# Gatwick Airport Flight Performance Report

This report covers the period

(1st April - 30th June 2015)



## Introduction

#### **ABOUT THIS REPORT**

This report is produced by the Gatwick Flight Performance Team (FPT). This team is responsible for recording, investigating and responding to aircraft noise enquiries as well as monitoring airline compliance to noise mitigation measures as detailed in the UK Aeronautical Information Publication (AIP). This department also actively engages with the airlines to improve their adherence to the above noise mitigation measures and in addition manages the night-time restrictions on flying at Gatwick.

This report contains detailed data on aircraft activity at Gatwick including the adherence to the noise mitigation measures detailed in the UK AIP, a report on night flying during the quarter, and an analysis of noise complaints received during the period.

## **KEY MONITORING INDICATORS -**2<sup>ST</sup> QUARTER 2015

		12 month perfor	mance averages*		
Parameter		Year to date (2015)	Previous year (2014)	2011	2006
Track keeping performance (% on track)	<b>A</b>	99.61%	98.53%	97.47	98.17**
24hr CDA (% achievement)	<b>A</b>	91.65%	92.56%	90.49	80.79
Day/Shoulder CDA (% achievement)	<b>A</b>	91.57%	91.76%	90.19	79.9
Core night CDA (% achievement)	<b>A</b>	95.50%	95.10%	93.96	89.6
1000ft Infringements (No.)	•	0	0	3	11
1000ft Infringements (No. below 900ft)	•	0	0	1	6
Departure Noise Infringements (Day)	-	0	0	0	10
Departure Noise Infringements (Night/Shoulder)	_	0	0	4	2
Callers	<b>A</b>	3335	1568	343	587
Noise complaints***	<b>A</b>	19277	11313	2673	4791
Enquiry response performance target is 95% within 8 days (quarterly)	<b>A</b>	95.07%	81.01%	KPI 95%	
West/East Runway Split (%)	-	69/31	68/32	67/33	68/32

<sup>\*</sup>The colour indicates the most recent 12 month performance compared to 2011, with green showing improvement and red a decline in performance.

\*\* This figure did not include deviations from prop types or those due to weather.

<sup>\*\*\*</sup>Complaints are recorded in line with our published complaints handling policy. The revised policy published in Nov 2014 advises that only one complaint per day is recorded per individual.

## PERFORMANCE HEADLINES

## CONTINUOUS DESCENT APPROACH (CDA) PERFORMANCE

While the Noise and Track keeping system utilises the most up to date format of radar data currently available, the algorithm that measures CDA performance has remained unchanged since the definition was initially defined several years ago. As part of a development project to improve the accuracy of CDA measurement, the Flight Performance Team has worked closely with NATS to upgrade the current algorithm. The core algorithm remains unaltered although some additional rules have been added with the result that some marginal profiles previously classified as CDA compliant will now be re-classified as non-CDA flights. These changes came into effect from May 2015 and the resulting variance in recorded levels of performance is in the order of 1%, therefore we expect to see a minor drop off in recorded performance from this date. Historical observations have consistently shown a reduction in performance during the winter months due to instances of inclement weather.

Despite these factors the level of Continuous Descent Approach (CDA) performance remains very positive.

#### TRACK KEEPING

Track keeping performance has improved again on the previous year's performance, details of which will follow later in this report.

As part of our continuing commitment to increase on track performance, the FPT also continues to engage with the airlines directly and through the Flight Operations Performance and Safety Committee on a range of initiatives.

### **COMPLAINTS**

Both the number of complaints and the number of individual callers have increased significantly compared to the previous twelve months. This increase has been caused by a number of contributing factors. As well as the publicity surrounding a potential 2nd runway at Gatwick, 2015 will be the busiest year in the airports history. Last year also saw the emergence of a number of campaign groups and changes to departure flight paths.

The postcode areas with the greatest number of enquiries this quarter were Tunbridge Wells, Edenbridge the Holmwoods and Reigate.

Complaints about aircraft operations are processed

in accordance with our published complaints handling policy. Details of this policy are available on our website www.gatwickairport.com/noise. With regards individuals making multiple complaints these are recorded as one complaint per individual per day.

#### **AIRPORT OPERATIONS**

During the quarter, there were a total of 71,129 fixed wing aircraft movements at Gatwick, an increase in traffic of about 2.0% compared to the same period in 2014. The direction of operation is determined by wind direction and this quarter was split 69% on the westerly runway and 31% on the easterly runway. The rolling 20 year average for the split in runway usage is approximately 70% westerly and 30% easterly.

#### NORTHERN RUNWAY (26R/08L) USAGE

Although Gatwick has the main runway and the 'reserve' or northern runway, they cannot be operated simultaneously.

The northern runway is normally only utilised during the night when maintenance on the main runway is planned. During these three months, there were a total of 882 movements from the Northern runway.

## WOULD YOU LIKE TO KNOW MORE ABOUT AIRCRAFT NOISE OR TRACK A FLIGHT?

To track aircraft, see noise readings or make a complaint about aircraft noise at Gatwick you can visit our website: www.gatwickairport.com/noise

The website provides detailed maps on aircraft traffic around the airport as well as useful information on noise and statistics on aircraft movements. It also details the work we undertake with others in the aviation industry to try and alleviate the impact of our operations on both the local and wider community.

## COMMUNITY NOISE MONITORING

For several years we've run a programme of noise monitoring to get a better understanding of the levels of aircraft noise in the communities surrounding Gatwick Airport. The noise monitors provide a method of monitoring and recording noise from both aircraft, and background sources. This allows us to evaluate trends and make comparisons between the noise environments at different locations.

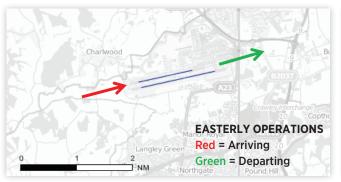
In addition to fixed monitors located close to the ends of the runway, there are currently mobile noise monitors deployed at sites in Lingfield, Rusper, Okewood Hill, Hever, Bidborough, Cowden, South Holmwood and Slinfold.

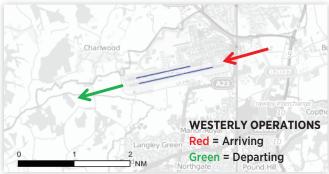
#### **RUNWAY DIRECTION**

The following graph represents the direction of runway operation at Gatwick. Aircraft operating in a westerly direction take off towards the west and land from the east. Aircraft operating in an easterly direction take off towards the east and land from the west.

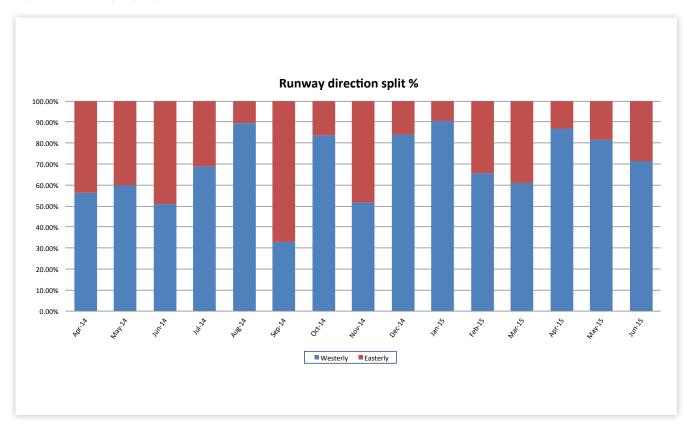
This quarter the direction of runway operation was split 69% in a westerly mode, against 31% in an easterly mode.

Although the long term average is approximately 70:30 in favour of westerly operations, it is not unusual to experience long periods of prolonged operation in either one direction or another.





#### **RUNWAY DIRECTION SPLIT %**



#### THE AERONAUTICAL INFORMATION PUBLICATION

An Aeronautical Information Publication (or AIP) is defined by the International Civil Aviation Organisation (ICAO) as a publication issued by or with the authority of a state and containing aeronautical information of a lasting character essential to air navigation.

It is designed to be a manual containing thorough details of regulations, procedures and other information pertinent to flying aircraft in the particular country to which it relates. It is usually issued by or on behalf of the respective civil aviation administration.

The structure and contents of AIPs are standardized by international agreement through ICAO. AIPs normally have three parts - GEN (general), ENR (en route) and AD (aerodromes).

The Gatwick Aerodrome AIP contains details regarding the noise mitigation measures in place and adherence to these is reported in this section.

## ADHERENCE TO NOISE MITIGATION MEASURES AS DETAILED IN THE GATWICK AIP

Each element of this report is preceded where applicable by the relevant Aeronautical Information Publication (AIP) reference and summary text detailing the purpose of the requirement. Data is then presented on current performance.

It should be noted that Gatwick is 202ft above mean sea level and the Noise and Track Keeping (NTK) system measures height relative to Gatwick elevation and not sea level.

References in the AIP are usually above sea level (quoted as Gatwick QNH) and therefore need to be reduced by 202ft to be comparable with heights as measured by the Noise and Track keeping system. For example, the requirement to join the ILS at 3000ft would equate to 2798ft in the Noise and Track keeping system.

No account is taken of the variability of heights as measured by the radar which, depending on the distance from the radar head, can be +/- 200ft from that indicated. This is obviously allowed for by NATS when managing operations.

FOR THE PURPOSES OF THIS REPORT ANY REFERENCE TO HEIGHT SHOULD BE READ AS ABOVE AIRFIELD ELEVATION UNLESS OTHERWISE STATED.

ALL DATA CONTAINED WITHIN THIS REPORT SHOULD BE CONSIDERED IN LIGHT OF THE PRECEDING TEXT AND THE COMMENTARY THAT FOLLOWS.

#### **DEPARTURES - INITIAL CLIMB PERFORMANCE**

EGKK AD 2.21 (3(1)) After take-off the aircraft shall be operated in such a way that it is at a height of not less than 1000 ft aal (above airfield level) at 6.5 km from start of roll as measured along the departure track of the aircraft. This is to ensure departing aircraft achieve at least that climb gradient in order to reduce the impact on the ground.

#### **Comment:**

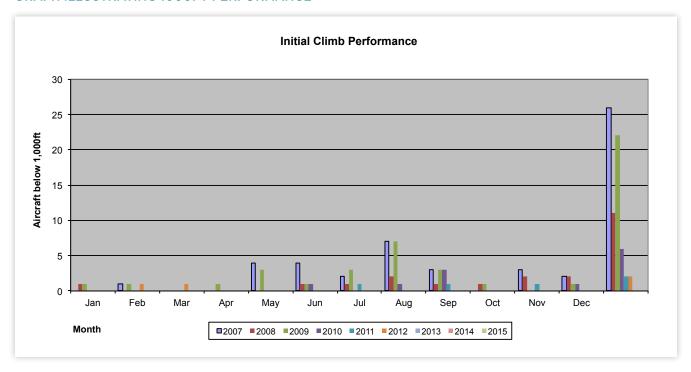
There were no infringements of the 1000ft rule during this quarter.

Historically, the summer months are typically the peak period for aircraft failing to meet the 1,000ft requirement primarily due to the warmer weather, which reduces aircraft climb performance.

### 1000ft INFRINGEMENT TABLE

Year	Total Infringements	Year	Total Infringements
2006	11	2011	3
2007	26	2012	2
2008	11	2013	0
2009	22	2014	0
2010	6	2015	0

#### **GRAPH ILLUSTRATING 1000FT PERFORMANCE**



#### **DEPARTURES - NOISE INFRINGEMENTS**

#### **Departure Noise Limits (Daytime)**

**EGKK AD 2.21 (3(3))** Subject to sub-paragraphs (5) and (6) below, any aircraft shall, after takeoff, be operated in such a way that it will not cause more than 94 dBA Lmax by day (0700 to 2300 hours local time) as measured at any noise monitoring terminal at any of the sites referred to in sub-paragraph (2). This is to ensure that departing aircraft do not exceed the stated level during the day.

## Comment:

There were no infringements of the noise limits during the day time period during the quarter.

Year	Number of Day Infringements	Year	Number of Day Infringements	Year	Number of Day Infringements
2006	9	2010	0	2014	0
2007	13	2011	0	2015	0
2008	2	2012	0		
2009	0	2013	0		

## DEPARTURE NOISE LIMITS (CORE NIGHT & SHOULDERS)

EGKK AD 2.21 (3(4)) Subject to sub-paragraphs (5) and (6) below, any aircraft shall, after takeoff, be operated in such a way that it will not cause more than 89 dBA Lmax by night (2300 to 0700 hours local time) and that it will not cause more than 87 dBA Lmax during the night quota period (2330 to 0600 hours local time) as measured at any noise monitoring terminal at any of the sites referred to in sub-paragraph (2). This is to ensure that departing aircraft do not exceed the stated levels during the night and shoulder periods.

## Comment:

There have been no night time noise infringements during this quarter.

Year	Number of Night & Shoulder Infringements	Year	Number of Night & Shoulder Infringements	Year	Number of Night & Shoulder Infringements
2006	2	2010	0	2014	0
2007	2	2011	4	2015	0
2008	2	2012	0		
2009	1	2013	0		

#### **DEPARTURES - TRACK KEEPING**

All jet aircraft leaving Gatwick Airport should follow flight paths known as Noise Preferential Routes (NPRs) up to a height of 3,000ft or 4,000ft depending on the route.

In 2012, Gatwick Airport publicly consulted on the implementation of a more modern form of aircraft navigation called P-RNAV (Precision Route Navigation). After having assessed all consultation feedback, the Civil Aviation Authority (CAA) granted the airport permission to implement P-RNAV on all of our departure routes.

Implementing P-RNAV on the published departure routes has resulted in the tracks of departing aircraft being more concentrated within the boundaries of the current NPRs, with one exception.

This is the NPR designed 26LAM that heads west then turns back on itself and passes to the north of the airfield. This route has always presented a challenge for modern jets as it was designed to accommodate propeller driven aircraft and early jets that were around in the late 1960s. Implementing P-RNAV on this route now requires aircraft to fly outside of the current NPR. Therefore, as approved by the CAA, aircraft on a P-RNAV departure on this route are not classified as off track as they are following the published route.

Air Traffic Control (ATC) are responsible for the routing of aircraft once airborne and when 3,000 or 4,000ft has been reached they may give a flight a more direct heading (known as vectoring) off the route. This is subject to certain factors including weather conditions or other traffic in the vicinity.

An NPR is a corridor 3 kilometres wide and aircraft are not obliged to follow any particular track within it. As long as aircraft remain within the corridor boundaries they are deemed to be on track. A map illustrating the Noise Preferential Routes at Gatwick is available on our website.

#### www.gatwickairport.com/noise

Flights leaving the route below the required height are automatically tagged and details sent to the airline for investigation. Our Flight Operations Performance & Safety Committee regularly review track keeping performance.

#### TABLE ILLUSTRATING TRACK KEEPING PERFORMANCE OVER 15 MONTHS

		Total			Westerly			Easterly	
Month	Deviations	Departures	% Deviations	Deviations	Departures	% Deviations	Deviations	Departures	% Deviations
Apr-14	78	9774	0.80%	57	5229	1.09%	21	4545	0.46%
May-14	37	11654	0.32%	26	7067	0.37%	11	4587	0.24%
Jun-14	41	11659	0.35%	25	6079	0.41%	16	5580	0.29%
Jul-14	56	12642	0.44%	30	8769	0.34%	26	3873	0.67%
Aug-14	102	13182	0.77%	83	11816	0.70%	19	1366	1.39%
Sep-14	40	11993	0.33%	22	4069	0.54%	18	7924	0.23%
Oct-14	82	11265	0.73%	77	9436	0.82%	5	1829	0.27%
Nov-14	61	8478	0.72%	43	4593	0.94%	18	3885	0.46%
Dec-14	11	9048	0.12%	10	7645	0.13%	1	1403	0.07%
Jan-15	13	8849	0.15%	13	8030	0.16%	0	819	0.00%
Feb-15	23	8584	0.27%	14	5601	0.25%	9	2983	0.30%
Mar-15	11	10075	0.11%	7	3962	0.18%	4	6104	0.07%
Apr-15	26	10916	0.24%	16	5610	0.29%	10	5306	0.19%
May-15	47	12206	0.39%	46	10001	0.46%	1	2205	0.05%
Jun-15	31	12440	0.25%	19	8910	0.21%	12	3530	0.34%

#### Comment:

The table above shows track keeping performance over the previous 12 month period. The on track performance for the quarter was 99.70%, compared to 99.82% measured in the previous quarter. The rolling 12 month period track performance stands at 99.61%, as opposed to 98.53% for the 12 months ended June 2014. (These figures do not include PRNAV Departures on the 26LAM wrap around route)

#### **DEPARTURES - OVER CONGESTED AREAS**

#### The WIZAD Noise Preferential Route

**EGKK AD 2.21 (8) (c)** The ATC clearance via Mayfield, specified in the second column of the table, will not be available between 2300 hours and 0700 hours local time. Aircraft following the Noise Preferential Routing which relates to that clearance shall not fly over Crawley, Crawley Down or East Grinstead.

#### Comment:

This quarter, there were three departures during the restricted period, on the '26 WIZAD' Noise Preferential Route. Following an investigation, it was established that these events occurred during a short time window for weather avoidance purposes. The departures in question were assigned a WIZAD SID.

#### **Overflight of Crawley and Horley**

**EGKK AD 2.21 (9)** After take-off the aircraft shall avoid flying over the congested areas of Horley and Crawley. This is to avoid aircraft noise from departing aircraft over areas of high population.

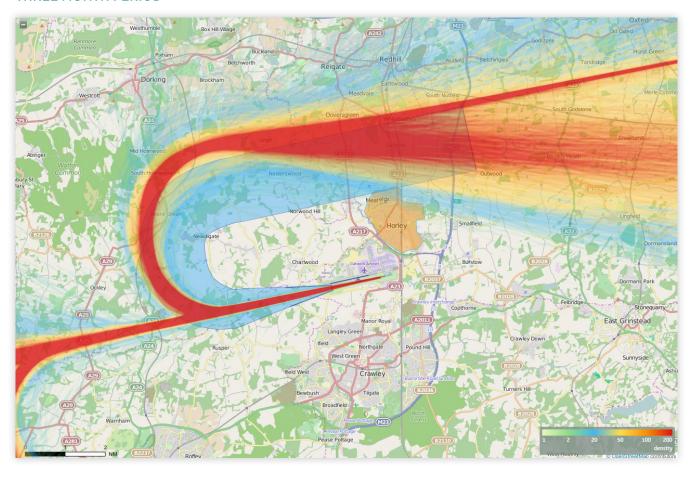
#### **Comment:**

During this period, there were no departing flights that passed over Crawley.

## MAP ILLUSTRATING CRAWLEY TOWN BOUNDARY WITH NOISE PREFERENTIAL ROUTE 26 WIZAD AND DEPARTURE OVERFLIGHT



## MAP BELOW ILLUSTRATES THE TRACK DENSITY OF AIRCRAFT OVERFLYING HORLEY DURING THE THREE MONTH PERIOD



#### BREAKDOWN SHOWING THE ANALYSIS OF HORLEY OVERFLIGHT

Month	Departures on 26LAM	Horley gate	% through Horley gate	Month	Departures on 26LAM	Horley gate	% through Horley gate	Month	Departures on 26LAM	Horley gate	% through Horley gate
Jan-13	2196	67	3.05%	Jan-14	3048	50	1.64%	Jan-15	3237	95	2.93%
Feb-13	1447	101	6.98%	Feb-14	3089	60	1.94%	Feb-15	2251	64	2.84%
Mar-13	1427	70	4.91%	Mar-14	2447	60	2.45%	Mar-15	2453	38	1.55%
Apr-13	2499	78	3.00%	Apr-14	2043	40	1.96%	Apr-15	2197	43	1.96%
May-13	3545	186	5.25%	May-14	2805	46	1.64%	May-15	4048	65	1.61%
Jun-13	3114	153	4.91%	Jun-14	2606	38	1.46%	Jun-15	3686	55	1.49%
Jul-13	2777	78	2.81%	Jul-14	3466	52	1.50%	Jul-15	0	0	-
Aug-13	4157	152	3.66%	Aug-14	4512	35	0.78%	Aug-15	0	0	-
Sep-13	3590	185	5.15%	Sep-14	1686	24	1.42%	Sep-15	0	0	-
Oct-13	3614	139	3.85%	Oct-14	3826	31	0.81%	Oct-15	0	0	-
Nov-13	2659	128	4.81%	Nov-14	1881	19	1.01%	Nov-15	0	0	-
Dec-13	3438	60	1.75%	Dec-14	3079	79	2.57%	Dec-15	0	0	-

Full implementation of PRNAV from 1 May 2014

#### **Comment:**

The FPT monitors all departing aircraft that overfly the town of Horley with details also being passed to Air Traffic Control so that they can continue to review how they direct traffic over the area.

#### CONTINUOUS DESCENT APPROACH

EGKK AD 2.21 (10) Where the aircraft is approaching the aerodrome to land, it shall commensurate with it ATC clearance to minimise noise disturbance by the use of continuous decent and low power, low drag, operating procedures (referred to in Detailed Procedures for descent clearance in section EGKK AD 2.22 of the UK AIP). Where the use of these procedures is not practicable, the aircraft shall maintain as high an altitude as possible. In addition, when descending on initial approach including in the closing heading, and on intermediate and final approach, thrust reductions should be achieved where possible by maintaining a 'clean' aircraft configuration and by landing with reduce flaps, provided that in all the circumstances of the flight, this is consistent with safe operation of the aircraft.

CDA data is measured over three time periods, the core night period (2330-0600), the day and shoulder periods (0600 - 2330) and the 24hour period.

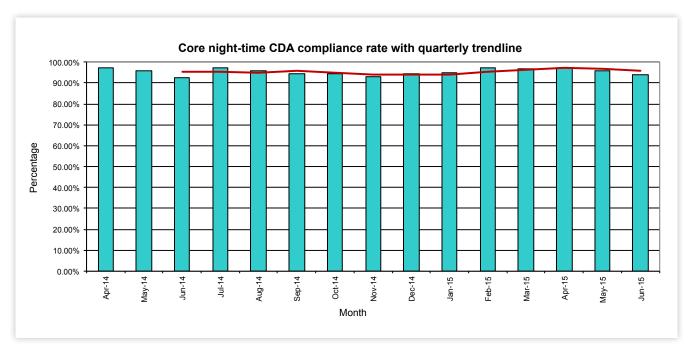
### **CORE NIGHT PERIOD**

During this quarter, the core night-time CDA achievement rate was 95.31%, compared to 96.36% recorded in the previous quarter. The underlying performance rate remains positive with an achievement rate of 95.50% recorded for the year to the end of June 2015.

## BREAKDOWN OF THE CORE NIGHT TIME PERIOD

	All Arrivals				08 Easterly Arriva	ls	26 Westerly Arrivals		
Month	Total	Non CDA	%CDA	Total	Non CDA	%CDA	Total	Non CDA	CDA
Apr-14	725	19	97.38%	383	9	97.65%	342	10	97.08%
May-14	1227	49	96.01%	536	27	94.96%	691	22	96.82%
Jun-14	1496	112	92.51%	863	81	90.61%	633	31	95.10%
Jul-14	1713	48	97.20%	546	28	94.87%	1167	20	98.29%
Aug-14	1866	80	95.71%	275	15	94.55%	1591	65	95.91%
Sep-14	1574	85	94.60%	1009	76	92.47%	465	9	98.06%
Oct-14	1046	56	94.65%	118	10	91.53%	984	46	95.33%
Nov-14	294	20	93.20%	104	3	97.12%	190	17	91.05%
Dec-14	366	21	94.26%	50	5	90.00%	316	16	94.94%
Jan-15	324	16	95.06%	20	1	95.00%	289	15	94.81%
Feb-15	280	8	97.14%	70	1	98.57%	210	7	96.67%
Mar-15	386	12	96.89%	135	3	97.78%	242	9	96.28%
Apr-15	847	22	97.40%	408	7	98.28%	439	15	96.58%
May-15	1297	56	95.68%	295	20	93.22%	1002	36	96.41%
Jun-15	1569	96	93.88%	416	22	94.71%	1153	74	93.58%

## CORE NIGHT-TIME COMPLIANCE GRAPH



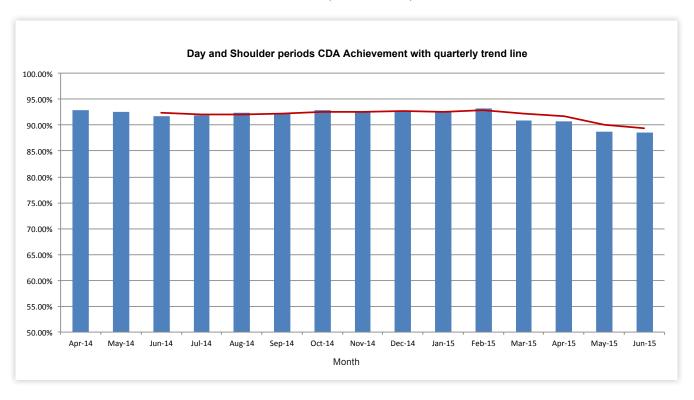
#### DAYTIME AND SHOULDER PERIOD

The average daytime and shoulder period achievement rate for this 3 month period is 89.33%, compared to 92.20% for the previous quarter.

#### BREAKDOWN OF THE DAYTIME AND SHOULDER TIME PERIOD WITH GRAPH

	All Arrivals			0	8R Easterly Arriva	als	2	6L Westerly Arriv	als
Month	Total	Non CDA	%CDA	Total	Non CDA	%CDA	Total	Non CDA	CDA
Apr-14	9326	655	92.98%	4402	345	92.16%	4924	310	93.70%
May-14	10618	796	92.50%	4230	345	91.84%	6388	451	92.94%
Jun-14	10455	861	91.76%	5000	479	90.42%	5455	382	93.00%
Jul-14	11144	895	91.97%	3413	355	89.60%	7731	540	93.02%
Aug-14	11404	870	92.37%	1099	107	90.26%	10305	763	92.60%
Sep-14	10853	848	92.19%	7149	590	91.75%	3704	258	93.03%
Oct-14	10344	726	92.98%	1691	160	90.54%	8653	566	93.46%
Nov-14	8413	627	92.55%	4229	344	91.87%	4184	283	93.24%
Dec-14	8841	643	92.73%	1429	122	91.46%	7412	521	92.97%
Jan-15	8487	632	92.55%	811	84	89.64%	7676	548	92.86%
Feb-15	8278	555	93.30%	2635	207	92.14%	5436	348	93.60%
Mar-15	9633	870	90.97%	3731	442	88.15%	5902	428	92.75%
Apr-15	10028	927	90.76%	4849	475	90.20%	5179	452	91.27%
May-15	10825	1219	88.74%	1999	237	88.14%	8826	982	88.87%
Jun-15	10802	1230	88.61%	3107	402	87.06%	7695	828	89.24%

## GATWICK DAY & SHOULDER CDA ACHIEVEMENT (0600 - 2330) WITH QUARTERLY TREND LINE



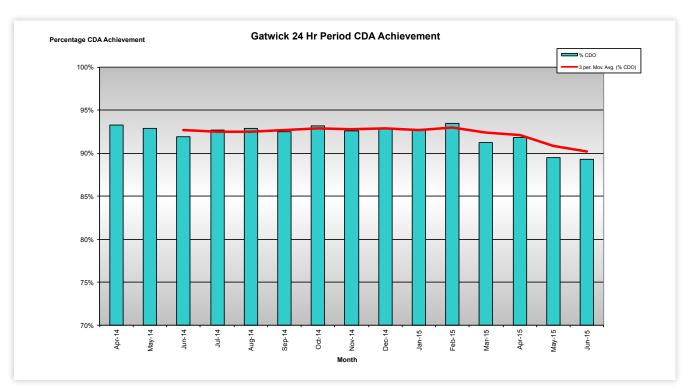
## 24 HOUR PERIOD

This quarter's performance level was 90.11%, whilst the performance for the previous quarter was 92.35%.

## BREAKDOWN OF 24 HOUR TIME PERIOD WITH GRAPH

	All Arrivals				08 Easterly Arriva	ls	2	26 Westerly Arriva	ls
Month	Total	Non CDA	% CDA	Total	Non CDA	% CDA	Total	Non CDA	% CDA
Apr-14	10051	674	93.29%	4200	334	92.05%	4664	294	93.70%
May-14	11845	845	92.87%	4766	372	92.19%	7079	473	93.32%
Jun-14	11951	973	91.86%	5863	560	90.45%	5675	413	92.72%
Jul-14	12857	943	92.67%	3959	383	90.33%	8898	560	93.71%
Aug-14	13270	950	92.84%	1374	122	91.12%	11896	728	93.88%
Sep-14	12427	933	92.49%	8258	666	91.94%	4169	267	93.60%
Oct-14	11446	782	93.17%	1809	170	90.60%	9637	612	93.65%
Nov-14	8707	647	92.57%	4333	347	91.99%	4374	300	93.14%
Dec-14	9207	656	92.87%	1479	124	91.62%	7728	532	93.12%
Jan-15	8811	648	92.65%	831	85	89.77%	7980	563	92.94%
Feb-15	8558	563	93.42%	2912	208	92.86%	5646	355	93.71%
Mar-15	10019	882	91.20%	3866	445	88.49%	6153	437	92.90%
Apr-15	10875	894	91.78%	5257	482	90.83%	5608	467	91.67%
May-15	12122	1275	89.48%	2294	257	88.80%	9828	1018	89.64%
Jun-15	12371	1326	89.28%	3523	391	88.90%	8848	789	91.08%

## **GATWICK 24 HOUR PERIOD CDA ACHIEVEMENT**



#### **ARRIVALS - OVER CONGESTED AREAS**

AD 2-EGKK1-12 (11) Before landing at the aerodrome the aircraft shall maintain as high an altitude as practical and shall not fly over the congested areas of Crawley, East Grinstead, Horley and Horsham at an altitude of less than 3000ft (Gatwick QNH) nor over the congested area of Lingfield at an altitude of less than 2000ft (Gatwick QNH). NB. 2000 ft - (202ft (airfield elevation) + 100ft (radar/ILS tolerance)) = 1698ft on ANOMS.

**EGKK AD 2.21 (13 (a))** Where the aircraft is using the ILS in IMC or VMC, it shall not descend below 2000 ft (Gatwick QNH) before intercepting the glide path, nor thereafter fly below the glide path. This is aimed at keeping aircraft as high as possible for as long as possible.

A) Day time joining height (0600 - 2330)

#### Comment:

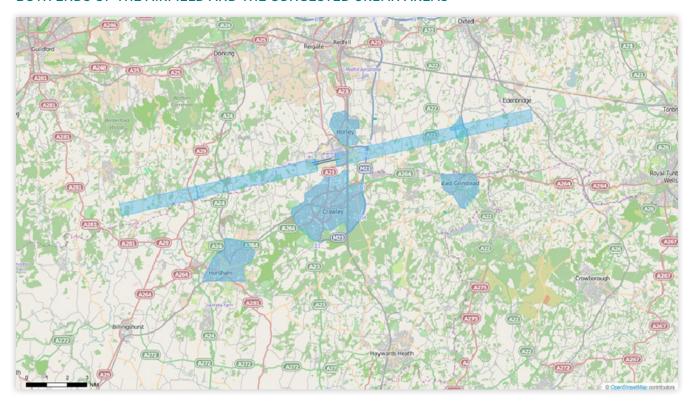
Aircraft tracks were analysed for April, May and June 2015 and, with the exception of a small number of go-arounds, there were no arriving flights that passed over the towns of Crawley, East Grinstead, Horley and Horsham below the required altitude.

A polygon located over the urban area at about 7 nautical miles (nm) from touchdown is normally used to analyse tracks over the Lingfield area. During the analysis period there were a total of 22456 arrivals that passed through this area. There were no arriving aircraft that passed over the town below a height of 1698 feet.

#### **Comment:**

The map below shows the congested urban areas, a series of gates running parallel to the extended runway centreline for around 6nm east and west of the airport. These are used to monitor low arrivals joining the ILS below 2000ft. There were 35521 arrivals recorded by the Casper NTK system this quarter, 9 (0.19%) were operating below an altitude of 2000ft (equivalent to a height in the NTK system of 1798ft) through one or more of the analysis gates. In addition, there were 29 'go-arounds' that were not included in this figure.

## THE FOLLOWING MAP ILLUSTRATES THE ANALYSIS ZONES USED FOR LATE AND LOW ARRIVALS FOR BOTH ENDS OF THE AIRFIELD AND THE CONGESTED URBAN AREAS



**EGKK AD 2.21 (14)** Aircraft which land at Gatwick Airport - London between the hours of 2330 (local) and 0600 (local), whether or not making use of the ILS localizer and irrespective of weight or type of approach, shall not join the centre line:

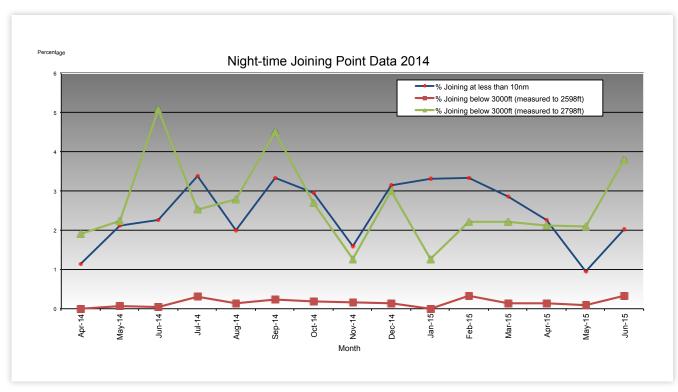
- a) below 3000ft or
- b) closer than 10 nm from touchdown.

This aims to keep aircraft higher for longer and avoid overflying areas en route to the ILS below 3000ft.

#### **Comment:**

The high number of arrivals of joining below 3000 feet (recorded to 2798 feet) was due to the use of the northern runway, during the latter part of June, due to the closure of the main runway for maintenance. The northern runway has no ILS system and this has a negative impact on performance.

## JOINING POINT GRAPH



#### **GO-AROUND STATISTICS 2004 - 2015**

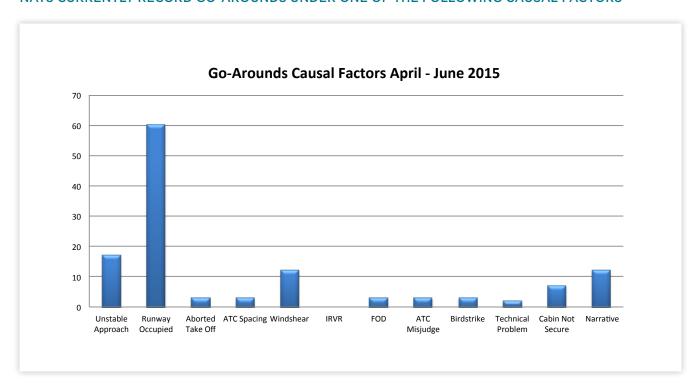
A go-around is a procedure adopted when an arriving aircraft on final approach aborts landing by applying take-off power and climbing away from the airport. It is a set procedure to be followed by the flight crew in the event of an aircraft being unable to land. The procedure is published so that Air Traffic Control (ATC) and the pilots can anticipate where the aircraft will go following the decision to go-around.

The number and reasons for go-arounds are routinely discussed at FLOPSC meetings and Pilot Forums. All parties are focussed on minimising the number of occasions when a go-around is required but expect some to occur given the fact that Gatwick

is a busy single runway airport. It should be stated that there are well established standard procedures which both pilots and controllers are trained in and are familiar with. Gatwick Airport Ltd, as the airport operator, actively encourages airlines operating at the airport to fly to the best possible environmental standards. However, safety must and always will be the number one priority.

The main causes of go-arounds this quarter were 'runway occupied' and 'unstable approaches'.

#### NATS CURRENTLY RECORD GO-AROUNDS UNDER ONE OF THE FOLLOWING CAUSAL FACTORS



## **GO AROUND STATISTICS 2004 - 2015**

Year	Total	Total Arrivals	% of Arrivals
2004	344	124665	0.28
2005	450	129509	0.35
2006	405	130954	0.31
2007	434	133271	0.33
2008	359	131858	0.35
2009	455	125861	0.36
2010	364	120263	0.3
2011	386	125541	0.31
2012	520	123408	0.42
2013	473	125290	0.38
2014	512	129966	0.39
2015	231	63056	0.37

## Comment:

The most common reasons for go-arounds were 'runway occupied' and 'unstable approaches' The percentage of arrivals performing go-arounds is 0.37%.

#### **NIGHT FLIGHTS**

#### Introduction

The Secretary of State, in exercise of his powers under Section 78 of the Civil Aviation Act 1982, has imposed restrictions at Gatwick Airport on aircraft operating at night. These restrictions are in place to limit and mitigate noise disturbance from aircraft operating at night and to prohibit aircraft of specified descriptions from operating, also to limit the number of occasions on which other aircraft may take-off or land.

The night flying restrictions are divided into summer and winter seasons which coincide with the start and end of British Summer Time. They consist of a movement limit and a quota count system. The quota count (QC) means that points are allocated to different aircraft types according to how noisy they are. The noisier the aircraft type, the higher the points allocated. This provides an incentive for airlines to use quieter aircraft types. Aircraft are certified by the International Civil Aviation Organisation according to the noise they produce and are classified separately for both take-off and landing.

For the purposes of night flying operations, the night quota period is defined as the period between 23:30 -06:00 (Local time). In addition, there are two further shoulder periods of 23:00 - 23:30 and 06:00 - 07:00 (Local time), where other restrictions apply to the scheduling and operation of aircraft of specified descriptions.

The Department for Transport has confirmed that the current night flight restrictions will remain in force until October 2017.

#### Comment:

Overleaf is a mid-season report for summer 2015. The summer season started at 02:00 on 29th March 2015. The total number of movements available will be 11,525 which includes a 10% carry over of the unused quota from the winter season.

**Dispensations** - There have been 276 dispensations applied this season due to delays caused by a different factors. Full details for the reason for each dispensation granted by the Airport is passed to the DfT in accordance with established procedure.

**QC4, QC8 and QC16 movements** - There have been no QC8 or QC16 movements during either the 'night quota' or 'shoulder periods', and no QC4 movements during the 'night quota period'.

### **RESTRICTIONS**

Winter	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Movements Limits	3250	3250	3250	3250	3250	3250	3250
Quota Points	2060	2000	2000	2000	2000	2000	2000

Summer	2010	2011	2012	2013	2014	2015	2016
Movements Limits	11200	11200	11200	11200	11200	11200	11200
Quota Points	6400	6300	6200	6200	6200	6200	6200

London Gatwick AIRPORT MOVEMENTS and QUOTA SUMMARY To Week 17 (29 March 2015 to 20 July 2015 inc)

11200

Season Movement Limit Total Movements Allowed

6200

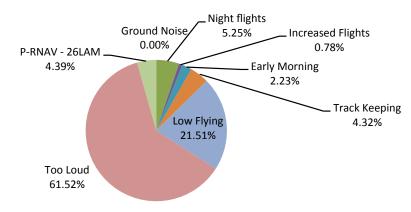
Season Quota Points Limit Total Quota Points Allowed

ek End Date	guil	QC0.25 No.	QC0.5 No.	O N O O	QC2 No.	0C4 No.	00 N 0.	QC16 No.	Total Quota Value	Mvmts Against Limit	Exmpt	Not Cnt'd Delays	Not Cnt'd Govt	Not Cnt'd Emgcy	Total Arvis No.	Total Arvis %	Total Deps No.	Total Deps %	Total Rnwy Mvmts
04/04/2015	1015	133	20	23	ĸ	0	0	0	87.25	509	-	43	0	0	226	89.3	27	10.7	253
11/04/2015	215	13.7	79	23	0	0	0	0	96.75	239	-	17	0	0	224	87.2	33	12.8	257
18/04/2015	015	126	89	22	2	0	0	0	91.5	218	2	0	0	0	185	84.1	35	15.9	220
25/04/2015	015	131	29	16	-	0	0	0	80.25	207	-	0	0	0	180	86.5	28	13.5	208
02/05/2015	015	155	69	30	-	0	0	0	105.25	255	2	0	0	0	221	86.0	36	14.0	257
09/05/2015	015	158	112	30	0	0	0	0	125.5	300	0	0	0	0	272	200.7	28	9.3	300
16/05/2015	015	13.7	66	34	-	0	0	0	119.75	271	2	0	0	0	244	89.4	59	9:01	273
23/05/2015		206	104	48	-	0	0	0	153.5	359	-	0	0	0	325	90.3	35	9.7	360
30/05/2015		207	125	44	Ŋ	0	0	0	168.25	381	м	0	0	0	339	88.3	45	11.7	384
06/06/2015		232	124	31	9	0	0	0	163	393	M	20	0	0	373	89.7	43	10.3	416
13/06/2015		230	133	34	2	0	0	0	162	399	2	9	0	0	364	89.4	43	10.6	407
20/06/2015		227	145	38	24	0	0	0	173.25	413	4	0	0	0	368	88.2	49	11.8	417
27/06/2015		224	143	44	ιΛ	0	0	0	181.5	416	0	0	0	0	369	88.7	47	11.3	416
04/07/2015		251	159	32	10	0	0	0	194.25	452	2	20	0	0	418	88.2	26	11.8	474
11/07/2015		246	154	33	12	0	0	0	195.5	445	0	თ	0	0	400	88.1	54	11.9	454
18/07/2015		235	144	43	7	0	0	0	187.75	429	2	26	0	0	403	88.2	24	11.8	457
25/07/2015		277	158	42	7	0	0	0	204.25	484	-	17	0	0	447	89.0	22	11.0	502
01/08/2015		274	155	49	4	0	0	0	203	482	-	40	0	0	459	87.8	99	12.2	523
08/08/2015		264	154	19	4	0	0	0	212	483	0	-	0	0	429	88.6	22	11.4	484
15/08/2015		260	142	28	89	0	0	0	200	463	rv	29	0	0	440	88.5	57	11.5	497
22/08/2015		237	153	67	2	0	0	0	206.75	459	8	0	0	0	392	84.8	70	15.2	462
29/08/2015		236	153	20	rv	0	0	0	195.5	444	м	39	0	0	419	86.2	67	13.8	486
05/09/2015		247	146	29	4	0	0	0	201.75	456	8	თ	0	0	402	85.9	99	14.1	468
TOTALS		4830	2828	911	88	0	0	0	3708.5	8657	42	276	0	0	7899	88.0	1076	12.0	8975
otts /	Quota Points Available Quota Points % Used Note 1 Not Cnt'd Delays: Note 2 Not Cnt'd Govt:	e .:. ::			7 F) L H L	4351.00 37.16 Delays lil Exemptic	cely to land gran	Mo Mo ead to s red by	Movements Availab Movements % Used to serious congestic by Gov't (VIP Passe	35.1.00 Movements Available 37.16 Movements % Used 48.67 Delays likely to lead to serious congestion and delays resulting from widespread disruption of Air Traffic. Exemptions granted by Gov't (VIP Passengers, Emergency Relief).	le in and d	'elays re Emerger	sulting f ncy Relie	14 4: rom wid	1494 48.67 idespread	disrupt	ion of A	ir Traffic	
Vot Cn:	Note 3 Not Cnt'd Emgcy:	cy:			ш	:merger	ıcy Take	e-offs ar	Emergency Take-offs and Landings.	ings.									

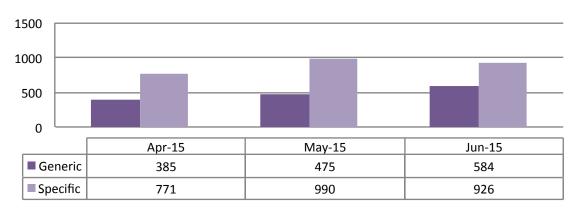
#### **NOISE COMPLAINTS**

It is important that we understand the issues of noise disturbance from individuals and communities who live around the airport. By studying the complaints we receive and by communicating with the affected towns and villages surrounding the airport, we believe that this gives us a greater understanding of the issues related to noise. This means that we can work together to improve noise climate around the airport. The complaints we received are either about specific aircraft events that cause disturbance or generic complaints about airport operations in general.

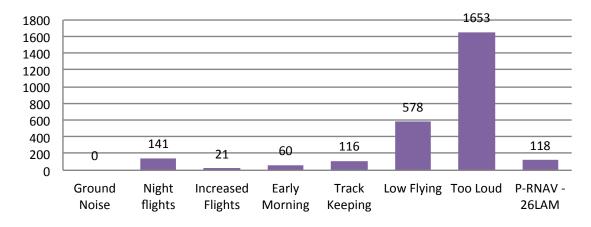
#### REASON FOR SPECIFIC COMPLAINT BY PERCENTAGE



#### **COMPLAINTS BY MONTH**



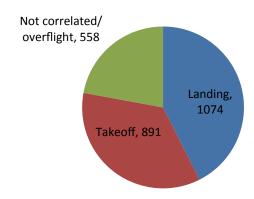
### REASON FOR SPECIFIC COMPLAINT BY NUMBER



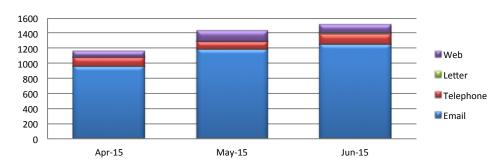
#### **NOISE COMPLAINTS**

Noise is very subjective and can affect people in different ways. Some people can tolerate a certain noise level whilst it can cause disturbance to others. As well as identifying the issues of noise, it is important to understand the location of each individual complaint. The charts below provide further analysis of the location of the complainants and whether they have been disturbed by arriving or departing flights, or by noise from within the airport boundary.

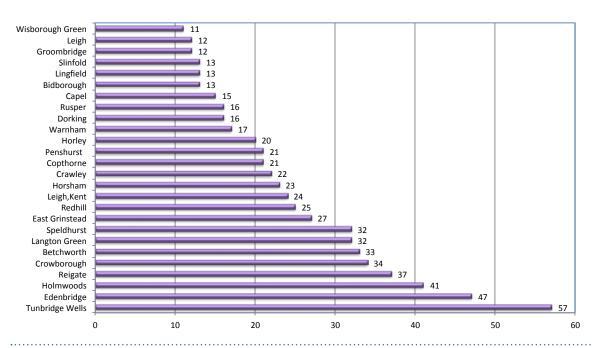
#### CATEGORY OF AIRCRAFT OPERATION



## **METHOD OF COMPLAINT**

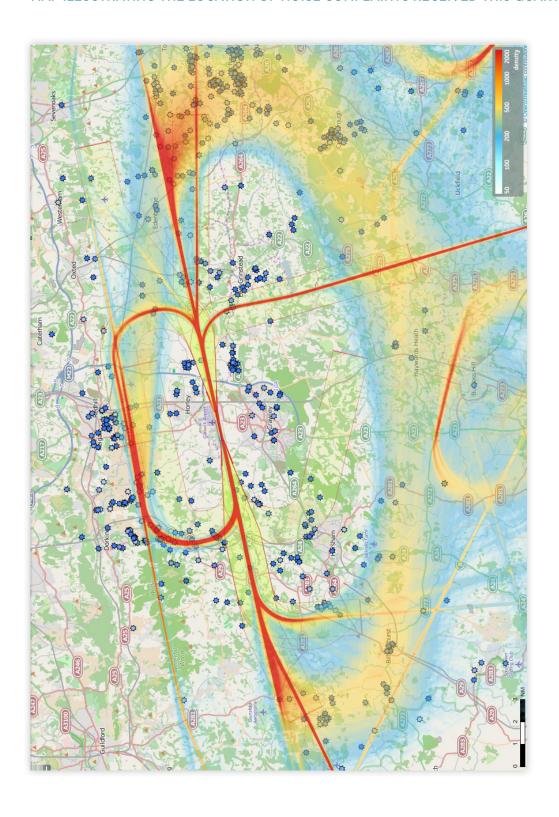


#### NUMBER OF INDIVIDUAL COMPLAINANTS BY TOWN

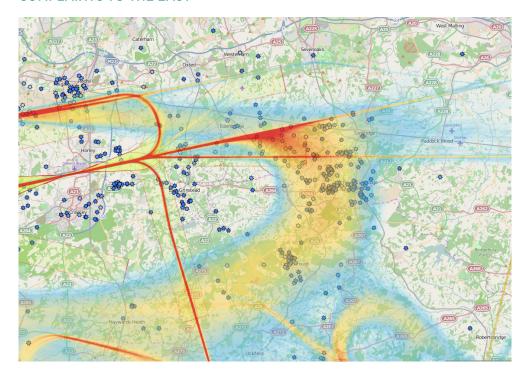


2<sup>ND</sup> QUARTER 2015

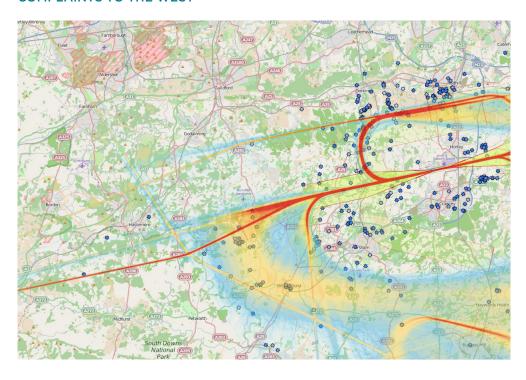
## MAP ILLUSTRATING THE LOCATION OF NOISE COMPLAINTS RECEIVED THIS QUARTER



MAP ILLUSTRATING **COMPLAINTS TO THE EAST** 



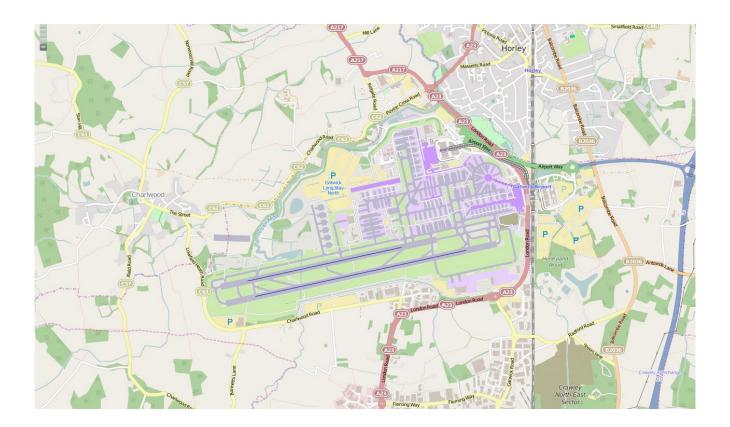
MAP ILLUSTRATING **COMPLAINTS TO THE WEST** 



#### **GROUND NOISE COMPLAINTS**

We occasionally receive complaints about disturbance from noise from within the boundary of the airfield. These can be caused by the normal operation of aircraft moving about the airfield, taking off and landing. Additional sources of noise disturbance can be the use of Auxiliary Power Units by aircraft on stand or the testing of engines following maintenance or repair (engines runs). Strict regulations exist to minimise this disturbance, which includes a ban on engine running during the night. Details of any ground noise complaints are outlined to the right.

There were no recorded ground noise complaints this quarter



Contact us: noise.line@gatwickairport.com For more information visit us at www.gatwickairport.com/noise

