



ANNUAL NOISE REPORT

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April 2020 – March 2021

Doncaster
Sheffield
Airport



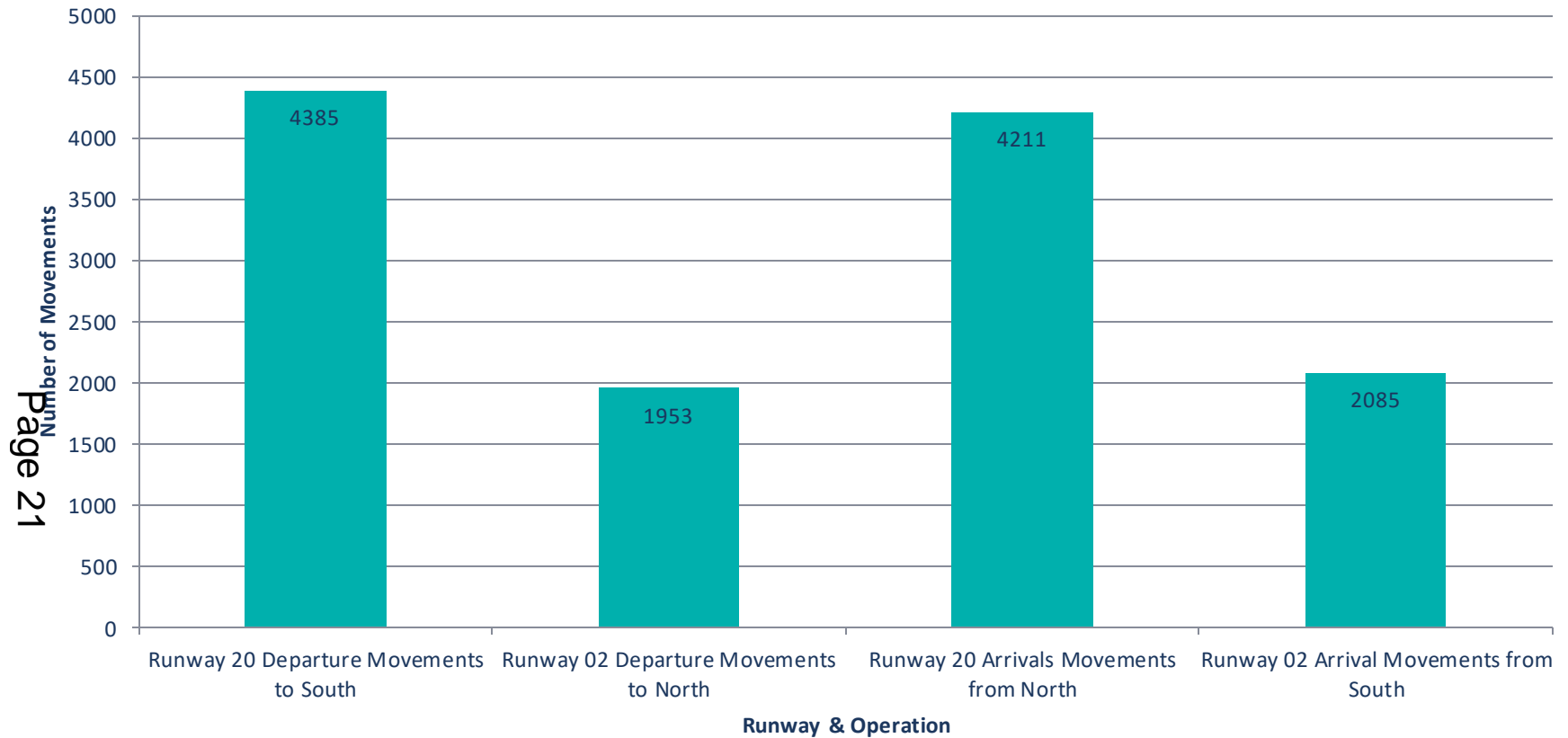
Agenda Item 9

Review of Operations 2005 - 2020

Aircraft Movements	From the opening of the airport to December 2007	From 1 January 2008 - 31 December 2011	After 1 Jan 2012	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Passenger ATMs				5,347	7,708	8,873	7,498	6,157	6,911	5,753	4,366	4,300	5,105	5,468	9,371	9,575	8,593	9,190	2,173
Total Passenger	17,039	22,419	27,799	5,347	7,708	8,773	7,498	6,157	6,911	5,753	4,366	4,300	5,105	5,468	9,371	9,575	8,593	9,190	2,173
Cargo ATMs				31	25	83	45	32	33	14	17	44	47	164	708	340	306	273	367
Total Cargo	2,738	3,596	4,140	31	25	83	45	32	33	14	17	44	47	164	708	340	306	273	367
General Aviation																			
Commercial	2,777	4,889	6,847	442	803	1,104	887	746	710	688	580	538	638	635	1,027	1,307	1,580	2,920	3,483
Non-Commercial	8,490	13,407	17,872	4,073	4,836	6,759	8,423	5,794	6,098	11,256	11,847	11,116	11,164	10,589	10,558	11,922	18,297	21,182	12,177
Total General Aviation	11,267	18,296	24,719	4,515	5,639	7,863	9,310	6,540	6,808	11,944	12,427	11,654	11,367	11,224	11,585	13,229	19,877	24,102	15,660
Maintenance	260	260	260	24	64	245	44	92	132	160	194	144	156	99	96	98	239	212	217
Total Aircraft Movements	31,304	44,571	56,918	9,917	13,436	16,964	16,897	12,821	13,884	17,871	17,004	16,142	16,675	16,955	21,760	23,242	29,015	33,676	18,377
Helicopter traffic	1,180	2,077	2,908	63	112	62	106	165	182	166	235	195	198	280	179	148	325	101	80

The table illustrates Air Transport Movements (ATMs) since the Airport opened in April 2005. The number and type of movements are restricted by Planning Condition 5. Air Traffic Control monitor and record the type and number of each movement every month.

Runway Use April 2020 to March 2021



The chart above illustrates a strong runway preference for arrivals from the North (Runway 20) and departures to the South (Runway 20). 70% of departures went to the South and 30% to the North. 67% of arrivals came from the North and 33% from the South.

Runway Use April 2005 to March 2021



The chart above further illustrates a runway preference for arrivals from the North (Runway 20) and departures to the South (Runway 20) since opening. 66% of departures went to the South and 34% to the North. 72% of arrivals came from the North and 28% from the South. However, year on year there will be slight differences with runway usage which is primarily attributable to weather in the year of operation.

Quota Count Point System

The Doncaster Sheffield Airport Quota Count Point (QCP) system was originally based on the night restrictions developed by the Government for Heathrow, Gatwick and Stanstead. The system classifies aircraft according to the noise they generate during arrival and departure (based on the noise levels measured at the time that aircraft was first introduced).

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The restrictions apply to a specific “noise quota” period (23:30 – 06:00 hours) during which time aircraft are restricted by noise quota. The noisiest types (QC8 & QC16) are not permitted to operate at night (between 23:00 – 07:00).

In 2017 after a review of the night flight restrictions at the designated airports – Heathrow, Gatwick and Stansted, a new QC0.125 category was added to the quota-count system. There are therefore eight categories of quota count and these double with each increase of three decibels.

CERTIFIED NOISE LEVEL (DECIBELS)	QUOTA COUNT
More than 101.9	QC16
99 to 101.9	QC8
96 to 98.9	QC4
93 to 95.9	QC2
90 to 92.9	QC1
87 to 89.9	QC0.5
84 to 86.9	QC0.25
81 to 83.9	QC0.125
Less than 81	Exempt

Quota Count Point System

The limit set on the total number of QC points for all aircraft taking off or landing between 23:30 and 06:00 depends on the season. Doncaster Sheffield Airport's seasonal QC point noise budgets are: Summer 3700 points & Winter 2300 points

Quota Count Points used per season since 2005				
	Summer		Winter	
Year	Summer Limit	Summer Usage	Winter Limit	Winter Usage
2005/06	3500	421	2200	70.5
2006/07	3875	447	2425	23
2007/08	4250	314.75	2650	95.75
2008/09	4625	306.75	2875	34.75
2009/10	5000	331	3100	58.75
2010/11	5000	391	3100	33.75
2011/12	3700	321.25	2300	59
2012/13	3700	195.25	2300	60.5
2013/14	3700	215.5	2300	35
2014/15	3700	163.5	2300	60.75
2015/16	3700	161.75	2300	52.75
2016/17	3700	245.75	2300	128
2017/18	3700	214.75	2300	138.5
2018/19	3700	334.25	2300	104.25
2019/20	3700	736.5	2300	212.5
2020/21	3700	122.5	2300	235

Noise Monitoring

Airborne noise is monitored at two fixed Noise Monitoring Terminals (NMTs) at Boston Park Farm (NMT1) to the North of the runway and at RAF Cadets Bawtry (NMT2) to the South of the runway. The NMTs were replaced with new Brüel & Kjær 3639 Noise Monitoring Terminals in October 2018.



Examples of Noise Monitoring Data

The noise statistics below show the L_{Amax} and Single Event Level (SEL) average recorded noise levels for the Wizz Air Airbus A320 for the periods April 2020 to March 2021 at the two fixed noise monitors. The L_{Amax} is the maximum noise level measured with slow time weighting and represents the highest level of environmental noise occurring during a correlated noise event.

Wizz Air Airbus A320		
NMT & Operation	L_{Amax} (dB)	SEL (dB)
Boston Park Farm (NMT 1) Arrivals	68.3	78.4
Boston Park Farm (NMT 1) Departures	69.0	80.7
RAF Bawtry (NMT 2) Arrivals	76.1	85.1
RAF Bawtry (NMT 2) Departures	71.4	82.9

The SEL is a measure of aircraft noise from a single event which takes account of the duration as well as the intensity, being the level maintained constantly for a period of one second that would deliver the same A weighted energy as the given noise event. The SEL and the L_{Amax} vary slightly at the NMTs, this is because NMT2 is located nearer to the airport than NMT1.

Noise Event Report

Flight Details

Flight Number

Tail Number HALPJ

Beacon Code 3116

Aircraft Type A320

A/D Flag A

Runway Name 20

Origin LRCL

Destination EGCN

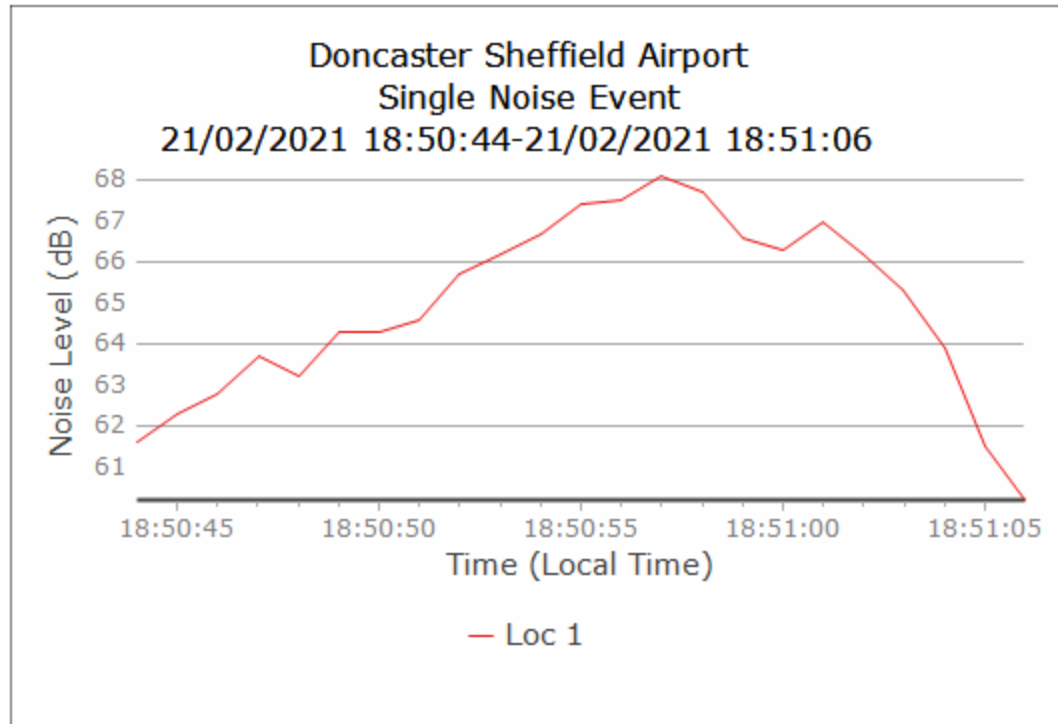
Way Point

Actual Time 21/02/2021

21/02/2021

18:53:10

Flight No



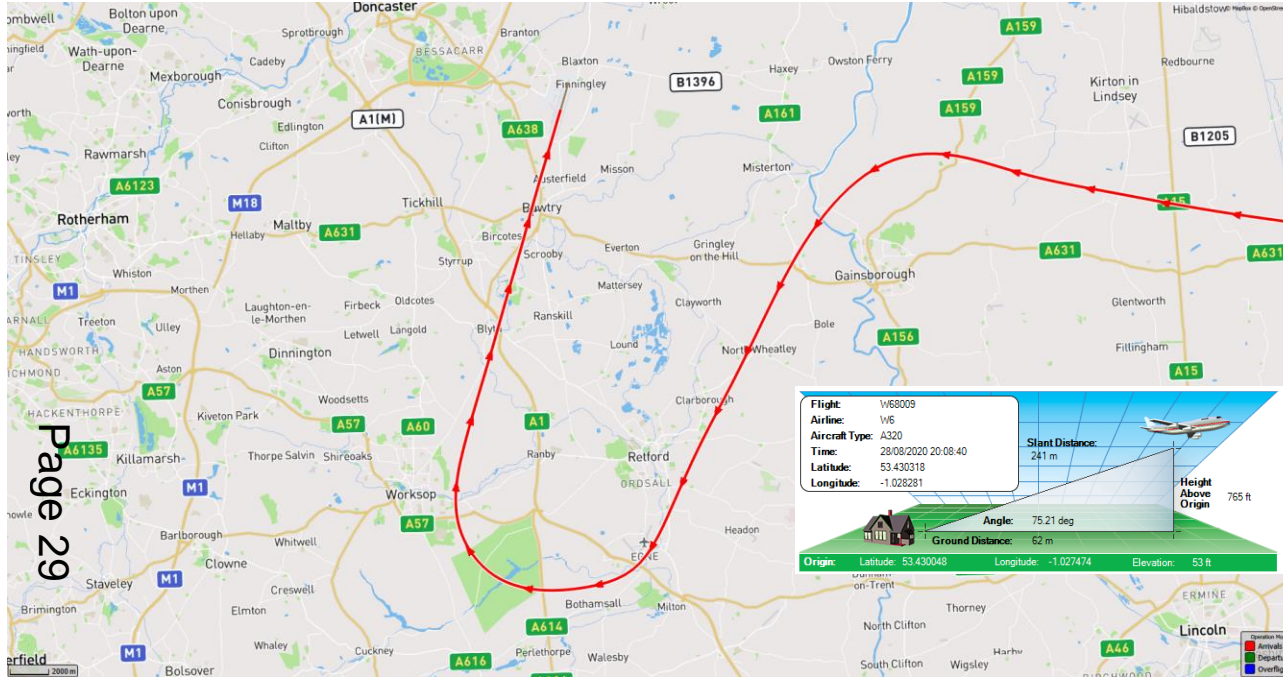
The above is an example of a Noise Event Graph from the Noise Monitoring and Track Keeping System for a Wizz Air Airbus A320 arriving on runway 20 recorded at the Boston Park Noise Monitoring Terminal.

Night-time Noise Sanctions Scheme

Definition	Limit, dB(A)
All aircraft types with QC greater on departure than 4	92
Aircraft with a QC on departure of 2 or 4	89
Aircraft with a QC on departure of 1	85
Aircraft with a QC on departure of 0.5 or less	83

Aircraft found, without reasonable cause, to have exceeded the noise limits during the night time period (23:00 to 07:00) will be subject to a financial penalty of at least £500. Aircraft found exceeding the noise limits during the daytime are investigated and operators asked to modify their operations. For the period of this report there have been no breaches of the Sanctions Scheme.

Noise Complaints



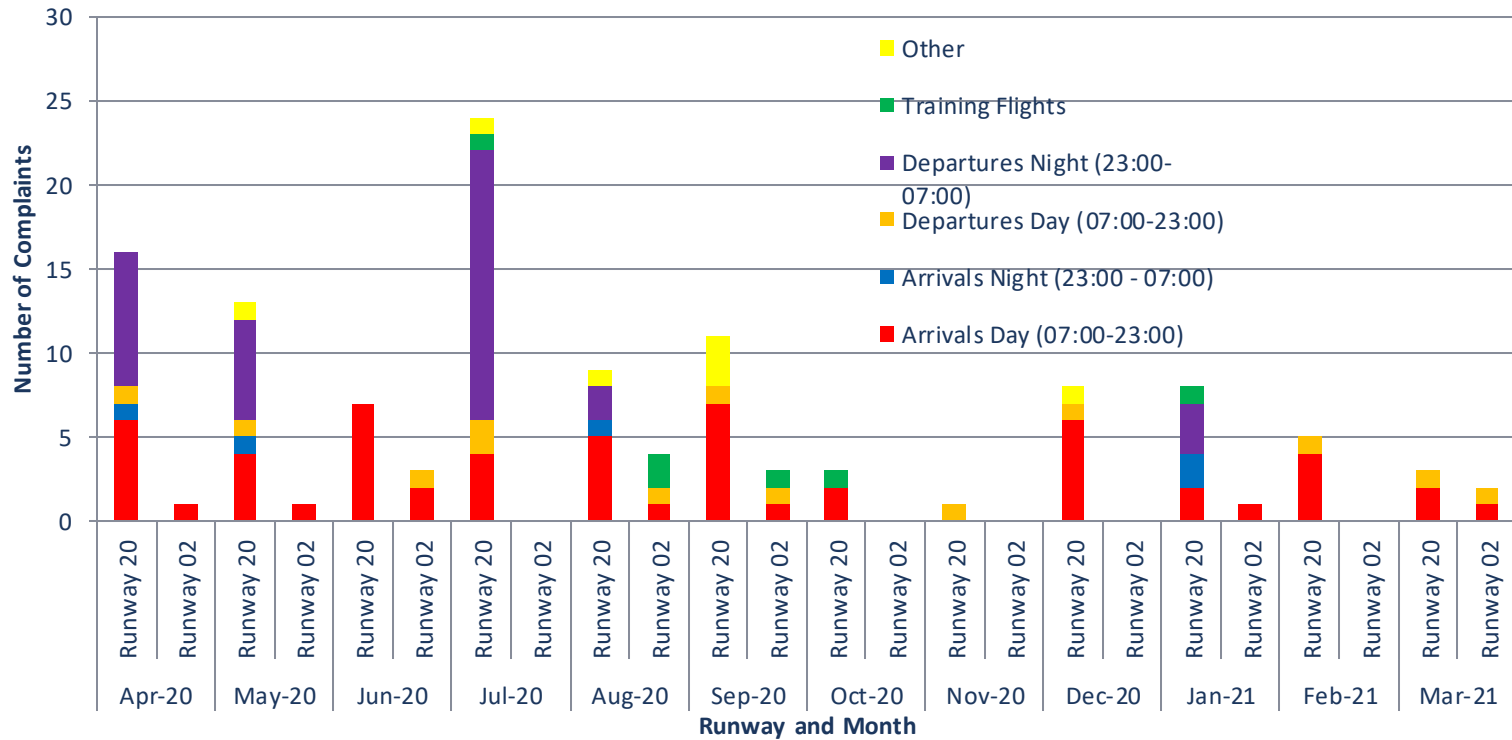
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Doncaster Sheffield Airport operates a Noise Management System to accurately record the nature of the noise complaints made by the local community to the Airport Company.

A complaint can be made via the website, email, voicemail service, by telephone or letter to Doncaster Sheffield Airport.

The Airport requests the minimum amount of information from the individual which includes a description of their concerns, the date, time and contact details. This information is used to investigate their concerns using the Airport Noise Monitoring and Management System (ANOMS). ANOMS correlates radar (both Secondary Surveillance and ADS-B) and operational data with information from the Noise Monitoring Terminals. In October 2018 Doncaster Sheffield Airport invested £90K in a new ANOMS system from EMS Brüel & Kjær (now renamed Envirosuite) which included the ANOMS software, two fixed Noise Monitoring Terminals (NMT) and one portable NMT.

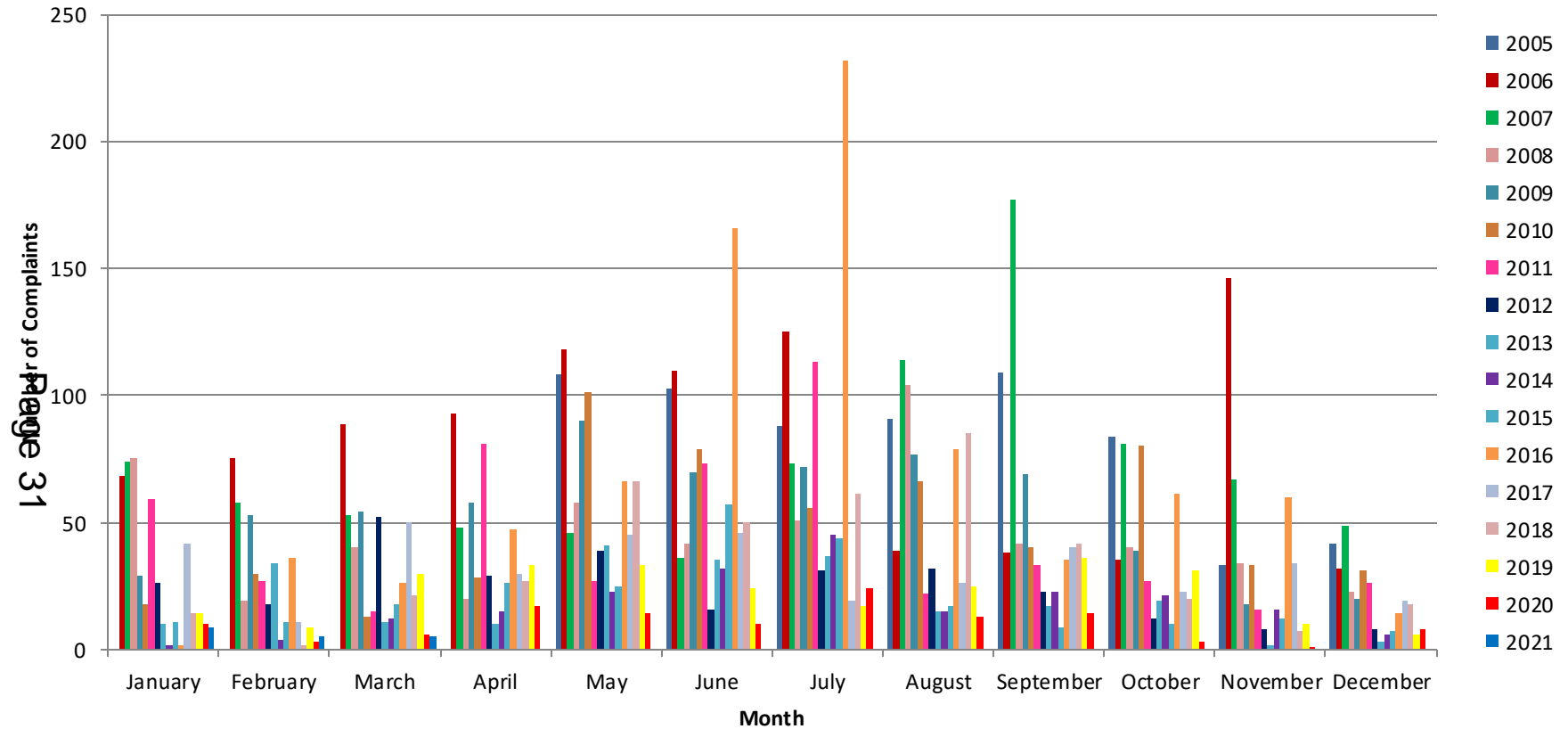
Noise Complaints April 2020 to March 2021



17 | **14** | **10** | **24** | **13** | **14** | **3** | **1** | **8** | **9** | **5** | **5**

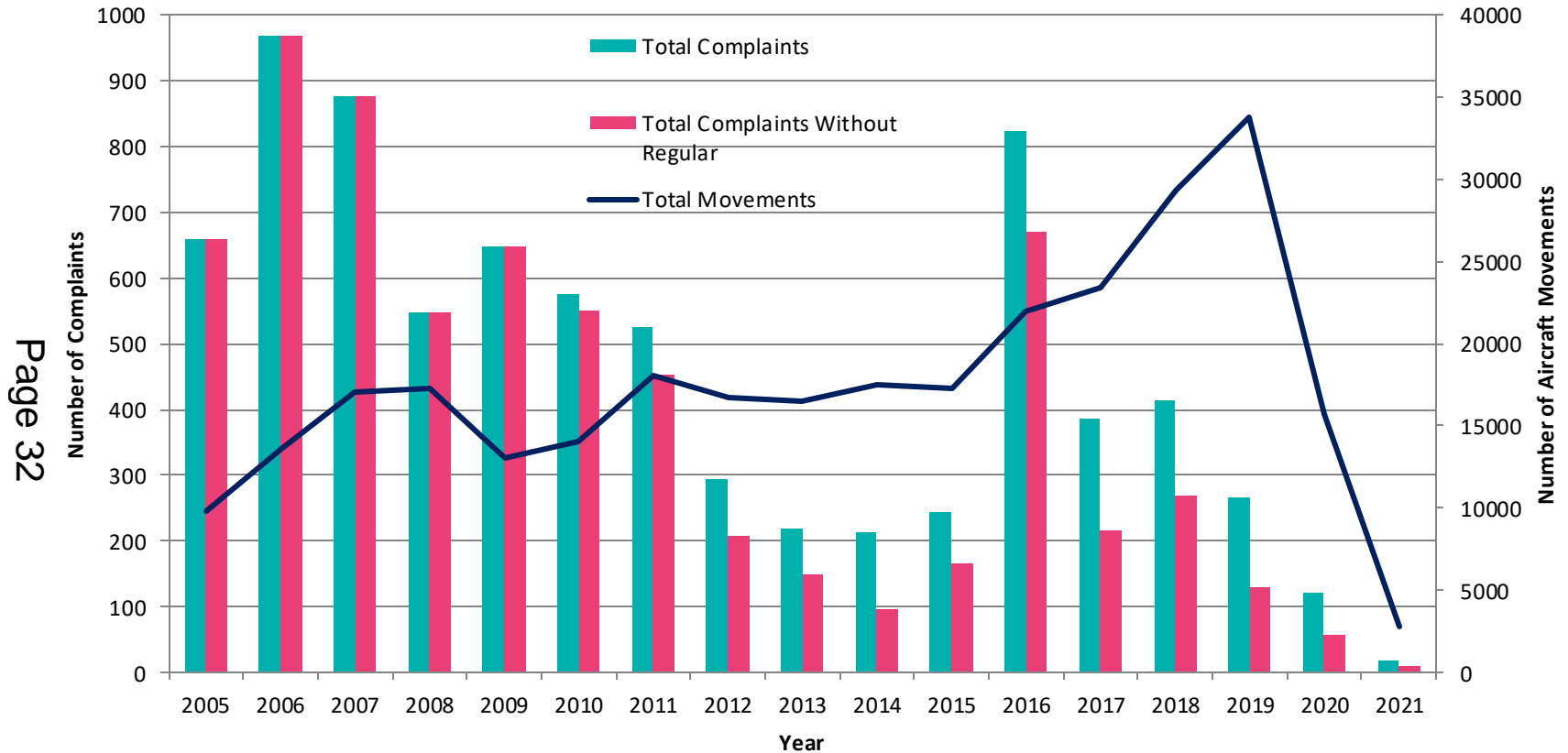
The above chart shows the number of noise complaints by operation from April 2018 to March 2019. The numbers below the chart show the total number of complaints received for each month. 123 complaints were received for the period April 2020 to March 2021.

Historical Noise Complaints April 2005 to March 2021



The above chart shows the number of noise complaints by operation from April 2005 to March 2021.

Annual Noise Complaints & Aircraft Movements 2005-2021



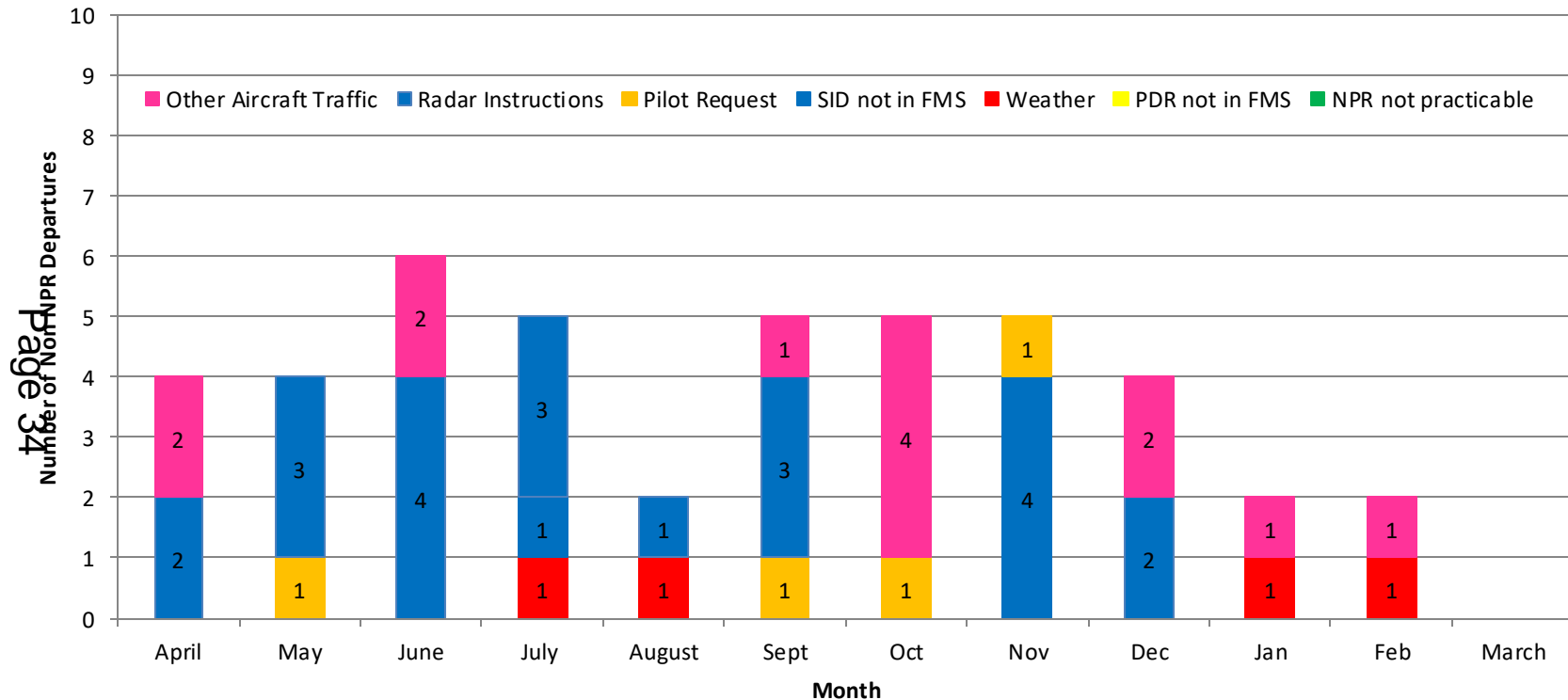
The above chart shows the number of annual noise complaints and annual total aircraft movements from April 2005 to March 2021.

Noise Preferential Routes



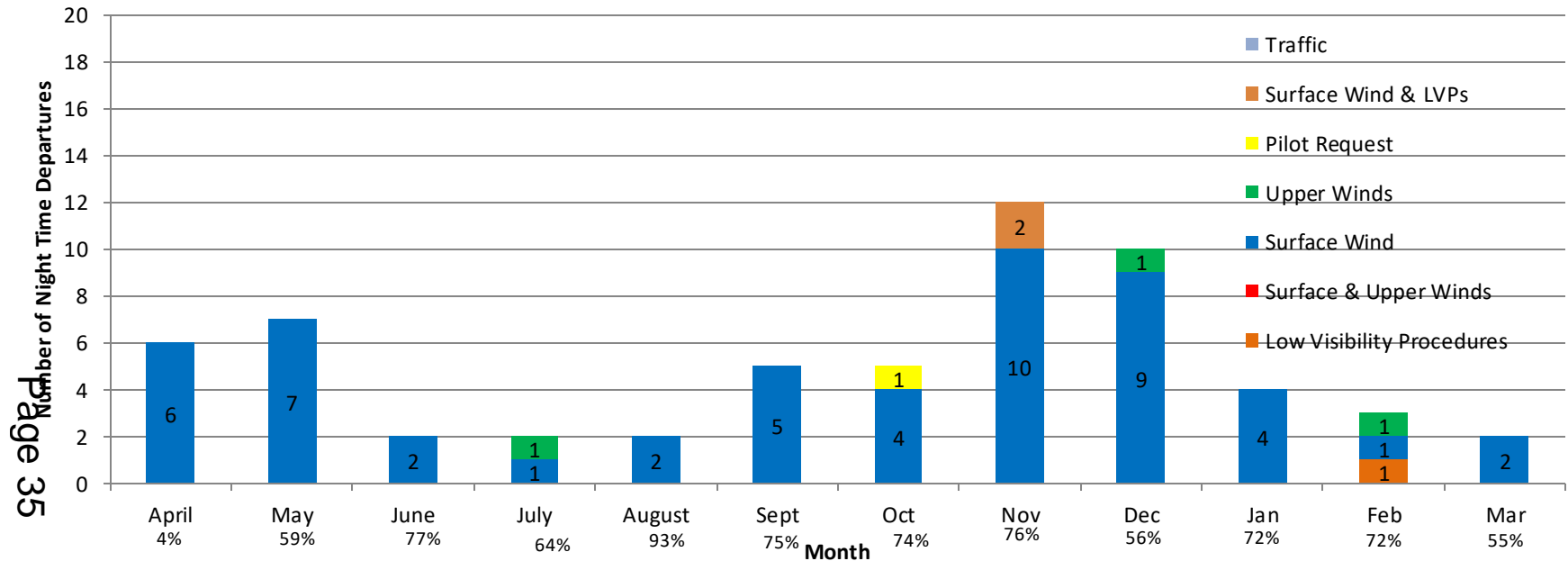
The figures to the left show the Noise Preferential Route's (NPRs) which apply to all aircraft departing from the airport on an instrument flight plan. NPR's allow aircraft to follow a route to join the national airways system aiming to minimise noise to residents as best possible. NPR's also allow Air Traffic Control to maintain separation distances between aircraft. The NPR's are shown on the map as 3km swathes that aircraft are obliged to operate within. Not all aircraft shall attain a path within the swathe due to external factors such as wind and aircraft separation.

Track Performance – Non Noise Preferential Route Departures for April 2020 to March 2021



The Noise and Track Keeping System allows the Airport to monitor an aircraft track, altitude, speed and noise level which can be reported to a complainant. Monthly track keeping reports are reported to the Noise Monitoring Sub Committee each quarter. On occasions, for the purposes of aircraft safety, aircraft are vectored by Air Traffic Control (ATC) outside of the NPR. This may be due to other traffic or weather conditions why the NPR can not be adhered. ATC record all aircraft that are vectored outside of the NPR's.

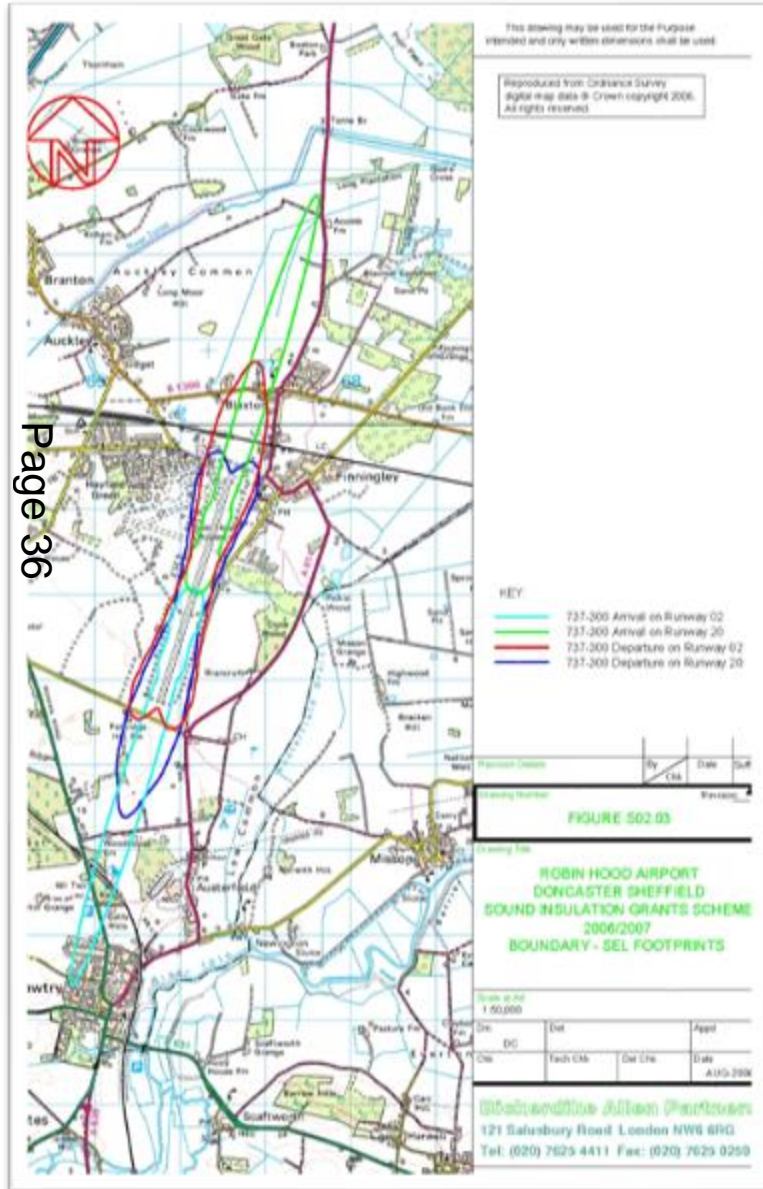
Night Departures from runway 20 for April 2020 to March 2021



The Night Noise Policy of Doncaster Sheffield Airport states that between the hours of 2300 and 0700 Runway 20 shall not be used for take-off unless its use is operationally essential (defined as any activity required to enable aircraft operations to be undertaken with full regard to meeting safety and air traffic control requirements).

Details of every occasion on which Runway 20 is used for take-off between the hours of 2300 and 0700 together with an explanation of the reasons for it being considered operationally essential is logged and notified to Noise Monitoring & Environmental Sub Committee. The above chart shows the number and reason for night time departures from runway 20.

Sound Insulation Grant Scheme



The Sound Insulation Grant Scheme (SIGS) was developed prior to the Airport opening based on movement forecasts up to and including 2007. The scheme makes available up to £3000 for glazing and up to £500 for loft insulation for each residential property within the scheme. The scheme is based on noise exposure levels derived from modeling aircraft noise. The noise contours produced from the modeling use a 63 dB L_{Aeq} 16 hour day noise contour, a 55 dB L_{Aeq} 8 hour night contour and a 90 dB SEL contour.

A total of 29 properties have taken up the scheme since April 2005, the majority of properties in the village of Blaxton. The scheme is regularly reviewed.

Find Out More or Make A Noise Complaint

<https://dsa.aero/about-us/environment/noise/>

Lodging A Complaint

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There is a 24 hour answering service to lodge a complaint: 01302 623499, or alternatively write to:

Environment & Community Manager, Doncaster Sheffield Airport, Heyford House,
First Avenue, Doncaster, DN9 3RH
or email environment@dsa.aero

Please leave your name and address followed by the date of the disturbance, time and any other information to assist the investigation.

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