters

Sydney Airport				
Suburb	Q2 2015	Q3 2015	Q4 2015	Q1 2016
Ashfield	2	0	3	5
Bexley	2	2	6	9
Blaxland	1	1	16	24
Bundeena	1	2	2	7
Concord	0	1	5	6
Coogee	7	1	1	1
Cronulla	1	2	1	9
Drummoyne	3	2	2	5
Dulwich Hill	3	2	5	2
Emu Plains	0	0	5	7
Glenbrook	0	0	5	15
Hunters Hill	1	2	1	10
Kurnell	1	2	1	10
Lane Cove	2	3	3	6
Leichhardt	3	4	5	10
Maroubra	6	7	5	13
Marrickville	1	7	2	13
Mascot	8	6	15	7
Matraville	2	3	2	7
Mount Riverview	0	0	0	6
Paddington	8	6	11	5
Randwick	3	1	5	3
Springwood	1	0	5	8
Stanmore	2	0	2	7
Summer Hill	3	1	1	5
Turramurra	4	3	3	6
Wahroonga	4	1	4	6
Winmalee	0	0	4	5
Woodford	0	0	5	5
All other Complainants	107	89	128	198
Total Complainants	176	148	253	420

Table 2: Recorded Bankstown Airport Complainants by Suburb for the last 4 Quarters

Bankstown Airport				
Suburb	Q1 2015	Q2 2015	Q3 2015	Q1 2016
-	-	-	-	-
Total Complainants	22	18	22	15

Table 3: Recorded Camden Airport Complainants by Suburb for the last 4 Quarters

Camden Airport				
Suburb	Q2 2015	Q3 2015	Q4 2015	Q1 2016
-	-	-	-	-
Total Complainants	2	4	1	3

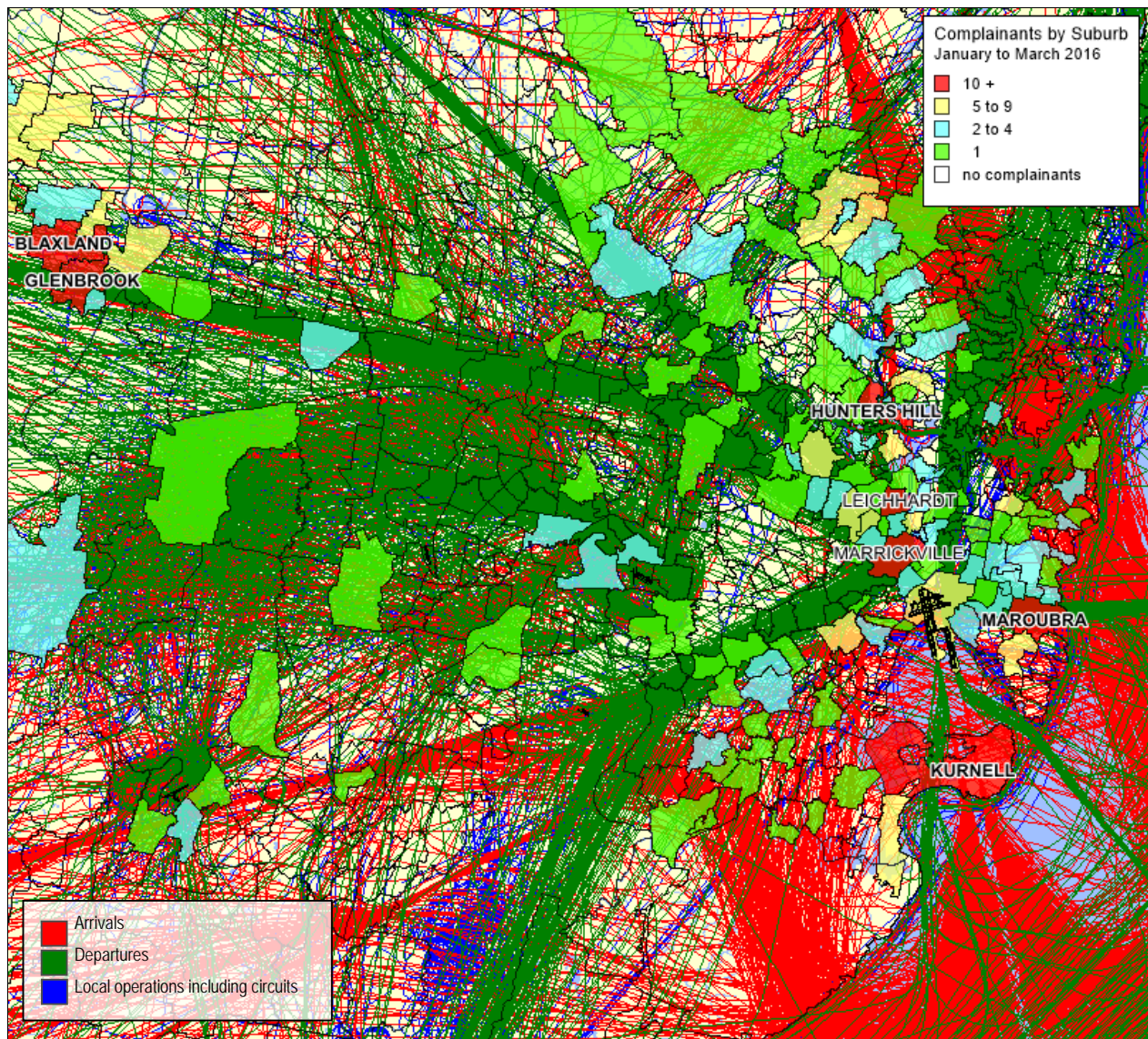


Figure 32: Complainant density by suburb for Quarter 1 of 2016 with an overlay of tracks for sample period 1 to 3 March 2016 at Sydney Airport, Bankstown Airport and Camden Airport

Key points (Table 1 & Figure 32):

- As seen in Table 1 complainant numbers from areas of the Blue Mountains (Blaxland) which are further away from Sydney Airport continue to rise. These areas are affected mainly by departing aircraft off Runway 34 that are tracking via Katoomba. The release of the Environmental Impact Statement for the new Western Sydney Airport and subsequent media publicity has heightened sensitivity to aircraft noise in many suburbs of the Blue Mountains and has resulted in contacts about the existing flight path that passes over the area as well as concerns about the potential flight paths for the new airport.
- Many contacts contend that the flight path over the Mountains is new whereas it has been in existence for many decades. Aircraft flying to destinations such as Adelaide, Darwin, Broome, Singapore, Kuala Lumpur, Dubai, Abu Dhabi, Hong Kong and Shanghai, for example, will take this route. Aircraft passing over the Blue Mountains after departure from Sydney Airport will be at altitudes ranging from 10 000 to over 20 000ft, depending on whether they departed to the north or to the south. Departures to the south have covered more track miles by the time they reach the Blue Mountains, and therefore have had more time to climb.
- For several days in February weather diversions continued throughout the entire day and this is reflected in contacts from the suburbs typically affected in these conditions. When bad weather is located off the coast aircraft departing from the westernmost parallel

runway must make a harder right turn after departure to the south and this pushes them over such suburbs. These aircraft cannot turn left after departure because this would conflict with traffic departing from the easternmost parallel runway.

- Helicopter activity was raised by complainants along the eastern coastline and Sydney Harbour. There were increased helicopter flights due to the Christmas/New Year holidays, Valentine's Day and Chinese New Year.
- Curfew operations continue to concern some complainants in the Sydney Basin. Most Curfew operations were medical emergencies, including one landing on Runway 25, although some complainants are also disturbed by routine permitted movements under the Curfew Act.
- Complainants from a range of suburbs felt aircraft were too low. While some suburbs were close to the airport others were relatively distant, such as Warrawee and Turramurra which are affected by arrivals to the parallel runways from the north.
- Complainants numbers at Camden Airport remain very low.

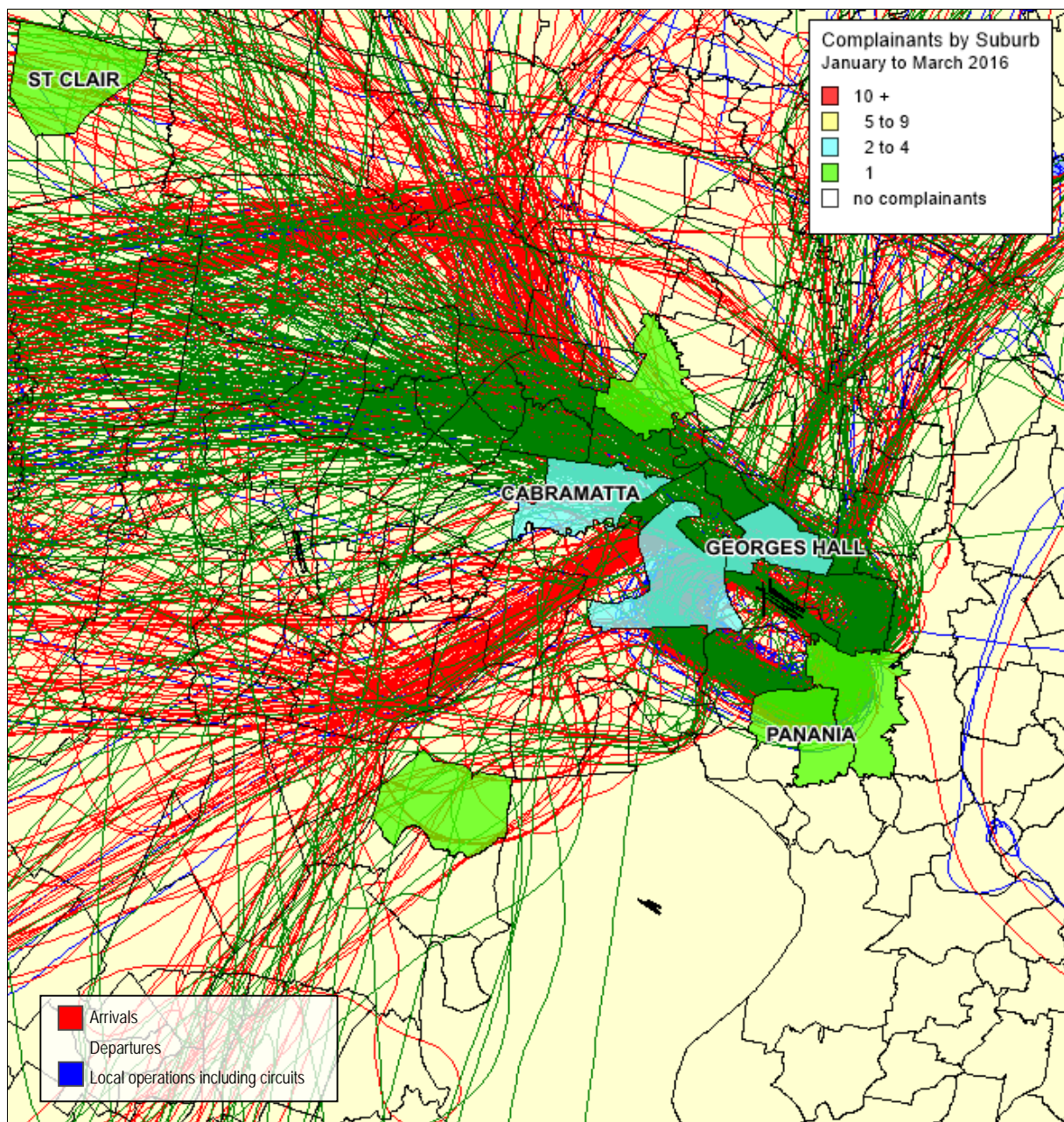


Figure 33: Complainant density by suburb for Quarter 1 of 2016, with an overlay of tracks for sample period 1 to 3 March 2016 at Bankstown Airport

Key points (Table 2 & Figure 33):

- Complainant numbers are higher close to Bankstown airport.
- Issues raised related mainly to circuit training, helicopters and night operations (11pm – 6am) at Bankstown Airport.

6 Airservices update

6.1 Community Aviation Consultation Groups

Airservices attends Community Aviation Consultation Group (CACG) meetings at Sydney Airport, Bankstown Airport and Camden Airport to provide information to the community and assist in discussions on aviation matters. Appendix 1 provides a summary of issues raised by Airservices at recent CACG meetings.

6.2 Noise improvements

Airservices has developed a process to investigate aircraft noise improvements across Australia. Working with the community and the aviation industry, Airservices will assess the benefits of noise improvement proposals and implement them if feasible.

Airservices will assess the potential safety, efficiency and environmental impacts of proposals. We will seek community views throughout this process to help inform decisions. Safety remains our top priority and any change would have to meet rigorous Air Traffic Control requirements. This means that it may not be possible to implement some proposals.

Airservices would only implement a new procedure or a trial after a comprehensive community engagement process, including consultation with community forums. We would also discuss potential changes with the aviation industry. Airservices will publish details of any changes to procedures or trials on its website.

Appendix 1 also provides details of noise improvements that have been implemented in the Sydney Basin and others that are in progress.

7 Contact us

To lodge a complaint or make an enquiry about aircraft operations, you can:

- go to WebTrak (www.airservicesaustralia.com/aircraftnoise/webtrak/)
- use our online form (www.airservicesaustralia.com/aircraftnoise/about-making-a-complaint/how-to-make-a-complaint/)
- telephone 1800 802 584 (freecall) or 1300 302 240 (local call –Sydney)
- fax (02) 9556 6641
- write to, Noise Complaints and Information Service, PO Box 211, Mascot NSW 1460.

Airservices welcomes comments about this report. Please contact us via e-mail at community.relations@airservicesaustralia.com if you would like to provide feedback.

Appendix 1 Airservices update

Sydney Airport Community Forum (SACF)

19 February 2016

Airservices provided an update on movements and mode use for October – December 2015. Aircraft Noise Information Report October to December 2015 was summarised and full report made available on Airservices website.

A presentation and response to questions raised from the Blue Mountains and inner West of Sydney community members on flights over the Blue Mountains area was provided. Airservices also advised that a preliminary investigation would be undertaken into whether in principle there is any feasibility to alter the flight path over the Blue Mountains, including what impact this would have on other routes. Further details are below in Sydney Basin Noise Improvement Investigations.

6 November 2015

Airservices provided an update on movements and mode use for August and September. Aircraft Noise Information Report for July to September 2015 was summarised and full report made available on the Airservices website.

28 August 2015

Airservices provided an update on movements and mode use for July. Responses were also provided to community questions regarding Performance Base Navigation and the OneSKY program.

Bankstown Airport Community Aviation Consultation Group (CACG)

19 April 2016

Aircraft Noise Information Report October to December 2015 was summarised and full report made available on Airservices website. Movements were generally in line with the three year average and complainant numbers were slightly up for the quarter, but still relatively low with Revesby, Milperra and Cabramatta having the highest number of complainants (between two and four).

24 November 2015

Airservices provided an update on the Airservices Noise Complaint Management System (NCMS) upgrade.

Information was also provided on Airservices Annual Report 2014/2015 and its' availability on the website, the appointment of Spencer Stuart to assist in the recruitment of Chief Executive Officer and Chief Financial Officer positions and Waypoint, Airservices premium industry consultative forum on 3 December 2015.

25 August 2015

Airservices provided information on the upcoming Airservices Noise Complaint Management System (NCMS) upgrade. During the upgrade two-week period telephone services will be unavailable, however inquiries and complaints can still be lodged via WebTrak, the online form or by post.

Camden Airport Community Aviation Consultation Group

31 March 2016

Aircraft Noise Information Report October to December 2015 was summarised and full report made available on Airservices website.

Information was provided on the Camden non-directional beacon that will be decommissioned on 26 May 2016, possibly resulting in a decrease in aircraft noise from over flying itinerant twin engine aircraft and information the NCIS provides complainants on the issues of circuit training, low flying aircraft and aerobatics

12 November 2015

Airservices provided a short update on Quarter 3 2015 Aircraft Noise Information Report. Complainant numbers were higher than the previous two quarters, while operation numbers were below the three year average. No single suburb in the August to October 2015 quarter registered five or more complainants.

An update was provided on the Noise Complaints Management System upgrade and information provided on Airservices Annual Report 2014/2015 and its' availability on the website,

Airservices input to the CANSO and Airports Council International report on 'Managing the Impacts of Aviation Noise' was also discussed and a copy of the report provided to members.

2 July 2015

Airservices provided an update on the Q1 2015 Aircraft Noise Information Report and also around the two instrument approaches at Camden the NDB (non-directional beacon) approach which is carried out to the north of the aerodrome and the RNAV approach which is conducted to the south west of the aerodrome. The NDB is expected to be decommissioned from 26 May 2016 as part of Airservices [Navigation Rationalisation Project](#).

Sydney Basin Noise Improvement Investigations

Issue	Investigated	Outcome
Sydney: Airservices recently advised the Sydney Airport Community Forum that we would conduct a preliminary investigation into whether in principle there is any feasibility to alter the flight path over the Blue Mountains, including what impact this would have on other routes. This will take some time. If this preliminary investigation indicates there would be any safety or efficiency implications there will be no further consideration of the proposal. If it should be found to be feasible in principle then there would be a long process of further, detailed investigation (which could take some years), with no guarantee of a favourable outcome for you at the end of the process.	In progress	
Sydney: Can southern departures between 11pm and 6am track further east once abeam Kurnell to minimise noise impacts?	In progress	
Sydney: Airservices developed a trial departure procedure to minimise the noise impact on La Perouse and the Kurnell Peninsula.	Completed	This procedure was tested using flight simulators. While normal or low weight operations were able to fly the trial procedure, in certain weather conditions, heavy aircraft flew over the tip of the Kurnell Peninsula. Overall, the trial procedure delivered no better outcome than the current design and it is not being progressed. Airservices continues to investigate ways in which noise impacts can be minimised in the area.
Camden: Fly neighbourly agreement to include provision of measure to reduce engine stall procedures over residential areas.	Completed	Camden Airport fly neighbourly agreement updated to include provision of measure to reduce engine stall procedures over residential areas.
Bankstown: Can southern aircraft tracking into Bankstown early in the morning use Holsworthy restricted areas (including R555A, HJ SFC to 2500ft) to avoid overflying Campbelltown, Ingleburn and Minto at low level.	In progress	